2021 Course Catalog

Accounting

ACC 101 Survey of Accouting

ACC101 (formerly Intro to Accounting Basics).This course is designed to teach you the mechanics of accounting as well as provide you with the skills necessary to be able to understand financial statements prepared according to GAAP. Students will also learn how accounting impacts all facets of business. This course is required for Business Studies majors. (3 credits)

Objectives:

1. Record, read, describe, and interpret economic transactions and financial statements for the purpose of making decisions and informed judgments about a business.

2. Apply accounting information in the management planning and control processes, which focus on basic accounting principles.

3. Prepare a bank reconciliation.

4. Explain how accounting for notes receivable and accrued interest affect financial statements.

5. Identify characteristics of sole proprietorships, partnerships, and corporations.

6. Explain the characteristics and accounting for different types of stock.

ACC 105 Principles of Accounting I

ACC 105 (Formerly AC 101) - Principles of Accounting I

Accounting I is an introductory course building the foundation for the advanced levels of accountancy training, starting with accounting for a service or merchandising business operated by a single proprietor. The course emphasizes generally accepted accounting principles and practices, the fundamental equation of accounts, the accounting cycle, the accounting system, accounting for merchandise and the Sarbanes Oxley Act. (3 credits)

Objectives:

1. Describe the role of accounting and ethics in business; use generally accepted accounting principles in recording business transactions; explain the effects of transactions on the accounting equation; formulate financial statements of a proprietorship and explain how they interrelate.

2. Describe the characteristics of an account; describe and illustrate journalizing and posting transactions using the double-entry accounting system; prepare an unadjusted trial balance and explain how it can be used to discover errors.

3. Journalize entries for accounts requiring adjustment; summarize the adjustment process; prepare an adjusted trial balance.

4. Prepare financial statements from adjusted account balances; prepare closing entries; describe the accounting cycle; explain what is meant by the fiscal year and the natural business year.

5. Describe and illustrate the accounting for merchandise transactions; describe and illustrate the financial statements of a merchandising business; describe the adjusting and closing process for a merchandise business. Determine the cost of merchandise in inventory and the cost of merchandise sold using the first-in-first-out and last-in-first-out inventory cost flow assumptions.

6. Explain the Sarbanes-Oxley Act; describe the objectives and elements of internal control to cash; illustrate the use of a bank reconciliation in controlling cash; describe and illustrate the reporting of cash and cash equivalents in the financial statements.

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ACC 110 Principles of Accounting II

ACC 110 (Formerly AC 102) - Principles of Accounting II

Accounting II is a continuation of Principles of Accounting I with emphasis on accounting systems and controls, payroll systems, concepts and principles, partnership formation, income division and liquidation, corporation organization and operation, stockholder's equity, earnings, and dividends, long term liabilities and investments. (3 credits) Prerequisite: ACC105

Objectives:

1. Describe the common classes of receivables, and their accounting processes. Compare the direct write-off and allowance methods of accounting for uncollectible accounts.

2. Define, classify, and account for the cost of fixed assets. Compute depreciation and depletion, describe the accounting for intangible assets.

3. Prepare journal entries for current liabilities, payroll accounting, accounting for contingent liabilities, and product warranties.

4. Describe the characteristics of proprietorships, partnerships, and limited liability companies; describe and illustrate the accounting for partnerships.

5. Describe the nature of the corporate form of organization and illustrate the accounting for various stock transactions.

6. Compute the potential impact of long-term borrowing on earnings per share; describe and illustrate the reporting of long-term liabilities, including bonds and notes payable.

7. Describe why companies invest in debt and equity securities; describe and illustrate the accounting for debt investments.

8. Describe the cash flow activities reported in the statement of cash flows; prepare a statement of cash flows.

ACC 220 Managerial Accounting

ACC 220 (Formerly AC 219) – Managerial Accounting -

The basic principles of cost accounting are developed and applied to industrial situations. Specific topics covered are: accounting for labor, material, and manufacturing expense; cost statements; analysis of cost information for administrative and control purposes. Pre-Requisite: ACC105 or ACC101(3 credits)

Objectives:

1. Evaluate the organizational role of management accountants.

2. Explain job order cost systems.

3. Describe process cost systems.

4. Classify costs by behavior – variable, fixed, mixed.

5. Describe budgeting, its objectives, and its impact on human behavior.

6. Explain performance evaluation for decentralized operations.

7. Discuss differential analysis and product pricing.

8. Examine capital investment analysis.

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ACC 230 Accounting with QuickBooks

This course teaches our students computer accounting with QuickBooks. This accounting information system will illustrate how to record accounting transactions for both a service and merchandising company. Accounting topics covered are chart of accounts, accounts receivable, accounts payable, inventory, payroll, and financial statements. (3credits) Pre-requisite: ACC105

Objectives:

1. Install, navigate, and customize QuickBooks in order to create an accounting information system.
2. Use QuickBooks to record the company's banking transactions.
3. Demonstrate an understanding of how QuickBooks is utilized to record customer and sales information. This section focuses on accounts receivable transactions.
4. Use QuickBooks to record a company's vendor, purchases, and inventory information. This section focuses on accounts payable and inventory transactions.
5. Illustrate how to record employee and payroll information into QuickBooks.
6. Prepare financial statements and analyze the results using QuickBooks.
7. Use QuickBooks to set up an accounting information system for a new service or merchandising company.

ACC 235 The Cost of White-Collar Crime

This course is designed to provide an understanding of White-Collar Crime, focusing on corporate, occupational, and financial forms of fraud. This course explains the financial implications of White-Collar Crime, and the ethical and regulatory impact it has on society and the accounting profession. This course is required for Forensic Accounting students. (3 credits) Pre-requisites: None

Objectives:

1. Define the differences between white collar crime and conventional crime, including cross-cultural dimensions.
2. Determine direct, indirect, physical, and other costs of white collar crime, and its consequences.
3. Analyze the corporate abuse of power, fraud, and economic exploitation from a financial perspective.
4. Identify the various forms of occupational and financial crimes.
5. Discuss legal and regulatory issues, as well as the role of accountants, regarding the policing of white collar crime.

ACC 240 Excel for Accounting

This course teaches our students how to create, customize, and analyze accounting tasks using Microsoft Excel. Excel is a worksheet application used to facilitate accounting tasks in a more efficient and accurate way. Students will apply their knowledge from Principles of Accounting I by using Excel to record journal entries, financial statements, inventory costing, bank reconciliations, amortization schedules, and payroll registers. Students will perform vertical and horizontal analysis on financial statements by creating charts and calculating financial ratios. Data analysis tools will be introduced to perform budgeting and cost analysis. Pre-req ACC105.

Objectives:

1. Create and customize a spreadsheet in order to journalize and post transactions by utilizing Excel's basic features that will be the foundation for all subsequent topics.
2. Create an Excel file as a base to significantly increase the efficiency of preparing financial statements by using row/column manipulation, text alignment/control, and worksheet management. Create, modify, copy, and correct Excel formulas in order to perform accounting tasks.
3. Examine an inventory listing and calculate inventory cost under the FIFO, LIFO, and Weighted Average methods by using analysis tools in Excel such as data bars and pivot tables.

Objectives:

4. Import data from other sources and apply quick styles and conditional formatting in order to prepare a bank reconciliation.

5. Use the Quick Analysis button and built-in functions of Excel to calculate the depreciation expense for fixed assets.

6. Use advanced functions to create a payroll register, examine the VLOOKUP function, and enhance the layout of your worksheets.

7. Create a bond amortization schedule using complex financial functions such as the PV (present value), FV (future value), and PMT (payment) functions.

8. Perform vertical and horizontal analysis on financial statements by creating charts and calculating financial ratios. Use data analysis to perform budgeting and cost analysis.

ACC 305 Intermediate Accounting I

Intermediate Accounting I is an intensive study and application of Generally Accepted Accounting Principles (GAAP) necessary for preparing, reading, understanding, and interpreting financial statements. Emphasis is placed on the principles pertaining to balance sheet accounts including current assets, inventory, property, plant, and equipment, and intangible assets. (3 credits)
Pre-requisites: ACC105 and ACC110

Objectives:

1. Describe the meaning of generally accepted accounting principles, the role of the Codification for GAAP, and the major policy-setting bodies in the accounting field.

2. Prepare Retained Earning and Income Statements which include intermediate components such as unusual and infrequent gains and losses, discontinued operations, and other comprehensive income.

3. Determine which balance sheet information requires supplemental disclosures and describe the major disclosure techniques.

4. Identify accounting issues related to the valuation and disposition of accounts and notes receivables and their corresponding presentation on the financial statements.

5. Analyze inventory valuation methods and determine ending inventory by applying the gross profit and retail inventory methods.

6. Describe the accounting problems associated with self-constructed assets, interest capitalization, and valuation of property, plant, and equipment.

7. Calculate depreciation, depletion, and amortization of tangible and intangible assets using the proper accounting procedures outlined in GAAP.

8. Report and analyze property, plant, equipment, natural resources, and intangible assets.

ACC 310 Fraud Examination

ACC 310 - Fraud Examination
This course will explore fraud examination for business by developing an understanding of forensic accounting, fraud prevention and deterrence, financial transactions, fraud schemes, as well as investigation and law. Fraud Examination combines business expertise and basic accounting with the investigative techniques and legal knowledge of criminal justice. (3 credits) Pre-requisites: ACC105 and ACC220.

Objectives:

1. Define the role of a forensic accountant, demonstrating knowledge of basic accounting and auditing concepts, and explaining the different types of financial fraud schemes.

Objectives:

2. Describe fraud prevention and detection by explaining appropriate fraud prevention measures and the internal controls necessary to deter fraud.

3. Analyze and communicate information gained through proper investigative techniques developed for forensic accountants including interviewing, obtaining information from public records, tracing transactions, evaluating deception, and report writing.

4. Define digital forensic analysis by understanding several basic computer forensic techniques, including data mining concepts and strategies.

5. Describe the legal ramifications of conducting forensic accounting examinations, including criminal and civil law, rules of evidence, rights of the accused and accuser, and expert witness matters.

6. Research current accounting fraud schemes in order to analyze the fraud triangle, role of organizational culture in the perpetration of occupational fraud, and importance of sound business ethics.

ACC 315 Intermediate Accounting II

Intermediate Accounting II represents an intensive study and application of the generally accepted accounting principles liability valuation, income measurement, and financial statement presentation for business organizations, and the processes through which these principles evolve. The course builds on Intermediate Accounting I by covering in detail topics that are essential to preparing, reading, understanding, interpreting, and using financial statements that are prepared in accordance with generally accepted accounting principles. (3 credits)
Pre-requisites: ACC305

Objectives:

1. Identify the classification issues of short-term debt expected to be refinanced and the accounting for gain and loss contingencies.

2. Describe the accounting and reporting for convertible securities, stock warrants, and stock compensation plans.

3. Evaluate the equity and consolidation methods of accounting and explain the accounting procedures for both debt and equity securities.

4. Apply the five-step process to major revenue recognition issues and describe proper presentation and disclosures of revenues.

5. Perform the accounting for loss carrybacks and carryforwards and the presentation of deferred income taxes on the financial statements.

6. Prepare journal entries for pension plan transactions and describe the requirements for reporting pension plans on the financial statements.

7. Determine the appropriate accounting procedures for leases by both lessees and lessors.

8. Analyze accounting changes and errors and correct them in accordance to proper accounting principles.

ACC 320 Personal Taxation I

This course provides an overview of federal income tax regulations and procedures for individuals. Topics include tax law, electronic research and methodologies, and the use of technology for the preparation of individual and business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax laws, and complete federal tax returns for individuals. (3 credits)
Pre-requisites: ACC105

Objectives:

1. Calculate tax liability utilizing the tax formula for individuals and prepare individual tax returns manually and with practitioner grade tax preparation software.

Objectives:

2. Differentiate between taxable and non-taxable income sources and their proper placement on the tax return.

3. Identify available deductions and incentives and apply them in the most advantageous manner on the tax return.

4. Apply the regulations regarding credits and special taxes in order to calculate their effects on the tax return.

5. Compute withholdings, payroll taxes, and estimated payments and apply them to the tax return in order to find an individual's refund or amount due.

6. Describe the IRS audit process, the Taxpayer Bill of Rights, and common rules and penalties for taxpayers and tax practitioners.

ACC 325 Personal Taxation II

This course builds upon Personal Taxation I by expanding upon the overview of federal income tax regulations and procedures for individuals. Emphasis is placed on capital gains and losses, and the taxation of business transactions at the sole proprietor and partnership levels. Students are also introduced to individual taxation at the state and local levels. Upon completion, students should be able to analyze business-related tax scenarios, research applicable tax laws, and complete federal, state, and local tax returns for individuals. (3 credits)
Pre-requisites: ACC320 OR ACC215

Objectives:

1. Identify the requirements for claiming business expense deductions and complete the proper tax schedules and forms related to a sole proprietorship on the individual tax return.

2. Apply the tax rules for rental property, vacation homes, and other passive income and losses and complete the associated tax schedules and forms.

3. Calculate the depreciation of assets utilizing MACRS tables and identify additional depreciation elections.

4. Compute the tax on various types of capital gains and losses including short-term, long-term and like-kind exchanges.

5. Differentiate between the tax treatment of transactions between partners and their partnerships.

6. Identify key regulations of individual taxation at the state and local levels in Pennsylvania.

7. Prepare complex federal tax forms and schedules, and basic state and local tax forms, both manually and with practitioner grade tax preparation software.

ACC 330 Auditing Theory

This course explores the different regulatory, ethical, and technical standards of the auditing profession that external and internal auditors follow when conducting financial statement audits, reviews, compilations, and other engagements. In addition, the ever-changing audit environment will be explored to gain an understanding of the various auditing techniques, and practices. (3 credits)
Pre-requisites ACC305

Objectives:

1. Describe the nature and scope of the different audit engagements.

2. Define the principles, rules, and interpretations included in the AICPA Code of Professional Conduct, along with the guidelines set forth by the Securities and Exchange Commission and the Public Company Accounting Oversight Board.

3. Identify the importance of following ethical guidelines when conducting engagements.

4. Prepare engagement plans using the applicable financial reporting framework.

5. Identify the importance of understanding an entity's system of internal control; including their control environment and IT processes.

Objectives:

6. Perform audit engagement processes such as analytical procedures, external confirmations, inquiry of management, and observations.

7. Describe the closing process to an audit engagement; including forming an audit opinion, compiling an audit report, and reporting on internal controls.

ACC 405 Accounting Information Systems

In this course students will learn how the accounting information system plays an integral role in the operations of a business entity throughout the accounting cycle. Students will learn about accounting information systems that are used to process accounting data, the governance of the information technology operations of a business, and the importance of the control and audit of accounting information systems. (3 credits)
Pre-requisites: ACC230

Objectives:

1. Describe the role of the accounting information system in an organization's value chain.

2. Research accounting information systems that are used to process and accumulate data as well as provide monitoring and financial reporting information.

3. Examine the governance of the information technology operations of a business by identifying the Control Objectives for Information and Related Technology (COBIT).

4. Determine whether there is appropriate segregation of duties, authorization levels, and data security in an organization to maintain an appropriate internal control structure by examining COSO framework.

5. Describe how organizations use Enterprise Resource Planning (ERP) systems to process transactions and provide information.

6. Identify business and operational risks inherent in an entity's disaster recovery/ business continuity plan by using the Enterprise Risk Management (ERM) model.

ACC 410 Advanced Accounting

This course covers advanced theories and accounting standards for related business units. Students will gain an understanding of the various business combinations, be able to account for subsidiaries, complete consolidated financial statements, prepare entries for intercompany transactions, and discuss minority interests. In addition, students will learn accounting principles unique to foreign affairs including the accounting for foreign currency transactions, and the translation of foreign currency financial statements. (3 credits)
Prerequisites: ACC315

Objectives:

1. Identify the various types of business combinations such as mergers, and acquisitions; as well as the respective accounting procedures for each.

2. Prepare consolidated financial statements including any necessary adjustments, eliminations, and controlling interests, while using the basic concepts and terms related to consolidation.

3. Prepare intercompany transactions that take place involving the sale of merchandise, plant assets, and bonds and leases.

4. Demonstrate how to prepare a statement of cash flows for consolidated businesses, as well as the calculation for earnings per share.

5. Account for special circumstances that arise in consolidation, such as the subsequent purchase of a subsidiary's stock, sale of a subsidiary's stock, issuance of stock dividends by the subsidiary, and the various equity structures of a subsidiary.

6. Discuss the international business environment as well as the issues of accounting for foreign currency transactions and translating foreign financial statements.

Objectives:

7. Account for foreign currency transactions, including the measurement of gains and losses; while using an understanding of derivatives to hedge foreign currency transactions.

8. Translate foreign currency financial statements while accounting for any re-measurement gains or losses.

ACC 420 Financial Statement Analysis

This course teaches our students the skills needed to examine the interrelationships of financial statements, and to analyze results of forecasts and projections. An in-depth understanding of financial statements, including balance sheets, income statements, and cash flow statements will be developed through the use of real-world case studies. Ratio analysis, along with the techniques used for planning, forecasting, and projection of the future health of an organization will be examined. This course will also teach students how to research and compare the financial conditions of publicly traded companies in order to analyze investment decisions. (3 credits)
Pre-requisites: FIN325 AND ACC305 OR ACC305 AND ACC225

Objectives:

1. Define the interrelationships between financial statements and explain the mechanics of the balance sheet, income statement, and cash flow statement.

2. Model revenue growth, cost and expense characteristics, and profitability using forecasting and projection techniques.

3. Analyze results of forecasts and projections by calculating the key financial analysis ratios used to evaluate liquidity, solvency, profitability, and leverage.

4. Prepare and calculate metrics to be utilized in the planning process, such as cost benefit analysis, sensitivity analysis, and breakeven analysis.

5. Research and compare the financial conditions of publicly traded companies in order to analyze investment decisions.

ACC 425 Fraud Data Analytics

This course will teach students the importance of accounting data analytics, and illustrate how the accounting profession is impacted by Big Data. Forensic Accounting students will learn about the basics of fraud-detection data analytics, and will learn how to analyze and detect financial statement fraud using descriptive, predictive, and social network techniques. (3 credits)
Pre-requisites: ACC305 and ACC405.

Objectives:

1. Identify the importance of accounting data analytics, and explain how the accounting profession is impacted by Big Data.

2. Define types of data sources, types of data elements, and Benford's Law to detect fraud and errors.

3. Analyze and detect financial statement fraud using descriptive analytics for fraud prevention.

4. Analyze and detect financial statement fraud using predictive analytics for fraud prevention.

5. Analyze and detect financial statement fraud using social network techniques for fraud prevention.

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Agriculture

AGR 105 Basic Farm Maintenance

AGR 105- Basic Farming Maintenance
The course covers fundamentals of maintenance and repair of farm facilities and equipment. Topics include safe use of hand tools and farm machinery, carpentry, concrete, painting, wiring, welding, plumbing, and calculating cost and materials needed. Upon completion, students should be able to answer theoretical questions on topics covered and assist with maintenance and repair of farm facilities and equipment. (3 Credits).

Objectives:

1. Describe the importance of good maintenance practices.
2. Explain major issues related to productivity of farm facility.
3. Working productivity individually and groups.
4. Thinking creatively and critically.
5. Review farm safety practices.

AGR 130 Sustainable Livestock Management

AGR 130-Sustainable Livestock Management
This course covers the integration of livestock as part of a sustainable farming system with emphasis on small-scale production for niche markets and pasture. Topics included are appropriate breed selection, nutrition and living requirements for livestock such as goats, hogs, sheep, poultry, and bees. Upon completion, students should recognize appropriate breeds for their farm needs and demonstrate knowledge of small-scale livestock production. (3 Credits).

Objectives:

1. Describe the importance of animal production and explain major issues related to production of livestock on an international, national, state level.
2. Explain the relationship of science and animal production through the study of biotechnology, technology, genetics, physiology, nutrition, and health.
3. Describe the basic physiology and terminology of the animal industry.
4. Define the production (including sustainable production) methodologies, of swine, beef, and dairy, sheep, horse industry.
5. Recognize the requirements of production animals and the benefits of proper care, nutrition, genetics, and environment to the animal's productivity levels.

Fine Arts

ART 105 Fine Arts Survey

ART 105 (Formerly AR 103) - Fine Arts Survey

This is an interdisciplinary course, which surveys music, painting, architecture and sculpture in various historical periods and from various philosophical perspectives (Classicism, Romanticism, Modernism, etc.). Through multi-media presentations as well as textbook descriptions and classroom lectures, students gain both a deeper appreciation of the arts and a deeper understanding of the interrelationships among the various arts in history (3 Credits).

Objectives:

1. Locate, analyze, and evaluate the beauty of a variety of fine arts, from Raphael's lines to Beethoven's modulations, in order to understand artistic concerns, characteristics, and influences; the humanistic perspective; and the value of humanity's worth and contributions worldwide.
2. Demonstrate an understanding of the creative process and be able to analyze and interpret creative works.

Objectives:

3. Discuss and think critically about the basic elements and principles in which the beauty of fine arts becomes manifest.

4. Analyze how the arts reflect the socio-cultural conditions of their time and place, including an examination of the contributions of minorities and women.

Baking

BAK 105 Baking Industry Knowledge

This class will provide an introduction to the identification and use of the various edible tools of the trade- vegetables, fruits, herbs, nuts, grains, dry goods, prepared goods, dairy products, beverages and spices. Class time will be dedicated to the exploration of foods and ingredients, industry terminology and tool identification and will also identify how to evaluate products for marks of seasonality, freshness and quality. (3 credits)

Objectives:

1. Identify and explain the selection factors for the ingredients used in the contemporary baking and pastry kitchen.

2. Explain how to effectively purchase, receive, store and issue perishables and dry goods.

3. Begin to build or to expand upon student's palate to better create and execute outstanding recipes in a cost effective manner.

4. Comprehend and recognize the roots the French and Italian languages have given our industry and be able to navigate and prepare menus using authentic ingredients and cooking fundamentals.

BAK 110 Baking and Pastry Foundations

This course introduces students to the professional culinary and baking and pastry kitchen. Course will focus on historical and current cooking and baking techniques, knife skills, piping skills and mixing methods and foundational sauces. (3 credits) Prerequisites: BAK105.

Objectives:

1. Demonstrate proficiency in basic knife skills.

2. Execute recipes using foundational mixing methods.

3. Create foundational sauces used in the professional baking kitchen.

4. Utilize various piping methods on basic cakes, desserts and plates.

BAK 115 Intro to Cakes

This course outlines the techniques needed to produce cakes, butter creams and icings, fillings and basic decorations and piping. Students will learn the foundational methods of cake production and assembly, foundational and contemporary icing, filling and finishing techniques of cakes. (3 credits) Prerequisites: BAK105, BAK110, HSP125.

Objectives:

1. Produce cakes, fillings, glazes and icings necessary to cake assembly.

2. Prepare cake layers for finished cake assembly.

3. Utilize cake construction and production tools proficiently: dowels, offset spatulas and turntables.

4. Create basic cake finishes including piped boarders and basic flowers.

BAK 120 Intro to Hot and Cold Desserts

This course teaches students the techniques, recipes and skills required in the production of the chilled and frozen components of composed desserts and builds on the foundational recipes included in whole and plated desserts. Students will use ratios, classical and contemporary techniques and chilled and frozen dessert components to create hot and cold desserts. (3 credits) Prerequisites:BAK105, BAK110, HSP125.

Objectives:

1. Utilize recipes and ratios to create granitas, sorbets, ice creams, gelatos and other frozen desserts.
2. Create the basic chilled sauces used as dessert components in the professional pastry kitchen.
3. Execute basic hot dessert recipes with proficiency.
4. Apply ratios to the creation of original contemporary hot and cold dessert components.
5. Create basic finishes used in the plating of hot and cold desserts.
6. Apply plating techniques to the creation of hot and cold plated dessert.

BAK 125 Basic and Artisan Breads

This course introduces students to the basic skills and techniques of artisan bread production. Focus is given to leavened breads, laminated doughs, decorative breads, and contemporary breads and bread products. Properties and characteristics of grains other than wheat and sustainability in baking are covered. Study will build upon key concepts to include: the baker's percentage system, scaling ingredients, foundational mixing techniques, controlled fermentation, hand shaping skills, and baking methodology are studied. (3 credits) Prerequisites:BAK105, BAK110, HSP125.

Objectives:

1. Apply different traditional fermentation methods to produce a variety of traditional and artisan breads.
2. Analyze the components of the bread dough at its various stages, and evaluate the finished product.
3. Demonstrate hands-on skills to form and mold rolls, and sweet doughs to quality standards and within production deadlines.
4. Identify a variety of flours and describe their different uses and ingredients in professional bread making.
5. Apply the baker’s percentage and recipe scaling formulas to recipes.
6. Produce a variety of Artisan, traditional and contemporary breads meeting quality standards and production deadlines.

BAK 130 Plated Desserts

Students will learn to prepare and present individual hot and cold plated desserts through utilization of classical and contemporary plating techniques. Focus will be given to baking and pastry station organization, a la care dessert service. Students will consider the impact of complementing and contrasting flavors, temperatures and textures in execution of plated dessert. (3 credits) Prerequisites:BAK105, BAK110, HSP125.

Objectives:

1. Organize station and assemble mise en place for a la carte dessert service.
2. Synthesize all components of the plated dessert into a professional quality plated dessert.
3. Accurately calculate cost per portion, selling price and food cost percentage for each item.

BAK 200 Baking and Pastry Externship

Students will be required to complete a 180-hour externship with one of Lackawanna College's impressive industry partners. Externship will provide students the opportunity to reveal areas of specific interest through hands on hospitality experience. Students will explore and experiment in the chosen field while learning from industry professionals in a real working environment while gaining professional and resume building experience. (3 credits) Prerequisites: CUL150, BAK105, BAK110, BAK115, BAK120, BAK125, BAK130, HSP125 AND BAK100

Objectives:

1. Comprehend the responsibilities and expectations of the student while on externship.
2. Use the skills and techniques learned in previous prep class to obtain an extern position.
3. Engage in mock interviewing exercises.
4. Secure an externship position.
5. Apply principles from level one classes at selected externship site.

BAK 205 Confectionary and Cake Designs

Students build on their fundamental skills of icing cakes in creating special occasion cakes. Students will concentrate on the skills of making various flowers out of modeling chocolate, marzipan and gum paste. Students will build on basic cake icing skills and will learn to use rolled fondant and will build their piping skills through creation of advanced design. (3 credits) Prerequisites: CUL150, BAK105, BAK110, BAK115, BAK120, BAK125, BAK130, BAK200 AND HSP125

Objectives:

1. Create confectionary designs from chocolate, marzipan, fondant and gum paste.
2. Sculpt and assemble specialty cake components according to instructor design and to professional quality standards.
3. Finish cakes with icings, glazes or fondant to professional quality standards.
4. Execute final piping and garnish detail to a finished specialty cake product to professional quality standards.

BAK 210 Contemporary Chocolate Techniques

This course provides students with the skills and knowledge of chocolate confectionary creation. Focus will be given to tempering methods, controlling the crystallization of fats and sugars, managing water and the function of emulsions in chocolate confection production. Students will study and produce various chocolate centers to include caramels, pralines, ganache, mousses, jellies and aerated fillings. (3 credits) Prerquisites: CUL150, BAK105, BAK110, BAK115, BAK120, BAK125, BAK130, BAK200 AND HSP125

Objectives:

1. Identify the chemical scientific properties of chocolate and explain the effects when used in recipes.
2. Demonstrate chocolate tempering techniques with couverture chocolate.
3. Produce professional quality chocolate candies including caramel, gel and ganache fillings, hand-dipped candies and nuts, molded chocolates, and truffles.
4. Identify and demonstrate updated methods of traditional French recipes through use of efficient production methods, including an enrobing machine.

BAK 220 Advanced Baking Principles

This course builds upon the basic skills and techniques of artisan bread production to include bagels, multi-grain and alternative grain breads, sourdoughs and holiday or specialty ethnic breads. Students will focus on the skills of handling and shaping bread and bread products and will study regional and international applications in bread. Emphasis will be placed on contemporary consumer trends and industry innovations in the bread making sector of the professional baking kitchen. (3 credits) Prerequisites: CUL150, BAK105, BAK110, BAK115, BAK120, BAK125, BAK130, BAK200 AND HSP125

Objectives:

1. Identify the chemical scientific properties of chocolate and explain the effects when used in recipes.
2. List allergy and food intolerance issues associated with baked products and desserts.
3. Describe ways to reduce or eliminate common allergens, fats, sugars, gluten or other dietary concerns from basic baking recipes or formulas.
4. Modify and execute baking formulas and recipes to accommodate dietary issues.

BAK 225 Sugar Artistry

Students are emerged in the study of various sugar artistry applications, including pastillage, poured, pulled and blown sugar. Students will engage in the action of using sugar applications in the creation of garnishes, designing of elements used in plating and creation of sugar showpieces. (3 credits) Prerequisites: CUL100, CUL150, BAK105, BAK110, BAK115, BAK120, BAK125, BAK130, BAK200 AND HSP125

Objectives:

1. Boil syrups for decorative sugar work in a safe and professional manner.
2. Create designs of spun sugar, sugar cages and poured sugar designs.
3. Pull sugar for use in professional quality pulled and blown-sugar decorative pieces.
4. Prepare basic boiled sugar confections to a professional quality standard.

BAK 230 Platter and Production Desserts

Students will utilize practical techniques of platter design and presentations. Students will design, organize and set up pastry buffets suitable for large scale functions. Focus will be given to scaling recipes, menu design and pricing. This capstone course will engage students in the creation of large scale pastry and confection menu design. (3 credits) Prerequisites: CUL100, CUL150, BAK105, BAK110, BAK115, BAK120, BAK125, BAK130, BAK200 AND HSP125

Objectives:

1. Collaborate with instructor and students to plan and create professional quality baking and pastry menus and displays.
2. Create retail prices for project designs using culinary and baking math principles.
3. Apply plating and platter principles to display design.
4. Assemble and display final project for a chosen audience.

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Biology

BIO 105 Human Biology

BIO 105 (Formerly BI 101) – Human Biology

This course provides a survey of the structure and function of the major body systems and emphasizes the relationship between humans and other living things. Topics include anatomical organization and physiological regulation of the body, reproduction and heredity, and human evolution and ecology (3 Credits). Offered every semester.

Objectives:

1. To provide a survey of human biology from various levels of biological organization and complexity.

2. To develop an understanding of and an appreciation for the complexity of human body organization and regulation and the relationships of humans to other living things.

3. To develop a sense of the scientific process and the critical thinking skills involved in scientific inquiry.

4. To provide students with a firm grasp of how their bodies function and how the human population can become more fully integrated into the biosphere.

5. To enable students to realize that science is fun!

6. To define science (and non-science) and review the scientific method from a biological perspective.

7. To present how biological systems are hierarchically organized and how these organizational levels inter-relate.

8. To review biological classification (taxonomy) using human beings as an example organism and illustrating how humans relate to other organisms by emphasizing evolutionary relationships.

9. To provide an overview of human anatomy (structure) and physiology (function) from cellular organelles through organ systems.

10. To emphasize how the body maintains a constant internal environment (homeostasis) by interaction of body systems.

11. To review the structure and function of carbohydrates, lipids, and proteins and their role in maintaining homeostasis.

12. To illustrate body metabolism by reviewing the interactions between the digestive, respiratory, cardiovascular, and urinary systems so that an understanding of the complexity of life is achieved.

13. To review concepts of heredity and chromosomal inheritance by focusing on visible heritable characteristics and blood type.

BIO 115 Biological Science

BIO 115 (Formerly BI 111) – Biological Science

This course presents a survey of the biological world from the basic to the complex. Topics include the nature of life, cell biology, genetics, ecology, evolution, anatomy and physiology, and the diversity and classification of living things. Two hours lecture and two hours of laboratory per week (3 Credits).

Objectives:

1. To explain the nature of life from various levels of organization, beginning from the small to the large and complex.

2. To discuss energy and its transformations (respiration and photosynthesis).

3. To review reproduction in cells (mitosis, meiosis) and organisms (genetics and DNA).

4. To thoroughly integrate the theory of evolution as the unifying theme of all biology and trace its origins and development over the last 150 years.

Objectives:

5. To determine how and why evolution is responsible for the diversity of life on earth by assessing allele frequencies as they relate to both micro and macro evolution.

6. To diagram and explain the basic structure and function of plants and animals.

7. To solve genetics and pedigree problems as they relate to both genetic traits and illnesses.

8. To perform scientific research on either a scientific topic or person.

9. To utilize the laboratory to reinforce classroom learning through microscopic evaluations, genetic analysis, evolution simulation, and hands-on classifying and observing of Domain Prokarya and Domain Eukarya, including Kingdoms, Fungi, Protista, Plantae, and Animalia.

BIO 120 General Biology I

BIO 120 (Formerly BI 124) - General Biology I

This course presents a detailed overview of the general principles of biology for science majors. Topics include the chemical nature of life, cell structure and function, energetics, cell division, genetics, and molecular biology. Corequisite: BIO 121 Three hours lecture per week (3 Credits).

Objectives:

1. To think like a biologist — specifically, understanding the central roles of evolutionary theory and hypothesis testing in biology.

2. To explain the physical and chemical basis of life.

3. To explain the importance of water to all living organisms.

4. To explain that all living organisms are composed of cells, and the types of structures found within cells.

5. To explain that all cells require energy, and the ways in which it is obtained and converted through metabolism to maintain homeostasis and fuel growth and development.

6. To explain how organisms reproduce, both at the level of individual cells, and at the level of entire organisms.

7. To expalin the nature of the genetic material, and the ways in which the genetic information is accessed and used to construct living organisms.

BIO 121 General Biology I Lab

BIO 121 (Formerly BI 125) – General Biology Laboratory

Three hours per week (1 Credit). Corequisite: .BIO 120.

Objectives:

1. To measure common objects using English and metric units of length, mass, and volume and to apply basic statistical measurements to them.

2. To use correctly the microscope and identify its functional parts.

3. To prepare wet mounts and examine these and prepared slides under the microscope.

4. To analyze pH, buffering capacity, and biological molecules contained in different solutions.

5. To identify major parts of respiration and photosynthesis based on measured data.

6. To identify phases of cell division in plant and animal cells.

7. To apply basic genetic principles in the transmission of genetic traits.

Objectives:

12. To prepare students for future science courses in biology and chemistry and for future careers in the sciences.

BIO 125 General Biology II

BIO 125 (Formerly BI 128) - General Biology II

This course is a detailed overview of evolutionary and organismal biology, with an emphasis on the diversity of living things. Three hours lecture per week (3 Credits). Corequisite: BIO 126 Prerequisite: BIO 120-121,

Objectives:

1. The aims of organismal biology, and its relationship to cellular/molecular biology and other natural sciences.

2. Historical and current approaches to understanding biological diversity and its classification.

3. Concepts pertaining to phylogentetic classification, including cladistics and problems with the Biological Species Concept.

4. Issues pertaining to nomenclature.

5. Issues pertaining to regional and global biological diversity, including species conservation and problems with invasive species.

6. Characteristics, phylogenetic diversity, ecology, and economic importance of the prokaryotic kingdoms (Monera and Archaebacteria).

7. Characteristics, phylogenetic diversity, ecology, and economic importance of the simple eukaryotic kingdoms (Protista and Chromista).

8. Characteristics, phylogenetic diversity, ecology, and economic importance of the complex eukaryotic kingdoms (Plantae, Fungi, and Animalia).

BIO 126 General Biology II Lab

BIO 126 (Formerly BI 129) – General Biology II Laboratory

Three hours per week (1 Credit). Corequisite: BIO 125. Prerequisite: BIO120 AND BIO121.

Objectives:

1. To apply the principles pf Mendelian inheritance to predict outcomes of parental crosses using Punnett squares and pedigrees.

2. To identify major genetic trends in the evolution of humans.

3. To calculate allele frequencies and their associated changes in genotypes and phenotype frequencies along multiple generations using Hardy-Weinberg principles.

4. To explain the major characteristics of the major kingdoms and phyla of organisms: protists, bryophytes, ferns, gymnosperms, angiosperms, sponges and cnidarians, various phyla of worms, arthropods, chordates, and echinoderms.

BIO 150 Wildlife Management

This course is designed to introduce students to the concept wildlife management, with special emphasis on Northeastern United States. Students will learn best management practices regarding wildlife management, starting with the fundamental needs of all living things and the dynamics of an ecosystem. The taxonomic classification of mammals will be investigated along with learning to identify a variety of wildlife species. (3 credits)

Objectives:

1. Learn best management practices regarding wildlife management, especially for Pennsylvania.

Objectives:

2. Learn what all living things need to survive.
3. Understand the dynamic balance required within ecosystems to withstand life.
4. Learn about mammals including their life cycles, habitats, and adaptations.
5. Be able to identify common mammals of Pennsylvania.
6. Learn how to use field guides.
7. Keep an appropriately detailed field journal.

BIO 155 Dendrology & Wildflowers

Introduction to dendrology and wildflowers with special emphasis on Northeastern United States. Covers common field identification techniques, field guide and dichotomous key use and basic principles of forest ecology and natural history. (3 credits)

Objectives:

1. Explain the internal anatomical structure and function of trees and other plants.
2. Use techniques in gathering, encoding, and recording field or research data.
3. Identify major tree, shrub, wildflower, and herbaceous species from living specimens as well as from samples of flowers, twigs, leaves, and fruits.
4. Use rules of scientific nomenclature to correctly present the common name and binomial.
5. Employ dichotomous and other plant keys to identify species.
6. State major and minor uses of each selected species.
7. Describe physical and biological features associated with the selected species and forest types.
8. Identify and describe select species of native, non-native, and invasive plant species.
9. Synthesize, write, and publicly present information about trees, wildflowers, and other plants.

BIO 160 Field Ornithology

This course is designed to enable students to identify and classify birds with special emphasis on the birds of Northeast United States. Students will also gain an understanding of bird evolution, physiology, behavior, biodiversity, conservation, techniques of field study, and methods of collection and preservation. (3 credits)

Objectives:

1. Recognize the common birds of Northeast United States.
2. Learn the biology, habitats, and adaptations of birds.
3. Learn and practice a variety of field techniques used for studying birds including, banding, census methods, nest monitoring, and behavioral observations.
4. Learn the migratory patterns of birds.
5. Keep an appropriately detailed field journal.

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BIO 205 Anatomy and Physiology I

This course is an introduction to human anatomy and physiology for students planning careers in medicine or the allied health professions. Topics include: body organization, body divisions and cavities, basic biochemistry, cell structure, metabolism and histology. Structure and physiology of the following systems are included: integumentary system, skeletal system, muscular system, nervous system, and special senses. Laboratory provides students with hands-on exercises to better visualize and enhance lecture topics. The laboratory relies on dissections to illustrate anatomical principles. Physiological principles are demonstrated using human subjects, preparations of frog muscle, nerve and computer simulations. Anatomy and Physiology is a 4 credit course consisting of 3 hours of lecture and 3 hours of laboratory per week. Prerequisites: BIO120 and BIO121

Objectives:

1. To define and explain the difference between anatomy and physiology.

2. To explain the body planes, the body cavities, the terms of body position and direction, and the body regions of the human body.

3. To use basic chemistry and introductory biochemistry as they relate to anatomy and physiology.

4. To distinguish the parts and function of the animal cell, the cellular organelles, and the basic tissue types and their relationship functioning and healing.

5. To describe the anatomy and physiology of the integumentary system.

6. To describe the anatomy and physiology of the skeletal system and list the bones of the human body.

7. To compare and contrast different major muscles of the muscular system.

8. To define and distinguish differences in the central and peripheral nervous system and the special senses.

9. To review of the anatomy and physiology of the endocrine system including structures and functions.

10. To describe the anatomy and physiology of the circulatory system.

11. To provide an overview of the anatomy and physiology of the immune and lymphatic systems.

12. To diagram the structures and the anatomy and physiology of the respiratory system.

13. To discuss the general overview of the anatomy and physiology the digestive, the reproductive, and the urinary systems.

14. To complete laboratory exercises which both reinforce and increase a student's understanding of the topics covered in class as well as the scientific process.

BIO 220 Microbiology

BIO 220 (Formerly BI 221) – Microbiology

This course provides information concerning the nature and diversity of microorganisms. Additionally, BIO 220 covers specific properties of eukaryotic and prokaryotic organisms and their roles in the disease process. Three hours of lecture and three hours of laboratory per week (4 Credits). Prerequisites: BIO120 and BIO121.

Objectives:

1. To identify characteristics of the different classes of microbes.

2. To explain morphology, size, genetics, biochemical reactions and growth requirements of Microbes.

3. To list medically important microbes and the medical disease(s) caused by each as well as understanding individual treatments of each.

4. To perform common microbiology laboratory techniques, such as microscopic viewing of microbes, sterile technique, culture techniques, staining methods, biochemical testing of both carbohydrate and protein catabolism and sensitivity testing.

Objectives:

5. To research both known and unknown organisms through the use of Bergey's Manual.
6. To present and articulate some topic of microbiological research that has impacted the world.

BIO 225 Ecology & Evolutionary Biology

BIO 225 (Formerly BI 222) – Ecology and Evolutionary Biology

This course is an introduction to the principles of ecology and evolution, emphasizing the interrelationships between organisms and their environment. Topics include the historical development of evolutionary theory, the role of genetics, history of life on earth, and physiological, population, community, and ecosystem ecology. Three hours of lecture and three hours of laboratory per week (4 Credits). Prerequisites: BIO120, BIO125, BIO121 and BIO126.

Objectives:

1. To review the historical and biological development of evolutionary theory.
2. To integrate genetics and heredity into an understanding of evolution.
3. To analyze nutritional cycles and investigate their impact on ecosystems.
4. To evaluate ecological relations from different levels (individuals, populations, communities, and ecosystems).
5. To graph and interpret population dynamics and growth.
6. To compare and contrast different communities and ecosystems and their properties.
7. To use the laboratory and experiments to reinforce ecological and evolutionary concepts discussed in the classroom such as population growth, food chains and webs, ecosystem assessment, natural selection, and plant/animal adaptations.

BIO 235 Anatomy & Physiology II

This course is a continuation of Anatomy and Physiology I. Structure and physiology of the following systems are included: respiratory, endocrine, cardiovascular, reproductive, and lymphatic systems. Laboratory provides students with hands-on exercises to better visualize and enhance lecture topics. The laboratory relies on dissections to illustrate anatomical principles. Anatomy and Physiology II is a 4-credit course consisting of 3 hours of lecture and 3 hours of laboratory per week. Prerequisite: BIO205

Objectives:

1. To label, and demonstrate the body directions, body planes, body regions and body cavities.
2. To discuss the anatomy and physiology of the components of the circulatory system.
3. To describe the interrelationship between the anatomy and the physiology of the respiratory system.
4. To demonstrate and outline the anatomy and physiology of the digestive system.
5. To describe the components and function of the urinary system.
6. To review the functions and components of the reproductive system.
7. To explain the anatomy and physiology of the endocrine system and its role in regulation.
8. To demonstrate the anatomy and physiology of the immune system and its relationship to the health of the individual.
9. To define homeostasis and describe how the different organ systems regulate and maintain this state.
10. To complete laboratory exercises which both reinforce and increase a student's understanding of the topics covered in class as well as in the scientific process.

BIO 255 Freshwater Ecosystems

This course is designed to introduce students to freshwater ecosystems with special emphasis on Northeastern United States. Students will learn the characteristics of different freshwater habitats, along with the interconnected abiotic and biotic factors within each. Students will learn to identify common reptiles, fish, amphibians, and macro-invertebrates that live around and within freshwater ecosystems. (4 Credits)

Objectives:

1. Learn the characteristics of different freshwater ecosystems.
2. Learn the abiotic factors within freshwater ecosystems.
3. Learn the biotic factors within freshwater ecosystems.
4. Be able to identify common reptiles, fish, amphibians, and macro-invertebrates that live around and within freshwater ecosystems.
5. Gain a deeper understanding of ecology and how all thing within an ecosystem are dependent on one another.
6. Learn how to use field guides.
7. Understand the role of conservation organizations and law enforcement in freshwater ecosystems.
8. Keep an appropriately detailed field journal.

BIO 260 Intro Infectious Disease Epidem

Introduction to Infectious Disease Epidemiology. This course will introduce the students to basic concepts in epidemiology. The emphasis will be on descriptive epidemiology and explore the investigation and control of infectious diseases within the human population. Focus will be on transmission, pathogenesis, treatment, prevention and control of the major emerging and re-emerging infectious diseases of the 21st century (3 credits) Prerequisites BIO 120/BIO 121

Objectives:

1. Describe the epidemiological characteristics of the Major Infectious diseases of Humans.
2. Explain the different transmission characteristics of different types of infectious disease including fungi, bacteria, parasites and viruses.
3. Analyze the role of the immune response in the controlling of infectious diseases.
4. Research the mechanism of vaccines and medicines in preventing epidemics.
5. Survey emerging infectious disease.
6. Evaluate epidemiological characteristics which can then be used to develop strategies to prevent epidemics or endemic transmission of major infectious disease of humans.

Business

BUS 105 Introduction to Business

Introduction to Business explores a broad range of business concepts, provides basic knowledge needed in subsequent business courses, and helps students to see the role of business in society; examines top- and first-line management decisions in large and small business environments. (3 credits)

Objectives:

1. Differentiate specific business department functions and organizational structures.
2. Identify diverse, corporate ethical and socially responsible behavior in the business environment.
3. Describe the role of product, price, place and promotion in marketing.
4. Recognize the key areas of money, finance and investments.

Objectives:

5. Explore the evolution of common business practices and professional etiquette.

6. Develop an understanding for the formulation of a start-up, sole proprietorship, partnership, limited liability corporation (LLC), and corporation.

BUS 310 Organizational Behavior

This course is designed to explore the various human relationships and interactions that effect business operations. These behaviors are explored at both the micro and macro levels in relation to improving company culture. (3 credits)

Objectives:

1. Critically examine traditional and current theories of organizational behavior; discuss the motivations for the change and development of new theories.

2. Discuss micro-organizational and macro-organizational behaviors as they apply to company cultures through an international lens.

3. Critique the organizational behavior of a company internally and externally, from several perspectives.

4. Investigate methods and approaches used to effect, enhance, and redirect company culture at both the macro and micro levels. This should incorporate a review of surface-level and deep-level diversity, and equity among employees, in each facet of the organization.

5. Define the role of business leaders at various levels within the organization in managing organizational behavior.

BUS 315 Operations Management

This course combines managerial philosophies with budgeting processes and analysis. In addition, students will study business environments and scenarios through financial and non-financial lenses. Modeling, planning, and forecasting will allow students to explore various approaches to operating process-management driven businesses. (3 credits)
Prerequisites: MGT105 AND ACC220

Objectives:

1. Identify commonly used management philosophies and techniques for performance improvement and quality improvement within the context of business operations.

2. Prepare a budget to guide business decisions based upon case studies and research.

3. Determine which financial and non-financial measures are appropriate to analyze specific aspects of an entity's performance and risk profile. Examples might include Return on Equity, Return on Assets, Contribution Margin, etc.

4. Apply cost accounting concepts, terminology, methods, and measurement techniques within an entity.

5. Utilize forecasting and projection techniques to model revenue growth, cost and expense characteristics, profitability, etc.

6. Compare and contrast alternative approaches to address business challenges or opportunities for a given entity. Examples might include system replacement, cost/benefit analyses, and make vs. buy approaches.

BUS 320 eCommerce:Digital Mkt & Mgmt

This course is designed to seamlessly integrate the foundations of marketing and management with cutting edge business technology trends and automation. A hands-on approach will allow students to investigate business operations beyond the scope of what is easily seen on a web page.
Students will demonstrate their ability to synthesize these concepts by partnering with local businesses without current eBusiness solutions in order to determine what eBusiness items could be added. The focus will be on improving business operations through these additions.
(3 credits)
Prerequisites:
MKT105 and CIS105 or MKT105 and CIS115

Objectives:

1. Recognize the ways in which business operations have been effected by the increased usage of technological innovations such as e-commerce and automation.

2. Discuss and utilize the tools available to perform eBusiness operations, like online retail management; introduce methods of organization and maintenance.

3. Assess e-commerce as it relates to sales and marketing through quantifiable measures such as "add to cart" rates.

4. Identify various use-schemes and ethics associated with implementing social media platforms to enhance the customer experience.

5. Determine the areas of growth in existing business models, and develop a plan to integrate updated strategies with regards to eBusiness technologies.

BUS 325 Exploring Business Research

This course will describe qualitative research practices used by businesses in decision-making processes, such as interviews, focus groups, observations, and literature reviews. Students will demonstrate competency in designing, implementing, and analyzing the results of these qualitative research methods using practical examples (3 credits) Pre-requisites: MGT105 AND ENG105

Objectives:

1. Find, evaluate, critically analyze, and communicate the literature that is pertinent to a specific topic, issue, or question.

2. Demonstrate the ability to identify scholarly, peer-reviewed research.

3. Compare quantitative and qualitative research to determine appropriate use given specific research objectives.

4. Design and implement qualitative research methods, such as interviews, semi-structured interviews, focus groups, observations, etc.

5. Report on qualitative research findings for both academic and business audiences.

6. Apply the common elements of APA style formatting.

BUS 335 Business Statistics

In this course, students will begin to deepen their understanding of statistics and the implications of the results. The main purpose of the course is to integrate descriptive statistics with current business models; the application of this integration will be used in decision-making processes. Assignments throughout the course will be completed using Microsoft Excel. In addition, students will be prepared to complete the Microsoft Excel Expert Certification exam (optional). (3 credits)
Prerequisites: CIS210 and MAT135

Objectives:

1. Discuss the ways in which data is collected and applied in business research.

Objectives:

2. Explain how basic descriptive statistics concepts apply to business scenarios through data presentation.

3. Effectively test a hypothesis to determine correlation, and compare data from various sample populations.

4. Determine an effective method of statistical assessment based on the needs of a company and interpret results to make recommendations for business strategies.

5. Take on the role of a business consultant for a company through the synthesis of sampling methods, investigation techniques, and the interpretation of results as they relate to a company's decisions.

6. Use technology to assist in the finding and presentation of data.

BUS 400 Business Internship

The internship program is required for students pursuing a bachelor in Business. This program is designed to provide student interns the opportunity for a meaningful career-related experience in a corporation, government, and/or a non-profit organization. Student interns are expected to practice and expand upon their knowledge and skills learned in the classroom in a hands-on work environment. This experience should provide a better understanding of the business surroundings while facilitating the transition from the classroom to the career environment. (3 credits) Prerequisite: ESW101

Objectives:

1. Work Quality - Plans ahead to complete work thoroughly and accurately, understands requirements, sees assignments through to completion and meets all deadlines and expectations. Displays a positive attitude.

2. Productivity – Produces a reasonable amount of work in the time allotted. Completes activities in an organized, timely and efficient manner. Plans ahead and meets deadlines.

3. Self-development – Presents a professional image and reaches out to co-workers. Seeks training, instructions and feedback. Takes ownership of own development. Is inquisitive and seeks answers.

4. Effort/Initiative – Seeks out new assignments and duties; wants to learn more about the internship and business. Takes initiative to help others and pitches in where needed. Suggests and implements solutions.

5. Effective Communication – Effectively gives and receives information, ideas and opinions verbally and in writing. Keeps supervisor and co-workers updated on progress. Uses common courtesies and reaches out to help others.

6. Customer Focus – Demonstrates appropriate attention to customer needs when making decisions and taking action. Is responsive and courteous with customers. Listens and empathizes with customer concerns. Researches concerns to find solutions.

7. Job Knowledge – Understands duties and responsibilities. Seeks instructions and advice from key colleagues. Sets goals and is organized. Wants to learn new things and asks questions to clarify information.

8. Teamwork/Cooperation – Willingness and ability to work and cooperate with others. Solicits the advice and opinions of others and is open-minded. Seeks to collaborate with the team on solutions.

9. Problem Solving – Resolves problems effectively by considering appropriate options before making a decision. Looks for and considers alternative solutions. Open to new ideas and pro-active in finding ways to avoid problems.

10. Modeling Company Values – Shows an approach towards people and work that is consistent with the overall values of the business. Professional in appearance and demeanor.

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BUS 401 Contemporary Issues Global Buiness

This seminar style course engages students in conversation and collaboration about relevant modern business development, maintenance, evaluation, issues, and response. Students will develop problem solving and analytical skills through the multi-perspective investigation and consideration of present-day ongoing business scenarios both domestically and globally. In today's rapidly changing business environment, an awareness of emerging trends and issues is essential. Practical exercises and available literature will provide a realistic approach to understanding the complexity of these trends and how they can impact current business practices. All topics will be considered, from managerial strategy and corporate policy, theory, and behavior to human resources, economics, and entrepreneurship. This will serve as the concluding course in the Bachelor Program. (1 credit)

Objectives:

1. Identify contemporary topics in domestic and global business and analyze the weaknesses in current solutions through an examination of existing theory and practice.

2. Develop problem solving skills that integrate foundational business concepts and decision-making techniques to propose meaningful and ethical alternatives to emerging issues in a variety of business contexts.

3. Use key business concepts and tools to engage in strategic planning, policy formulation, and implementation within an authentic business environment.

4. Demonstrate the ability to communicate and function effectively as a member of a team.

BUS 410 Organizational Leadership

This course presents leadership theories and concepts that have emerged over the past several decades. It provides students the opportunity to apply these theories through case analysis and hands on learning and, to enhance personal skill development through self-assessment. Students will examine current leaders and contemporary perspectives on ethics and social responsibilty, organizational culture and design, diversity, business strategy selection, and crisis management. (3 credits)

Objectives:

1. Analyze the knowledge, understanding, tools and skills necessary to assume leadership roles in organizations at the local, state, national, and international levels.".

2. Relate theory to practice and demonstrate synthesis of advanced knowledge by improving organizations through hands on learning.

3. Adopt habits of personal and scholarly reflections that examine professional practice and lead to global renewal..

4. Identify opportunities for planned change based on a systemic view of organizations and use information and data to formulate strategic cost-effective project proposals.

5. Recognize the moral implications of ethical dilemmas in various settings and apply ethical reasoning with consideration for diversity and inclusion.

6. Work collaboratively and constructively with others as both a team member and team leader.

7. Monitor and manage personal and professional growth and development.

Cardiac Sonography

CDS 105 Cardio Clinical Lab I

Beginning students in the Cardiac Sonography program will gain basic entry-level knowledge of the field of Cardiac Sonography. This integrated clinical rotation along with in-house lab time will introduce the students to all areas of the cardiac laboratory and will include an introduction to equipment and basic scanning techniques through observation and minimal hands-on instruction. Students will meet monthly throughout the semester in group meetings for one hour to compare and contrast individual experiences in the clinical rotation. (1 Credit)

Objectives:

1. Maintain proper dress code as stated in handbook.

2. Use professional judgment and discretion, protect patients' privacy rights, maintain confidentiality and perform within the scope of practice.

3. Observe and identify pertinent patient history and physical examination.

4. Identify the appropriate technical worksheets used in the patient evaluation.

5. Identify the function of equipment utilized.

6. Observe and become familiar with the function and responsibilities of each clinical area as it relates to the field of diagnostic ultrasound.

7. Observe and recognize basic departmental duties of staff members in each clinical area.

8. In an ultrasound laboratory, observe and recognize proper equipment transducer and techniques for requested scanning procedure.

9. In a cardiac laboratory, observe and recognize correct manipulation of the ultrasound equipment for optimum image resolution.

10. In a clinical setting, observe and recognize appropriate indications for testing of the abdomen, pelvis and small parts structures that relate to diagnostic ultrasound procedures.

CDS 110 Cardio Clinical Lab II

Students with some working knowledge of the equipment utilized in the Cardiac Laboratory will gain basic entry-level knowledge of the overall operation and function of the Cardiac Lab. Through hands-on experience, the student will learn how the Cardiac Lab functions in the overall assessment and treatment of individuals with suspected or documented cardiac disorders. Students will demonstrate knowledge, understanding, and proficiency in the use of quantitative principles applied to the echocardiogram and flow data including M-mode, two-dimensional imaging, and Doppler (pulsed-wave, continuous wave, color flow and power). The student will apply application of the ultrasound utilities, transducer selection, and preparation and positioning for cardiac examination. Students will document normal findings of the echocardiogram and Doppler flow. Students will identify, recognize, and appropriately document abnormal echocardiogram and Doppler patterns of disease and pathophysiology listed. (3 Credits)

Objectives:

1. Maintain proper dress code as stated in handbook.

2. Use professional judgment and discretion, protect patients privacy rights, maintain confidentiality and perform within the scope of practice.

3. Observe and identify pertinent patient history and physical examination.

4. Identify the appropriate technical worksheets used in the patient evaluation.

5. Identify the function of equipment utilized.

6. Observe and become familiar with the function and responsibilities of each clinical area as it relates to the field of diagnostic ultrasound.

7. Observe and recognize basic departmental duties of staff members in each clinical area.

Objectives:

8. In and ultrasound laboratory, observe and recognize proper equipment transducer a d techniques for requested scanning procedure.

9. In a cardiac laboratory, observe and recognize correct manipulation of the ultrasound equipment for optimum image resolution.

10. In a clinical setting, observe and recognize appropriate indications for testing of the abdomen, pelvis and small parts structures that relate to diagnostic ultrasound procedures.

CDS 115 Skills Lab I

Students in this course will learn the sonographic applications of cardiac imaging of the adult heart and the responsibility while preparing for the transthoracic echocardiogram (TTE). The student will learn application of the ultrasound machine, transducer selection, and preparation and positioning for cardiac examination. Students will be able to demonstrate normal anatomy of the adult heart by utilizing 2D imaging, Color Doppler flow techniques, M-mode applications, routine valve calculations, cardiac dimensions, and diastolic function parameters through the appropriate cardiac imaging planes and windows. (2 Credits)

Objectives:

1. Sonographic Terminology.
2. Knobology of the ultrasound system and transducer selection.
3. Patient positioning for adult echocardiography.
4. Define and demonstrate normal anatomy utilizing the imaging planes and window for adult echo.
5. Describe and demonstrate normal cardiac anatomy utilizing 2D imaging.
6. Describe and demonstrate normal cardiac anatomy utilizing Color and Doppler flow techniques.
7. Describe and demonstrate normal cardiac anatomy utilizing M-Mode application.
8. Recognition of technical artifact and setup errors.

CDS 120 Cardio Pathophysiology I

Students in this course will have an understanding of the etiologies, clinical manifestations, morphological changes, and sequelae and typical pathways of cardiac diseases covered in this section. Of course the focus will be on the role of the sonographer and echocardiography in identifying and assessing these diseases. Be aware that the pathology dealt with in this section will intersect with that covered in Pathophysiology I; this redundancy (review) is necessary and intentional.

Over the course of the class, a large amount of information on cardiac pathophysiology that was not covered in the first section will be presented with using a traditional teaching style. This includes lecture and reviews, scrutiny of still images and echo "clips", frequent testing, a student presentation and creation of an outline. Any additional resources will be provided by the instructor, but is recommended that the student consult additional general texts on cardiac disease while preparing their outlines and presentation. (3 Credits)

Objectives:

1. List and Describe principles of echocardiographic images and Doppler analysis.
2. List and Describe indications for echocardiography.
3. List and Describe patient symptoms, history and physical examination.
4. List and Identify Congenital Heart Disease as it applies to Echo.
5. List and Identify Disease of the Great Vessels as it applies to Echo.
6. Describe and Identify Valvular Stenosis and Regurgitation of the Mitral, Aortic, Pulmonic and Tricuspid Valves.

Objectives:

7. List and Describe the quantitative evaluations of Valvular Stenosis and Regurgitation of the Mitral, Aortic, Pulmonic and Tricuspid Valves.

8. Describe and Identify Mitral Valve Prolapse as it pertains to Echocardiography.

9. Describe and Identify Prosthetic Heart Valves.

CDS 130 EKG/Lab

Students will learn the concept and skill to perform and read an ECG examination through classroom study and clinical experience. Students will learn the background needed to perform an ECG through recognition of heart anatomy and physiology, including biomechanics and electrophysiology. Students will be able to perform a 12-lead and 3-lead ECG through knowledge of limb and chest leads, electrode placement, and cable connections. Students will be able to analysis normal and abnormal types of rhythms, pacemaker rhythm, and myocardial infarct seen on ECG tracings. (2 Credits)

Objectives:

1. List and Describe the components of an ECG including limb and chest lead placement, cable connections, and electrode placement using a three and twelve lead connection.

2. List and Describe biomechanics and electrophysiology.

3. Rhythm strip analysis: normal and abnormal.

4. List and describe diagnosis for ECG examination.

5. Demonstrate proficiency and understanding in the use of quantitation principles as they apply to ECG examination.

CDS 150 Cardiac Intro to Vascular

This course will introduce the student to vascular sonography. It will include the hemodynamics, pathology and pathophysiology of the vascular system. The student will be introduced to normal and abnormal vasculature and the differentiation between the venous and arterial systems. Discussion will include the clinical signs and symptoms and the appropriate diagnostic testing and treatment of various vascular diseases. Emphasis will be placed on the functional workings and settings associated with vascular procedures. (3 Credits)

Objectives:

1. Define vascular terminology.

2. Describe vascular procedures and their appropriate clinical indicators.

3. Recognize normal and abnormal vascular structures on a sonogram.

4. Distinguish between venous and arterial characteristics on a gray scale image.

5. Describe the hemodynamics of the vascular system.

6. List the effects of respiration, augmentation and valsalva maneuvers on the venous system.

7. Describe the potential causes of pulsatile venous flow patterns.

8. Explain vascular protocols.

9. Demonstrate proper transducer and equipment selection for performing a vascular examination.

10. Identify the correct uses of applying various Doppler techniques.

11. Discuss the role of sonography and the vascular system.

12. Discuss vascular measurements and their clinical significance.

13. Diagram the normal vascular anatomy.

Objectives:

14. Describe the various types of vascular pathology and their sonographic characteristics.

15. Identify the appropriate testing methods for lower and upper extremity venous and arterial examinations.

CDS 205 Cardio Clinical III

Having completed both the observational and limited hands-on scanning during clinical rotations, in conjunction with successful completion of all core ultrasound and general education courses, the student will now focus on obtaining entry-level skills and knowledge in the Cardiac Lab.

In this final semester, the students will undertake intensive clinical training utilizing all prior skills obtained in didactic and practical application. The student will refine scanning skills and gain experience. Execution of sonographic examinations will be performed under direct and indirect supervision of the qualified clinical instructor. The student will be solely in the clinical environment preparing for their future career. By integrating didactic and laboratory skills learned in the classroom and lab, the student will improve their practical skills and overall knowledge necessary to obtain an entry-level position in the field of Cardiac Sonography. (15 Credits)

Objectives:

1. Maintain proper dress code as stated in handbook.

2. Use professional judgment and discretion: a. Protect patient's privacy rights, b. Maintain confidentiality, c. Perform within the scope of practice.

3. Perform complete non-invasive transthoracic echocardiogram testing protocol to include: 2D imaging, M-Mode, PW, CW and Color Doppler imaging.

4. Successfully challenge transthoracic echocardiogram demonstrating each of the following: Valvular Heart Disease, Ischemic Heart Disease, Cardiomyopathy, Myocarditis/Pericarditis, Pericardial Effusion/Tamponade, Myxoma/ Mass/Thrombus, Disease of the Aorta and/or Great Vessels, Congenital Anomaly, and Pulmonary Disease. *In the event the student is unable to fulfill the competency demonstrating a specific pathology listed above through no fault of the student, (ie. study volume), the student will have the opportunity to answer questions and demonstrate scan protocol through a simulated examination in the presence of either the Clinical Coordinator or Site Clinical Preceptor.

5. In addition, students will need to successfully challenge/assist the following specialty examinations: Stress Echocardiography, Transesophageal Echocardiography, Intraoperative Echocardiography, Contrast Echocardiography, Three-Dimensional Echocardiography, and Echo-guided Procedure.

6. Apply the appropriate diagnostic criteria to each of the above listed testing protocols.

7. Successfully complete the Professionalism challenge.

8. Provide a complete and accurate assessment of all testing findings in a preliminary impression.

9. Describe and/or demonstrate appropriate procedures for assuring the accurate and timely interpretation of studies according to the clinical sites policies.

10. Assist and perform daily duties as assigned by clinical site Preceptor/instructor.

11. Demonstrate proficiency in all required competencies as listed in the Clinical Binder.

12. Maintain clear and accurate records/forms as required in the Clinical Binder.

13. Submit accurate and concise paperwork in a timely manner as required by the Clinical instructor (i.e., logsheets, timesheets, evaluation sheets, competencies, final summary sheets including hours and study volumes).

CDS 210 Pharmacology Skills/Therapeutic Tec

This course deals with the properties and effects of cardiac drugs and therapeutic techniques. This course is designed to provide basic knowledge of medication theory and application and basic knowledge of cardiovascular surgery and interventional cardiology. Students will demonstrate knowledge of other cardiac procedures emphasizing indications, utility, and limitations of angiography and cardiac catheterization Student will also demonstrate knowledge and understanding of clinical pharmacology as it relates to provocative maneuvers and potential effects of cardiac medications on echocardiographic findings. This course consists solely of classroom (didactic) instruction. (2 Credits)

Objectives:

1. Identify classifications of cardiac medications.

2. Understand the indications for PTCA, CABG, Angioplasty, pacemaker and other alternative therapeutic procedures in cardiac care.

CDS 215 Skills Lab II

Students in this course will continue to advance in the sonographic applications of cardiac imaging of the adult heart and the responsibility while preparing for the transthoracic echocardiogram (TTE). Students will demonstrate knowledge, understanding, and proficiency in the use of quantitative principles applied to the echocardiogram and flow data. The student will apply application of the ultrasound utilities, transducer selection, and preparation and positioning for cardiac examination. Students will be able to demonstrate normal anatomy of the adult heart by utilizing 2D imaging, Color Doppler flow techniques, M-mode applications, routine valve calculations, cardiac dimensions, and diastolic function parameters through the appropriate cardiac imaging planes and windows.

In addition, students will demonstrate knowledge and understanding of clinical cardiology. Students will be able to relate the cardiac echocardiogram to the patient's history and physical examination including diagnosis for the exam, and differential diagnosis. Students will also demonstrate the knowledge of other cardiac procedures including Transesophageal echo (TEE), stress testing, contrast echo, cardiac catheterization, intraoperative echocardiography, three-dimensional, Echo-guided procedures, radionuclide studies and other tomographic imaging procedures. (2 Credits)

Objectives:

1. Sonographic Terminology.

2. Knobology of the ultrasound system and transducer selection.

3. Patient positioning for adult echocardiography.

4. Demonstrate knowledge, understanding and proficiency of normal anatomy utilizing the imaging planes and window for adult echo.

5. Demonstrate knowledge, understanding and proficiency normal cardiac anatomy utilizing 2D imaging, Color and Doppler flow techniques. M-mode.

6. Recognition of technical artifact and setup errors.

7. Demonstrate knowledge and understanding of the indications, utility, limitations and technical procedure for the following examinations: Stress Testing, Transesophageal Echo (TEE), Cardiac Catheterization, Intraoperative Echo, Contrast Echo, 3D Echo, and Echo-guided procedures.

CDS 220 Cardiac Pathophysiology II

Students will obtain the framework of Doppler Physics, intracardiac flow patterns with disease, indications for echocardiography, and identification of cardiac pathologies seen on an echocardiogram. Students will be able to list, describe and identify the basic principles for echocardiographic evaluation of that disease category along with the approach and differential diagnosis. Students will also learn the quantitative evaluations used in echocardiography. (3 Credits)

Objectives:

1. Demonstrates knowledge, understanding and proficiency in the use of quantitative principles applied to Doppler Echocardiography including Pulse wave and Continuous wave Doppler and Color flow Doppler.

Objectives:

2. Able to correlate regional wall motion abnormalities with coronary territory.

3. Identify complications associated with ischemic heart disease.

4. Provides an appropriate assessment of cardiovascular hemodynamics and flow patterns.

5. Demonstrates proficiency in recognizing, identifying, and appropriately documenting abnormal echocardiography, patterns of disease, pathology and pathophysiology for ischemic heart disease.

6. Able to evaluate diastolic function using left ventricular inflow, pulmonary venous flow, tissue and or color Doppler.

7. Able to assess and quantify ventricular and atrial size and systolic function.

8. Demonstrates proficiency in recognizing, identifying, and appropriately documenting abnormal echocardiography, patterns of disease, pathology and pathophysiology for cardiac thrombi, neoplasm or mass.

9. Able to identify primary vs. secondary cardiac tumors.

10. Obtains adequate images in 2D parasternal, shortaxis, apical, subcostal and suprasternal views as per protocol.

CDS 225 Cardio Vascular Anat & Physiology

Having completed the General Anatomy and Physiology course, students will take a more in depth look at the gross and cross sectional cardiac anatomy of the fetal and adult heart to include cardiac position, and relational and structural anatomy. Students will also learn fetal and adult heart physiology to include circulation of blood flow in the fetus and adult heart. An overview of the venous and arterial system will also be discussed in this course. Students will be able to identify normal cardiac anatomy of the adult heart by utilizing ultrasound techniques. (3 Credits)

Objectives:

1. List and Describe Embryology and Physiology of the Fetal Heart.

2. Describe and Identify Anatomical Cardiac Anatomy and Great Vessels as they relate to transthoracic echocardiography.

3. List and Describe blood flow through the heart and body.

4. Describe the venous and arterial physiology and hemodynamics of blood flow.

5. List and Describe Cardiovascular Physiology.

6. List and Describe electrophysiology and mechanisms of the heart.

7. Demonstrate and explain transthoracic echocardiography procedures and protocols using proper use of diagnostic techniques.

8. Demonstrate proficiency and understanding in the use of quantitation principles as they apply to cardiac physiology.

CDS 230 PEDS

Students in this course will learn basic cardiac imaging of the normal pediatric heart. The student will be able to relate the pediatric cardiac echocardiogram to the patient's history including diagnosis for the exam and differential diagnosis. The student will apply application of the ultrasound utilities, transducer selection, preparation and positioning for the pediatric cardiac examination. Cardiac diseases to be discussed are Atrial Septal
Defect, Kawasaki Disease, Patent Ductus Arteriosus, and Ventricular Septal Defects. (1 Credit)

Objectives:

1. Sonographic Terminology.

2. Knobology of the ultrasound system and transducer selection.

Objectives:

3. Patient positioning for echocardiography.

4. Demonstrate knowledge, understanding and proficiency of normal anatomy utilizing the imaging planes and window for pediatric echo.

5. Demonstrate knowledge, understanding and proficiency normal cardiac anatomy utilizing 2D imaging.

6. Demonstrate knowledge, understanding and proficiency normal cardiac anatomy utilizing Color and Doppler flow techniques.

7. Demonstrate knowledge, understanding and proficiency normal cardiac anatomy utilizing M-Mode application.

8. Recognition of technical artifact and setup errors.

Chemistry

CHM 110 Forensic Science

CHM 110 (Formerly CH 102) – Forensic Science

This course presents an overview of the application of science to law. Sample collection, handling, analysis and interpretation of physical, chemical and biological evidence from crime scenes are emphasized. Topics include searching the crime scene, nature of evidence, physical and chemical analysis, forensic toxicology, blood, DNA, and fingerprinting. This course includes both lecture and laboratory weekly. (3 Credits).

Objectives:

1. To describe the techniques, skills, and limitations of the modern crime laboratory.

2. To perform procedures and practices relating to the proper collection and preservation of evidence at crime scenes.

3. To explain how to analyze and evaluate physical, chemical, and biological evidence.

4. To scientifically explain the role of probability in statistical analysis of forensic evidence.

5. To evaluate mathematically the quality of forensic laboratory tests based on normal ranges, standard deviation, and quality controls.

6. To bridge the "communication gap" between those involved with the criminal justice system and forensic scientists.

7. To perform forensic laboratory testing, procedures, and run equipment after performing Forensic laboratory experiments and successfully completing lab reports.

CHM 120 General Chemistry I

CHM 120 (Formerly CH 123) – General Chemistry I

This course explores the fundamental laws, theories and mathematical concepts of chemistry with an emphasis on chemical properties, structure, stoichiometry and the periodic table. Intended for science majors. Three hours lecture per week (3 Credits). Prerequisite: CHM130 Corequisite: CHM 121.

Objectives:

2. To develop skills in problem solving using the unit conversion method; interconvert English-metric units, report answers using the appropriate number of significant figures.

3. To write the correct names and formulas for common molecular and ionic compounds, balance chemical reactions by inspection.

Objectives:

4. To determine number of subatomic particles in isotopes from periodic table information; describe element periodicity characteristics.

5. To calculate percent composition and determine empirical and molecular formulas from data; write net ionic equations using chemical reaction driving forces and solubility rules.

6. To calculate amounts of reactants and products using reaction stoichiometry, use the concept of limiting reactant, calculate theoretical and actual yields, percent yield.

7. To balance redox reactions using the half-reaction method.

CHM 121 General Chemistry I Lab

CHM 121 (Formerly CH 124) – General Chemistry I Laboratory

Three hours per week (1 Credit). Prerequisite: CHM130 Corequisite: CHM 120.

Objectives:

1. Apply proper safety protocols and wear safety gear (aprons, goggles) in the chemical laboratory.

2. Develop and use common laboratory glassware and equipment.

3. Collect and analyze chemical data involving separating mixtures, performing qualitative chemical analyses, determining empirical formulas experimentally.

4. To write a formal laboratory report in standard format.

5. To prepare students for future sciences courses in biology and chemistry and for future careers in the sciences.

CHM 125 General Chemistry II

CHM 125 (Formerly CH 125) – General Chemistry II

This course explores the fundamental laws, theories and mathematical concepts of chemistry with an emphasis on the chemistry of aqueous solutions, including reaction rates, acids and bases, oxidation-reduction, and chemical equilibria. Intended for science majors. Three hours lecture per week (3 Credits). Prerequisite: CHM 120 and CHM121 Corequisite: CHM 126

Objectives:

1. Understand the properties of solutions, including how to express and interconvert molarity, molality, mole percent, percent by mass and by volume; solve solubility problems as a function of temperature and pressure, including Henry's Law.

2. Understand the meaning of chemical reaction rate and orders of reaction by solving chemical rate problems mathematically and graphically; solve problems involving rate laws and integrated rate laws for zero-order, first-order, and second-order reactions; determine the exponents and rate constants in rate law equations.

3. Write equilibrium constant expressions for reversible reactions involving homogeneous and heterogeneous equilibria; interconvert between Kc and Kp; relate chemical equation stoichiometry and equilibrium constants; calculate equilibrium constants or concentrations from data; predict the direction of a reversible reaction after disturbance.

4. Write and identify conjugate acid-base pairs in reactions based on Arrhenius and Bronsted-Lowry definitions; assessing the relative strengths of acids and bases; calculate pH and associated variables for strong and weak acids and bases; manipulate and convert between Ka and Kb; solve acid-base reaction problems involving hydrolysis or cations and anions, as well as buffers; solve chemical equilibrium problems involving insoluble solids using Ksp.

CHM 126 General Chemistry II Lab

CH 126 - General Chemistry II - Lab (1 credit)

Three hours per week (1 Credit). Prerequisites: CHM120 AND CHM121. Corequisite: CHM 125.

Objectives:

1. Use standard laboratory apparatus in the execution of experiments involving the chemistry of aqueous solutions, particularly ionic reactions, chemical kinetics, and homogeneous and heterogeneous equilibria.

2. Record and analyze data by numerical computations with a calculator and computer spreadsheets, and graphical and statistical methods.

3. Report results and conclusions using standardized reports.

4. Wear chemical protection and exercise appropriate laboratory safety procedures while performing experiments and be aware of actions by others.

CHM 130 Integrated Science

This interdisciplinary course introduces the process of science to students pursuing science or health fields and develops the skills necessary to master the qualitative and quantitative aspects of the physical and life sciences. Emphasis will be placed on chemistry and its applications to other sciences, including biology, physics, and earth and environmental sciences. Topics include how to study science, the scientific method, scientific vocabulary, the metric system, unit conversions, analysis and interpretation of scientific data, and laboratory equipment and instrumentation. Material will be presented in the context of different scientific disciplines to illustrate common approaches in understanding the physical world. (3 Credits)

Objectives:

1. Learn how to learn science, develop time management skills, and understand the expectations of a college-level science course.

2. Understand the process of science by formulating testable hypotheses used in the scientific method.

3. Become familiar with scientific vocabulary used in different branches of science, and be able to figure out the meaning of scientific terminology by examining root words and their prefixes and suffixes.

4. Develop problem-solving skills in science by gaining confidence in manipulating and converting units of measurements used in equations, formulas, and word problems.

5. Analyze and interpret real scientific data obtained by observation and experimentation using graphical and statistical techniques.

6. Identify and explain the usage of common laboratory equipment and instrumentation used in scientific investigations.

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Computer Information Systems

CIS 105 Intro to Computer Applications

CIS 105 (Formerly IS 100) - Introduction to Computer Applications

This course provides an introduction to business computer applications. Students receive hands-on practice in Microsoft Office (Word, Excel, and PowerPoint) software. In addition, Google Docs, Google Sheets, and Google Slides are introduced so students become familiar with file sharing options, which can enhance group work and instructor-student interactions. Example projects include Word announcements, an APA formatted sample research paper, resume and cover letter. Excel workbooks use formulas, functions, charts, absolute cell references, and formatting. PowerPoint slide shows include bulleted lists, themes, clip art, and slide transitions. Students must achieve a prescribed level of proficiency in keyboarding. Extensive work on the student's own computer or in the college's computer labs is required. Students who have workplace or previous academic experience using MS Office are encouraged to enroll in CIS115 instead of CIS105. (3 Credits).

Objectives:

1. Correctly use the portal and college email.

2. Create, format, and edit a Word document; create a research paper with citations and references; create a business letter with a letterhead and table.

3. Create and edit a PowerPoint presentation with clip art; create a presentation with pictures, shapes, and word art; add media to a presentation.

4. Create an Excel worksheet and an embedded chart; use formulas, functions, and format the worksheet; work with large worksheets, charting, and what-if analysis.

5. Demonstrate the ability to share files and update files in real-time with classmates using Google Docs, Sheets, and Slides.

CIS 115 Computer Applications II

CIS 115 (Formerly IS 110) – Computer Applications II

This course builds upon a student's understanding of the basic features and options in Microsoft Office applications. The course focuses on the more complex and advanced capabilities of Word, Excel, and PowerPoint. Example projects include Word newsletters, tables, and form letters. Excel projects using data tables, templates, and linked workbooks. PowerPoint projects will include custom backgrounds, SmartArt Graphics, charts, tables, and hyperlinks. Extensive work on the student's own computer or in the college's computer labs is required. Students who enter with workplace or previous academic experience using MS Office are encouraged to enroll in this course instead of CIS105. (3 credits)

Objectives:

1. To construct Word documents that include: SmartArt graphics, section breaks, formatted headers and footers, sorted lists and tables, multi-level lists, and watermarks.

2. To construct Word documents that include: templates stored in popular alternative file formats to enable document sharing.

3. To construct Word documents that include: mail merge functions, data sources, and merge fields for letters, mailing labels, and directories.

4. To construct Excel workbooks that include: cell names, financial functions, data tables, section names, and cell protection.

5. To construct Excel workbooks that include: database tables, icon sets with conditional formatting, sorting, lookup functions, table queries, database functions, subtotals, and hidden data.

6. To construct PowerPoint presentations that employ SmartArt graphics, images, charts, tables, and symbols.

Objectives:

7. To construct PowerPoint presentations that employ tracking users' changes, comments, screen clipping, slide footers, slide show annotations, and storage options.

CIS 128 Visual Basic Programming

CIS 128 (Formerly IS 105) – Visual Basic Programming

This course serves to introduce students to the fundamentals of Microsoft Visual Basic programming. Each student will independently write, test, document, and debug Visual Basic programs in the Windows XP programming environment. Topics covered include: variables and constants, mathematical operators, data types, events and code, decision-making, repetition, functions, and procedures. (3 credits)

Objectives:

1. Demonstrate proficient use of the Visual Basic IDE (Integrated Development Environment) to independently create, store, and edit VB programs from instructor supplied specifications, which illustrate comprehension of object oriented programming concepts.

2. Use the following controls to construct Visual Basic programs: Forms, Buttons, Picture Boxes, Labels, Textboxes, Radio buttons, List Boxes, Checkboxes, and Combo Boxes.

3. Use sequential, selection, and repetition logic structures to code VB programs.

4. Debug a VB program using the system generated error/warning messages so that no errors or warnings are generated.

5. Include in their VB program, clear, concise, internal documentation, in the form of commentary statements. Documentation will also be demonstrated by the use of self-documenting (descriptive) identifiers throughout the source code.

6. Write a VB program and correct all logic errors to achieve the correct/desired output by utilizing a three-step process of creating the interface, setting properties, and writing code.

CIS 130 Hospitality Computer Applications

This course will expose students to the technology skills and knowledge used in the operations of hotels and food and beverage establishments. Focus is given to software applications for restaurant operations including point of sale systems and hotel property management systems. Students will analyze and review the selection and implementation of technology for effective use in the foodservice and hotel industries.

Objectives:

1. Achieve the ability to utilize Windows and Windows based user software at the highest capacity.

2. Create and present ideas through Prezi, the Web and the use of industry software.

3. Identify and explain the function of common PMS interfaces, which include point-of-sale systems, call accounting systems, energy management systems, electronic locking systems, and guest-operated devices.

4. Describe common hardware configurations of POS systems used by food service operations.

5. Explain the functions and use of food and beverage management applications, including those concerning recipe and menu management, sales analysis, and pre/postcosting.

6. Identify and describe the numerous accounting applications that are available to hospitality businesses.

7. Identify the various threats to technology systems and the security precautions that should be taken to keep those systems safe.

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CIS 210 Computerized Spreadsheets

CIS 210 (Formerly IS 210) - Computerized Spreadsheets

This course provides the student with an in-depth treatment of electronic spreadsheet software using Microsoft Excel. The course proceeds from the basics of spreadsheet design to such advanced topics as graphing, linking worksheets and macro creation (3 Credits). Prerequisite: CIS 105 Spreadsheets concepts are presented and developed in a computer lab environment with hands-on projects using the Microsoft Excel. Topics included are: formulas and functions, charts and graphics, pivot tables, pivot charts, multiple worksheets, advanced functions, conditional formatting and filtering, and integrating excel with other windows programs. Extensive work on the student's own computer or on the college's computer labs is required. (3 credits). Prerequisite: CIS105, CIS115 OR CIS130.

Objectives:

1. To gain intensive hands-on experience with the Microsoft Excel spreadsheet package in a laboratory environment.
2. To design, enter, edit, save, and print spreadsheets and graphs.
3. To analyze the needs of a spreadsheet and write formulas.
4. To design templates.
5. To be able to link worksheets.
6. To utilize database and other special functions.
7. To design and trouble-shoot macros.

CIS 220 Excel for Accounting

This course teaches our students how to create, customize, and analyze accounting tasks using Microsoft Excel. Excel is a worksheet application used to facilitate accounting tasks in a more efficient and accurate way. Students will apply their knowledge from Principles of Accounting I by using Excel to record journal entries, financial statements, inventory costing, bank reconciliations, amortization schedules, and payroll registers. Students will perform vertical and horizontal analysis on financial statements by creating charts and calculating financial ratios. Data analysis tools will be introduced to perform budgeting and cost analysis. Pre-req ACC105.

Objectives:

1. Create and customize a spreadsheet in order to journalize and post transactions by utilizing Excel's basic features that will be the foundation for all subsequent topics.

2. Create an Excel file as a base to significantly increase the efficiency of preparing financial statements by using row/column manipulation, text alignment/control, and worksheet management. Create, modify, copy, and correct Excel formulas in order to perform accounting tasks.

3. Examine an inventory listing and calculate inventory cost under the FIFO, LIFO, and Weighted Average methods by using analysis tools in Excel such as data bars and pivot tables.

4. Import data from other sources and apply quick styles and conditional formatting in order to prepare a bank reconciliation.

5. Use the Quick Analysis button and built-in functions of Excel to calculate the depreciation expense for fixed assets.

6. Use advanced functions to create a payroll register, examine the VLOOKUP function, and enhance the layout of your worksheets.

7. Create a bond amortization schedule using complex financial functions such as the PV (present value), FV (future value), and PMT (payment) functions.

8. Perform vertical and horizontal analysis on financial statements by creating charts and calculating financial ratios. Use data analysis to perform budgeting and cost analysis.

CIS 228 Java Programming

CIS 228 (Formerly IS 205) – Introduction to Java Programming

This course is an introduction to the Java programming language. Topics covered include the organization of a Java program, concepts and techniques of object-oriented programming, the structure and syntax of the language, concepts of data types, methods, decision-making and repetition, arrays, loops, sorting, and searching. Each student will independently write, test, document, and debug Java programs using an editor and the Java Software Development Kit (SDK) in the Windows XP programming environment. (3 Credits) Prerequisite: CIS128

Objectives:

1. Demonstrate proficient use of a text editor to independently create, store, and edit Java source programs (applications and applets) from instructor supplied specifications, which illustrate comprehension of object oriented programming concepts.

2. Compile Java source programs and to debug the source program using compiler generated error/warning messages so that no errors or warnings are generated. Compiled programs must produce the desired output when executed with no run-time errors.

3. Include in their Java source program, clear, concise, internal documentation, in the form of commentary statements. Documentation will also be demonstrated by the use of self-documenting data-names throughout the source code.

4. Write a Java program and correct all logic errors to achieve the correct/desired output illustrating: Sequence, iteration, and selection logic structures, elementary work with the java.awt package, arrays and sequential files.

Criminal Justice

CJS 105 Intro to Criminal Justice

CJS 105 (Formerly CJ 101) - Introduction to the Criminal Justice System

This survey course will provide the student with an introduction to formal institutions of social control, "the Criminal Justice System" and will closely examine the three major components of the criminal justice process: the police, the courts and the various forms of corrections and rehabilitation along with the history and role of each component. Additionally, the course will address crime in America as well as special criminal justice issues such as juvenile justice, drugs and crime and multi-national criminal justice systems in addition to discussing the future of criminal justice. (3 Credits)

Objectives:

1. Define the major components of the Criminal Justice System and explain the role of each (police, courts, corrections and rehabilitation) in the administration of justice.

2. Describe the history and role of the police, the courts and corrections as they relate to the Criminal Justice System.

3. Explain the nature of special criminal justice issues such as juvenile justice, drugs, multinational criminal.

4. Hypothesize the future of the criminal justice.

5. Identify correctional and rehabilitative components of the criminal justice system.

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CJS 110 Correctional Community

CJS 110 (Formerly CJ 102) - The Correctional Community

This course will offer the student an historical overview of the correctional system with emphasis on the third component of our criminal justice system, that of "Corrections" and will include the history of corrections in Pennsylvania,. An examination of the theories of punishment, role of the police, the courts and available correctional alternatives including but not limited to probation and intermediate sanctions, the state, local and private sector systems and their functions, the clients they serve, and their rights, inmate control and treatment, correctional classification, pre-release programs and community-based correctional programs. Alternatives to incarceration, including probation and parole, drug and alcohol treatment programs and mental health care will also be presented. Existing reintegration systems will also be explored in line with the future of the correctional community.(3 Credits).

Objectives:

1. Define the historical events regarding the correctional system in Pennsylvania.
2. Discuss theories of punishment utilized in the correctional community.
3. Describe the types of punishment for criminal activity and the rational.
4. Identify and describe alternatives to incarceration.

CJS 120 Criminal Law

CJS 120 (Formerly CJ 111 - Pennsylvania Criminal Law)
This course includes a study of the laws, both criminal and civil that law enforcement officials deal with on a daily basis. This includes study and understanding of defined requirements constituting the commission of a criminal act An examination of the fundamental nature of law, its contemporary role and function, and it's evolving changes in today's complex society will be presented.. Particular emphasis will be placed on criminal laws in Pennsylvania. Insights into the relevance of today's laws as they relate to various social issues and reflect the legal perspectives of other jurisdictions will be presented. Additionally, related legal terms and concepts including but not limited to criminal liability, inchoate crimes, defenses, excuses, property crimes as well as personal crimes and offenses against public morality and the Administration of Justice, the victims of crimes, punishment, and sentencing will be presented.(3 credits). Prerequisite: CJS105

Objectives:

1. Describe the fundamental nature of laws.
2. Illustrate the role and function of law in today's society.
3. Define the difference between property crimes and personal crimes.
4. Determine the legal perspective of other jurisdictions as they relate to the laws to social Issues.
5. Describe legal terms related to Pa Criminal Law.

CJS 125 Intro Search & Seizure

CJS 125 (Formerly CJ 112) - Introduction to Search and Seizure and Rules of Criminal Procedure
This course presents a practical approach to dealing with the complex and ever-changing laws of criminal procedure. An illumination of the many aspects of police investigatory practices will be highlighted along with explanations and rationale of the laws and recommendations to appropriately and legally deal with the requirements of the laws. Issues to be addressed will include basic individual rights under the United States and Pennsylvania constitutions, the maintenance of public order, arrest, confessions, search and seizure, pretrial identification, etc. Additional content will include a review of the duties, rights, and liabilities of a law enforcement professional and rights guaranteed by the Fourth, Fifth and Sixth amendments to the United States Constitution, along with the corresponding Amendments to the Pennsylvania Constitution, and how those rights affect the prevention, detection, investigation and prosecution of crime. (3 credits) Prerequisite: CJS105

Objectives:

1. Describe the laws of criminal procedure.
2. Identify police investigatory practices of search and seizures as it relates to the role of the 4th Amendment.

Objectives:

3. Analyze the legal requirements of a law 4. Define procedures associated with arrests, confessions, searches and seizures, pretrial Identification.

5. Describe the duties, rights and liabilities of a law enforcement professional as they relate to search and seizure.

CJS 130 Juvenile Delinquency

CJS 130 (Formerly CJ 107) - Juvenile Delinquency

This course surveys the major theories concerning juvenile delinquency. Juveniles with multiple problems are examined and the various theories outlining the historical causative factors contributing to juvenile delinquency. The legal history of the development of a separate criminal justice system for juveniles through English common law to current day is presented.. The role of the juvenile as a subcomponent of the larger criminal justice system and the problem of interfacing the juvenile system with the overall system will be examined with emphasis on the concept, process and components of the juvenile justice system, (including terminology, the police, the courts and corrections. (3 credits)

Objectives:

1. Define the concept, process and components of the juvenile justice system, (including terminology, the police, the courts and corrections).

2. Discuss various theories which outline the historical causative factors contributing to juvenile delinquency.

3. Identify the risk factors associated with endangered children/ maltreated/ abused and neglected.

4. Analyze the impact of the environment as it relates to gangs, violence, gender, and Schools.

5. Illustrate the role of the community, the family and community based programs (probation, placements, security) in prevention, control and treatment alternatives for Juveniles.

CJS 205 Police Operations

CJS 205 (Formerly CJ 204) - Police Operations
This course examines the problems of police organization and management, the allocation of police resources, information systems, community relations concerns and determinants of police policy will be presented with major emphasis on the initial major component of the criminal justice system "The Police". The history of policing will be explored as it evolved from the fifth century B.C. and the Roman Empire to today's technologically advanced Department of Homeland Security. An examination of the problems of police organization and management, the allocation of police resources, information systems, community relations concerns and determinants of police policy will be presented. The course also provides the student with a basic understanding of modern policing and will identify the organization, function, operational strategies and culture of the police as well as more current critical issues such as ethics, computers technology, less than lethal weapons, terrorism, D.N.A. Profiling and modern forensics, uniform patrol functions, criminal investigations and forensics are discussed and analyzed. This course also explores the ethical, emotional and physical aspects of a career in law enforcement. (3 Credits). Prerequisite: CJS105

Objectives:

1. Discuss the ethical, emotional and physical aspects of a career in law enforcement.

2. Define modern policing.

3. Identify what constitutes a police policy.

4. Describe the function of uniform patrols, criminal investigations.

5. Identify problems and issues with police organizations including but not limited to initial organization, management, resources, and community relation.

CJS 215 Prelim Law Enf/Crim Inv

CJS 215 (Formerly CJ 210) - Preliminary Law Enforcement and Criminal Investigation
This course will provide students with an overview of the fundamentals of the process of a criminal investigation. An exploration of related topics will include but not be limited to the history and development of the criminal investigations, the legal aspects, the role and responsibilities of the investigator, the process itself, and the tools and techniques the investigator will utilize in gathering information, the collection, prevention, interpretation and value of evidence as well as discussion of current trends and issues related to this field of study. (3 credits) Prerequisite: CJS105

Objectives:

1. Describe the process of a criminal investigation.
2. Outline the development of the criminal investigation from a historical perspective.
3. Define the legal aspects related to a criminal investigation.
4. Illustrate the role, responsibility, tools and techniques utilized by a criminal investigator in gathering information.
5. Analyze current trend and issues related to investigations.

CJS 230 Criminology

This course studies crime in society as a form of deviant behavior. It includes a review of classic and contemporary theories; an analysis of the nature and extent of crime; and an evaluation of prevention, control and treatment/rehabilitation programs (3 Credits). Prerequisite: CJS105

Objectives:

1. Define deviant behavior and its impact on society.
2. Discuss classical and contemporary theories of deviant behavior.
3. Analyze the nature and extent of crime.
4. Describe the effectiveness of current prevention, control and treatment/rehabilitation programs.

CJS 300 Criminal Justice Internship I

Students complete 120 hours per semester of experiential work. Students typically work in a criminal justice agency, in a non-profit agency which interacts with the criminal justice system, in an attorney's office, or in other similar positions promoting an understanding of Criminal Justice.Prerequisite ESW101.

Objectives:

1. To provide students with a renewed and deeper perspective of classroom learning.
2. To provide students with an opportunity to apply classroom learning in a professional setting.
3. To encourage students development of a professional identity.
4. To assist students in developing and enhancing appropriate professional skills and values.
5. To allow students to identify and clarify career interests.

CJS 305 Judicial Process

Study of the state and federal court systems and the impact those systems have on American politics and society. (3 credits) Prerequisite: CJS105

Objectives:

1. To understand the structure and functions of the American court system on both the national and state levels.
2. To understand the role of judges, lawyers and litigants.

Objectives:

3. To understand trial and appellate processes.

4. To understand the types of American law and the role of law in the American political and legal system.

5. To understand the structure, processes and power of the U.S. Supreme Court and the impact that Court has had in America's historical development.

CJS 310 Victims in the Justice System

Examination of the interface between victims and the various components of the criminal justice system. Topics include the history of the victims rights movement, victim prevention and victim assistance programs, victimization patterns and trends, victim interaction with law enforcement, victim rights and remedies in the court system, victim roles under the correctional system, demographic issues and concerns involving victims and offenders, and particularized consideration of victim issues in specific offenses including stalking, domestic violence, hate crimes and sex crimes involving adults and children.

Objectives:

1. To understand and appreciate the history and evolution of the Victim's Rights Movement.

2. To understand common terminology and methods used by professionals who interact with victims in the criminal justice system.

3. To explore regional and offense based variations in victims' rights and roles within the criminal justice system.

4. To examine the interaction between victims and law enforcement, the courts and the correctional system.

5. To focus on unique victimization issues inherent to specific criminal offenses.

6. To enhance critical thinking, research and writing skills on victims' issues.

CJS 320 Crisis Intervention

Survey of the current crisis intervention literature and introduction to the theories, principles, concepts, and techniques of crisis intervention. Upon completion, students should be able to predict who may need crisis intervention services and demonstrate the provision of first order crisis intervention.

Objectives:

1. To evaluate and apply theories, principles, concepts, and techniques of crisis intervention in social, therapeutic and business settings.

2. To engage in and evaluate first order crisis intervention skills.

3. To conduct and report in writing (APA format) research relevant to crisis intervention.

CJS 330 Terrorism

This course surveys contemporary terrorism, especially international terrorism. The course will examine controversies in defining terrorism; explore the historical roots of terrorism; examine terrorist motivations, organization and strategies; and explore ways in which countries can respond to the threat of terrorism.

Objectives:

1. To examine and evaluate significant definitions of terrorism.

2. To explore the diversity and evolution of terrorist groups, motivations, organization and tactics since the 1800s.

3. To identify and assess contemporary threats from terrorism.

4. To explore and evaluate means of preventing and combating terrorism.

CJS 335 Police in Democratic Society

Overview and analysis of law enforcement history, development, purposes and roles in a democratic society. Material is presented from a theoretical standpoint and examines critical issues and advances in crime control.

Objectives:

1. Describe the historical development of policing and law enforcement.
2. Explain the historical, social, political and democratic aspects of policing.
3. Articulate the police organizational process and police functions.
4. Describe the range of legal issues that are of special interest to police.
5. Explain common terminology and methods used by police professionals.

CJS 340 Private Security & Loss Prevention

A comprehensive survey of the private security field, including history, organizational and industry structure, strategies and tactics, legal and ethical issues, and employment possibilities.

Objectives:

1. To appreciate the history and evolution of the private security field.
2. To become exposed to common terminology and methods used by professionals in the private security system.
3. To survey legal and ethical issues connected with the private security function.
4. To explore current industry practices and market conditions in the private security field.
5. To examine the interface between law enforcement and the private security system.
6. To enhance critical thinking, research and writing skills on issues relevant to the private security system.

CJS 400 Criminal Justice Internship II

Students complete 120 hours per semester of experiential work. Students typically work in a criminal justice agency, in a non-profit agency which interacts with the criminal justice system, in an attorney's office, or in other similar positions promoting an understanding of Criminal Justice. (3 Credits)
Prerequisite: CJS300 OR ESW101.

Objectives:

1. To promote advanced personal and work skills.
2. To explore career options in areas related to criminal justice.
3. To promote advanced civic and social responsibility.
4. To promote learning through practical experience.
5. To increase advanced personal understanding of the criminal justice system as an enhancement to classroom understanding.

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CJS 401 Capstone in Contemp Issues in CJ

This capstone course enables the students to apply and reflect upon their education experiences in the Criminal Justice program. This process culminates with the presentation of a professional portfolio that highlights the knowledge, skills, resources, and tools developed and gathered over the course of their studies in criminal justice to demonstrate their academic, personal, and professional development.

Objectives:

1. Complete contemporary issues in Criminal Justice required to transition from college students to working professionals (graduation application, financial aid exit interview, graduation survey, portfolio components, interviewing skills, etc.).

2. Demonstrate professional aptitude as LC alumni with a focus on their personal impact on their greater communities and the significance of their life choices.

3. Evaluate and reflect upon their educational experience and goals by meeting with outside organizations within the criminal justice field to create a path toward future success.

CJS 410 Drug Abuse and Crime Control

Comprehensive examination of the interaction between drug abuse and the criminal justice system. Examines drug pharmacology, drug laws, public policy and the roles of the police. Prerequisites: PSY245

Objectives:

1. To understand drug pharmacology.

2. To increase awareness of how drugs interact and affect the human psyche and physiology.

3. To understand criminal organizations involved in trafficking illicit drugs.

4. To gain experience with common legal framework involved in the investigation and prosecution of illicit drug offenses.

5. To gain experience with the terminology and slang commonly used by criminals and criminal organizations in the trafficking of illicit drugs.

6. To understand the various types of dangerous drugs that are commonly abused from both illicit and legal sources of supply.

7. To demonstrate critical thinking, research and writing skills in drug abuse issues.

8. To delve into contemporary research in the area of drug abuse and trafficking.

CJS 415 Legal Research and Writing

Application of systems and methods of legal research to problems and issues in the Justice system. Prerequisite: CJS440 (3 Credits)

Objectives:

1. To understand the American legal system and the role of attorneys and related professionals in participating in the system.

2. To gain experience with common legal terminology and methods employed in researching legal issues.

3. To survey traditional and modern methods of conducting legal research.

4. To conduct legal research and to interpret and apply research to real and hypothetical problems.

5. To demonstrate critical thinking, research and writing skills on legal issues.

CJS 420 Organized Crime

Provides the student with a realistic concept and understanding of the problem of organized criminal activity in the United States. Focuses on theories and the evolution of traditional organized crime in America as well as examining the many new and emerging organized crime groups attempting to acquire a stronghold on domestic criminal enterprises. Prerequisite: CJS330 (3 Credits)

Objectives:

1. To understand organized criminal activity in the United States and abroad.

2. To understand traditional and non-traditional organized crime groups.

3. To gain experience with common legal framework involved in the investigation of organized crime and related offenses.

4. To understand terminology used by governments, theorists and professionals in the field of organized crime.

5. To understand the competing goals in identifying and investigating organized crime groups and those involved with them.

6. To demonstrate critical thinking, research and writing skills in organized crime issues.

7. To delve into contemporary research in the area of organized crime.

CJS 425 Understanding the Serial Killer

CJS425 This course will attempt to understand the motives, methods and states of mind of both serial and mass murderers. We will discuss the profiles of various killers and their victims, as well as the relevant criminological and victimological theories. Additionally, student's will analyze the public's and the criminal justice system's response to the development of the Serial/Mass murderer and how determine the best methods to utilize with regard to prevention, intervention, and/or punishment of these offenders. 3 cr. Prerequisite: ENG105

Objectives:

1.Compare and contrast the profiles of various Serial/Mass murderers.

2.Identify and analyze, in writing, the mind and motives of various Serial/Mass murderers.

3.Be able to discuss the different criminological theories of the Serial/Mass murderer.

4.Identify and describe the victimology of the Serial/Mass murderer.

5.Explain how the public and the Criminal Justice System has responded to the development of the Serial/Mass murderer.

CJS 430 Management of CJ Agencies

Examines criminal justice agencies within the context of current management principles, organizational theory, and administrative practices.

Objectives:

1. To understand and appreciate the history and evolution of management theory and practice.

2. To gain experience with the common terminology, methods and theories used and applied by managers in the criminal justice system.

3. To understand the roles and functions served by managers of public agencies and to distinguish the practical and legal differences between management of public entities as compared to management of private firms.

4. To apply competing methods and theories to real and hypothetical problems faced by managers in the criminal justice system.

5. To facilitate development of practical, conceptual and empirical tools for enhancing the performance of managers of criminal justice organizations.

Objectives:

6. To demonstrate critical thinking, research and writing skills on management issues.

CJS 440 Legal Issues in Criminal Justice

Analysis of current and controversial legal issues in the criminal justice system. Topics may include current Supreme Court issues, hate crime, domestic violence, gun control, the death penalty, police civil liability, privacy rights, wrongful conviction and public policy, plea bargaining, specialty courts, reforms to the justice system and law enforcement counter-terrorism activities.

Objectives:

1. To understand and appreciate current legal issues in the criminal justice system.
2. To focus on legal issues in the criminal justice system that are not considered or analyzed in other courses.
3. To gain experience with common legal terminology and competing legal and policy arguments.
4. To apply legal and policy principles to real and hypothetical fact situations.
5. To demonstrate critical thinking, research and writing skills on legal and policy issues in the criminal justice system.

CJS 445 Expert and Scientific Evidence

Examination of the role and function of expert and scientific evidence in the legal system, and critical evaluation of the standards governing the integration of law and science. Topics include the Frye, Daubert and other standards governing scientific evidence; ethical issues concerning expert testimony; the interface between the scientific, legal and law enforcement communities; and particularized consideration of evidentiary issues connected with specific scientific techniques. (3 Credits) Prerequisite: CHM110

Objectives:

1. To understand and appreciate the history and evolution of scientific and expert evidence in the justice system.
2. To understand the distinctions between the scientific and expert evidence and other forms of evidence in court proceedings.
3. To gain experience with the common legal terminology, methods and procedures connected with scientific and expert testimony.
4. To focus on legal issues and techniques connected with scientific and expert evidence in the criminal justice system which are not extensively considered or analyzed in other courses.
5. To examine the practical and theoretical difficulties in merging scientific and legal principles.
6. To demonstrate critical thinking, research and writing skills on issues relevant to scientific and expert evidence.

Conservation/Natural Resource

CNR 100 Park Mgmt/Enviro Interpretation

This course teaches students the basic principles of environmental and natural resource interpretation and management. Topics include environmental education, recreational programming, rules and regulations, interpretation, and public service. Course completion prepares the student for a career in the outdoors where there is a need to provide basic environmental education and programming in an outdoor recreational setting (both planned and impromptu). (3 credits)

Objectives:

1. Apply practical and identifiable methods to assess and manage the short and long term environmental impact of park and forest visitation in a recreational settings.
2. Utilize public-contact methods, techniques and skills to educate park/forest visitors.

Objectives:

3. Speak publicly in both group and one-on-one settings.

4. Develop and organize and present interpretive programs using learned methods and equipment.

5. Articulate the meaning, purpose, and consequence of recreational rules and regulations.

6. Understand and have the skills needed to obtain voluntary compliance of recreational rules and regulations.

7. Identify and articulate the distinct differences between the enforcement of recreational rules and regulations and regular law enforcement.

8. Understand and apply the skills necessary for stewards of public lands.

9. Describe key concepts and issues related to the philosophy, goals, and missions of agencies responsible for environmental recreation.

College 101

COL 101 College 101: Freshman Experience

COL 101- Freshman Experience is a course for first semester students at Lackawanna College intended to maximize the benefits of the college education by developing supportive relationships with faculty, staff and classmates. Emphasis will be placed on the college experience, academic skills, life skills, and institutional values. (1 Credit)

Objectives:

1. Describe the value of higher education make connections among courses in the core curriculum; and emphasize the benefits of lifelong learning.

2. Describe the roles and responsibilities of a Lackawanna College student with regard to the College's policies (e.g. Student Handbook).

3. Transact basic College business (e.g. advising and registration, interact with Financial Aid, view semester grades, navigate the portal, etc.).

4. Examine choices and consequences of college life in order to enhance wellness (e.g. emotional, spiritual, physical, financial, etc.).

5. Engage in reflection to identify and assess personal strengths and weaknesses and define personal values and goals.

6. Develop active, academic classroom skills in the areas of understanding personal learning styles, note-taking, and test taking.

7. Use organization and time-management techniques in response to competing curricular and co-curricular priorities and deadlines.

8. Use campus resources and technology (e.g. Seeley Memorial Library, Focus 2, etc.) to develop research skills.

9. Practice skills learned in DEV 010, DEV 020, and DEV 030 through participating in supplemental lessons and activities.

COL 201 Capstone Seminar

The Capstone is the culmination of the Lackawanna College learning experience for all associate graduates. Students will reflect on their overall experience, demonstrating how education has been applied to illustrate the values of a profession. Students will gather important information and tools necessary to prepare all for success in post-college employment and / or future education.

Note: COL201 is mandatory for all students. Students who fail this course will repeat in subsequent semester or subterm. Student who ultimately fail will receive a failing grade on their transcripts, which will affect their overall GPA.

Objectives:

1. Conduct basic college business (e.g. graduation application, financial aid exit interview, graduation survey, transfer options, etc.).

2. Through discussion, demonstrate achievement of critical thinking, communication skills, diversity/global awareness, respect for and acceptance of others, teamwork/collaboration, life-long learning, knowledge application, science/technology skills, and information literacy.

3. Explore, locate, evaluate and interpret career information and articulate acquired learning in platforms by submitting a résumé, a cover letter, personal statement, and letter(s) of reference.

4. Participate in the community culture of Lackawanna by completing a class service activity and delivering a voice over presentation.

5. Through a formal written paper, engage in reflection, self-knowledge, self-discovery and problem-solving to identify and assess personal strengths and weaknesses and define personal values and goals to enhance professional development and plan for the future.

6. Through artifact collection, demonstrate how applied learning in your major coursework and/or acquired important life skills through non-academic pursuits will help to advance your career aspirations.

Communications

COM 105 Intro to Mass Media

COM 105 (Formerly CM 100) - Introduction to Mass Media

This course is designed to familiarize the student with all phases of media, including newspapers, magazines, radio, films and television. Background information and contemporary technologies are studied to give the student a better understanding of all media forms and their impact on the public. Classes may be conducted at local radio/television stations and four-year universities. Seasoned professionals in the media field are invited to the class to give students a behind the scenes look at their particular careers (3 Credits).

Objectives:

1. Identify a number of media outlets.

2. Recognize various goals of different media organizations.

3. Review the past and present technologies used in media.

4. Examine the history of media and its contributions to society.

5. Critique and analyze the objectives of today's media.

6. Discuss their knowledge about current events, both local and national.

7. Compare occupations in the media field.

8. Provide an assortment of theories and arguments and the opportunity to apply them to specific and concrete examples and observations.

9. Demonstrate effective research and information management skills.

10. Utilize various forms of print and electronic references, evaluating each of these for logic, validity, and reliability.

Objectives:

11. Composing in an electronic environment and use the resources of word processing software to improve writing.

COM 125 Effective Speaking

COM 125 (Formerly EN 121) - Effective Speaking
This course stresses the various methods of speech for effective oral communication. Special emphasis is placed on the informative and persuasive speech, as well as on group presentations. At least three formal and informal speaking situations provide the student with a balance between the study of principles and practice (3 Credits).

If you are taking this course online, a Web Cam is required for this course, as well as a modern computer with Adobe Flash and broadband internet connection.

Objectives:

1. Explain what the communication process is and how it works.

2. Practice the listening process and know that "effective speaking" depends on "effective listening".

3. Practice the "fundamental principles" of speech preparation and organization: a. Finding a subject b. Determining speech purposes c. Framing thesis statements d. Developing content e. Arranging ideas coherently f. Outlining.

4. Demonstrate an understanding of the importance of language habits and semantics as they relate to "meaning" and one's total communication effectiveness.

5. Demonstrate principles of effective speaking by developing a number of extemporaneous and impromptu speeches during the course.

6. Demonstrate mastery of skills necessary for clear informative speaking.

7. Demonstrate knowledge and mastery of reasoning, motivating and refuting in the development and delivery of a persuasive speech.

8. Demonstrate increased self-confidence in oral communication through knowledge acquisition and skill mastery.

9. Demonstrate the ability to present speeches through the use of technology (i.e. PowerPoint, etc,).

COM 150 Intro to Film Study

COM150- (formerly CTN225) - Intro to Film Studies

This course is designed to provide students with an understanding of film analysis. Students will learn to appreciate film as art. Representative films are studied to understand the impact they have on modern society and on individuals (3 Credits).

Objectives:

1. Students will examine the history, people, theories and processes involved in the film and digital video production fields.

2. Students will discuss and demonstrate their knowledge and understanding of the terminologies and production techniques used in the film and digital video production fields.

3. Students will analyze and differentiate various film and digital video production styles.

4. Students will develop the foundation necessary to analytically and creatively think, write, speak and work in the film and digital production field.

5. Students will practice creating learned film and video techniques using digital video production equipment.

COM 205 New Media Journalism

COM 205 (Formerly CM 205) - Journalism I

This course is an introduction to writing for print, web, and T.V journalism - including practice in all activities relevant to news coverage. Students will become familiar with interviewing, editing, feature writing and many other aspects of journalism involved in today's communications-driven world. Students also will participate in the development of the College's newspaper, Off the Vine (3 Credits). Prerequisite: ENG 105

Objectives:

1. Conducting basic newswriting skills working toward a professional career in journalism.

2. Analyzing the writing process and include guidelines for good writing, grammar, punctuation, bias, sources, databases, editing as part of writing, the Internet, and different types of word usage.

3. Recognizing the need to understand and be more sensitive to language and increasing awareness of stereotypes.

4. Able to demonstrate to students how to evaluate their own writing as well as their classmates'.

5. Able to discuss the Internet and its effect on mass communication and discuss writing for the Internet to better prepare students for the different media in which they may work.

6. gaining a better assessment of professional resources on the Internet.

7. Participating in the creation of the College's own news publication.

8. Particulating a greater understanding of the reciprocal nature of media and culture.

9. Testing skills in critical thinking by providing an assortment of theories and arguments and the opportunity to apply them to specific and concrete examples and observations.

10. Becoming involved in their academic and local communities.

11. Able to demonstrate effective research and information management skills.

12. Able to demonstrate perseverance and learn from mistakes as students self-direct life-long learning.

13. Utilizing various forms of print and electronic references, evaluating each of these for logic, validity, and reliability.

14. Composing in an electronic environment and using the resources of word processing software to improve writing.

COM 208 Public Relations/Prof Wrtg

COM 208 (Formerly CM 208) - Public Relations/Professional Writing
This course is a workshop in public relations within the professional writing fields. Students will learn writing forms and styles, from basic press releases to multi-media public relations campaigns. Media relations, business ethics, and private and not-for-profit institutional case studies will also be covered. Students will have the opportunity to work "hands on" within the field through a public relations campaign project (3 Credits). Prerequisite: ENG105

Objectives:

1. Relating to what PR is and how it works in the real world.

2. Utilizing case studies and real world examples to make the material even more relevant for students.

3. Reading situations of debatable ethics, which will encourage them to think critically and prepare them to be ethical practitioners.

4. Able to recognize the important relationship between public relations and business.

5. Presenting new technology for public relations practitioners.

6. Presenting public relations as a global activity.

Objectives:

7. Analyzing systems within public relations, including specific processes for planning, writing, presenting, crisis communications, cross-cultural communication, and ethical decision-making.

8. Writing effectively for a number of different media.

9. Articulating a greater understanding of the reciprocal nature of media and culture.

10. Thinking critically through presentation of an assortment of theories and arguments and applying them to specific and concrete examples and observations.

11. Becoming involved in their academic and local communities.

12. Able to demonstrate effective research and information management skills.

13. Able to demonstrate perseverance and learn from mistakes as students self-direct life-long learning.

14. Utilizing various forms of print and electronic references, evaluating each of these for logic, validity, and reliability.

15. Composing in an electronic environment and using the resources of word processing software to improve writing.

COM 210 Media Scriptwriting

This course will teach students to write scripts for radio, television, and film including: newscasts, commercials, corporate scripts, and dramatic screenplays. Students will also learn about researching and editing original material. (3 Credits) Prerequisite: ENG105

Objectives:

1. Students critique legal aspects of writing for the media.

2. Students will write for news, both radio and television.

3. For the student to participate in the multi disciplinary team approach to script writing.

4. Students will learn how to work effectively with peers.

5. Students will learn research skills pertaining to programming objectives.

COM 228 Interpersonal Communication

COM 228 (Formerly CM 220) - Introduction to Interpersonal Communications

This course will explore intrapersonal and interpersonal communication processes. Students will learn the skills and techniques of enhancing interpersonal relationships. This course will provide students with an understanding of communication and self, interpersonal communication and perception, listening and responding, communicating nonverbally, and communicating verbally (3 Credits).

Objectives:

1. Exploring their own communication skills and individual effectiveness.

2. Collaborating and learning team-building skills.

3. Exploring their own problem-solving/critical thinking/skills.

4. Finding and analyzing their own leadership style.

5. Improving and working with individual and group communication skills and processes.

6. Creating projects where the emphasis is on seeking, understanding, and respecting the view of others.

Objectives:

7. Identifying personal and group interpersonal strengths, weaknesses, and preferences.

COM 245 Media Internship

COM 245 (Formerly CM 240) - Internship/Practicum

This course is designed to provide experience in a student's major field of study through full-time work. Students are graded on the basis of learning objectives and an employer's evaluation. On-the-job experience is supplemented by a consultation/reporting period of approximately 15 hours per semester, which will be individually arranged in a flexible time setting to meet criteria for the program and sponsoring agencies (3 Credits).

Objectives:

1. Achieving competence in areas of intended field of study.
2. Exposing themselves to the areas of communication arts and evaluated through professional supervision.
3. Demonstrating a working knowledge of ethical and professional practices.
4. Conducting an internship with professional maturity and engaging in professional relationships with the public and other professionals.
5. Developing a professional identity as a working communications practitioner.
6. Understanding the variety of opportunities and practices within the communications field.
7. Applying a commitment to lifelong learning.

COM 310 Writing for Social Media

This course will explore the many aspects of social media communication including the history of social media and its current hold on communication throughout the world. Students will write for social media and create their own digital communication using the latest social media platforms (Computer access is required) (3 credits)
Pre-requisite: ENG 105

Objectives:

1. Identify major social media platforms and the role they play.
2. Create content for various social media platforms.
3. Use social media as a tool to create effective digital messages.

Communications Technology

CTN 135 Basic Digital Production

CTN135 - This course covers the basics of digital production while providing students real-world, hands-on experiences with the equipment needed when working in today's digital production field. Students work on projects that teach them how to effectively collaborate in the three production phases - preproduction, production and post-production. Students will consistently use critical thinking skills and a good work ethic to develop a solid digital production foundation. Students are required to work in cooperative groups. Success in this course requires all students to work together in one way or another. This production course requires students to spend outside class time using equipment and computer software in the college's studio.

Objectives:

1. Produce various digital projects using a combination of photography, videography, audio recording and software.
2. Write scripts using scriptwriting software.

Objectives:

3. Learn basic production terminology, theories, disciplines, techniques, and aesthetic aspects used when creating quality digital projects.

4. Work responsibly, respectfully, professionally, creatively, and collaboratively in the digital production field.

5. Develop the communication and organizational skills necessary to work collaboratively on digital productions.

6. Critique professional and student produced productions for content and overall appeal, and recommend solutions for future productions.

CTN 230 Digital Journalism

CTN230 Digital Journalism (formerly Video Journalism) introduces and provides students the foundation to create journalistic and documentary style projects. This course provides students hands-on, real-life experiences with the equipment needed to work in today's digital video production field. Students learn how to professionally and ethically research, gather, organize and script factual information so they can present it in a news or documentary style. Be it news or documentary, Video Journalism teaches what "makes" a factual story and how to effectively "tell" it. Students will consistently use critical thinking skills and a good work ethic to achieve an advanced level of media literacy. Students will work in cooperative groups in a fast-paced/deadline oriented environment. Success in this class requires all students to work together in one way or another.
Prerequisites: CTN135, OR CTN245, OR CTN250

Objectives:

1. Students will recall production terminologies, theories, disciplines, and techniques used when working in the digital video production field.

2. Students will examine new production terminologies and techniques used in digital video journalism production.

3. Students will discuss the importance of working collaboratively, responsibly, respectfully, professionally, and creatively in a digital video journalism production environment.

4. Students will demonstrate successful communication and organizational skills necessary to work in a digital video journalism production environment.

5. Students will create digital video journalism projects using digital video cameras, microphones, lights, computers, nonlinear editing software, exporting software, and other digital applications and production equipment.

6. Students will assess their digital video production abilities.

CTN 235 Advanced Digital Production

CTN235 - This course expands on the basics covered in Basic Digital Production and focuses on the advanced digital production workflow both in studio and on location. Students revisit and further explore topics such as: scriptwriting, producing, directing, audio, camera operation, lighting, editing, and distribution. Students work with digital production equipment to produce various types of digital news and narrative projects. This production course requires students to spend outside class time using equipment and computer software in the college's studio. Pre-req - CTN135 or CTN245 or CTN250

Objectives:

1. Produce various digital projects using a combination of photography, videography, audio recording and software.

2. Write scripts using scriptwriting software.

3. Build on the skills and knowledge obtained in the beginning production course.

4. Gain technical proficiency along with aesthetic sensibilities.

5. Work responsibly, respectfully, professionally, creatively, and collaboratively in the digital production field.

Objectives:

6. Develop the communication and organizational skills necessary to work collaboratively on digital productions.

7. Critique professional and student produced productions for content and overall appeal, and recommend solutions for future productions.

CTN 245 Podcasting

CTN245 - This course teaches students the foundations of producing a podcast for various media formats, while incorporating the fundamentals of video production. Students will explore the history of the podcast, its different mediums, and current trends in the industry. This course will actively produce podcast content. Students are expected to have technical interest and be able to work independently and with others in a closed set environment. This production course requires students to spend outside class time using equipment and computer software in the college's studio.

Objectives:

1. Take turns in demonstrating the role of producer, director, camera operator, and editor in at least one recorded video podcast.

2. Produce scripted and freestyle podcasts using production equipment and software.

3. Develop production schedules and execute them according to timeline.

4. Explore the role of the podcasts as a media tool.

5. Recognize the podcast's role in the history of various media and explore its current value within a number of industries.

6. Analyze digital platforms for ease of use and visibility.

7. Critique professional and student produced productions for content and overall appeal, and recommend solutions for future productions.

CTN 250 Digital Storytelling

CTN250 - Everyone has a story. This course is your chance to tell yours or someone else's through the power of digital media. This course gives students the opportunity to create audio and video narrative projects through digital media. Students will participate in the examination of various media formats and their use of story as a tool for business, entertainment and overall information and awareness. Students are expected to have technical interest. This production course requires students to spend outside class time using equipment and computer software in the college's studio.

Objectives:

1. Produce digital storytelling projects using digital equipment and software.

2. Write scripts using using scriptwriting software.

3. Explore best practices and principles for creating amazing digital stories.

4. Work collaboratively and independently.

5. Expand on technical abilities and creative style with the use of various digital media.

6. Critique classmates creations and discuss possible revisions to projects.

CTN 255 Vlogging

CTN255 - This course introduces students to the vlog and the practice of vlogging. Students will examine popular vloggers and vlog channels on web based platforms and create vlogs centered around their own personal stories and interests and work with others in the college community interested in developing their own vlogs. Students will also explore the role of the vlog in society and its future in the media industry. Students are expected to have technical interest and be able to work independently and with others in a closed set environment. This production course requires students to spend outside class time using equipment and computer software in the college's studio. Pre-req - CTN135 or CTN245 or CTN250

Objectives:

1. Produce and edit a series of vlogs using equipment and software designed for vlogging.
2. Write scripts using using scriptwriting software.
3. Develop production schedules and execute them according to timeline.
4. Explore the role of the vlog as a media tool.
5. Analyze digital platforms for ease of use and visibility.
6. Critique professional and student produced vlogs for content and overall appeal, andrecommend solutions for future productions.

Culinary

CUL 100 Culinary Extern Prep 1

An introduction to the requirements of the externship course. Students will investigate the stages involved in developing a full-time job search. Emphasis will be placed on creating a strong resume and cover letter, interviewing skills and techniques, career planning, and course requirements. The process to secure the position as well as policies and procedures involved are also discussed. (Pass/Fail grading)

Objectives:

1. Create strong resumes and cover letters.
2. Develop strong interviewing skills and techniques that will help with obtaining a full time position within their field of study.

CUL 105 Culinary Extern Prep II

A continuation of the requirements needed for the externship course. Students will hone their interviewing skills and techniques, review and critique their resume and cover letter, develop the skills for securing the position and the follow up process. Emphasis will also be placed on the college's expectations of the student as well as a complete overview of the externship manual assignment. Lackawanna's mission and values, and the importance of professionalism are also stressed. A completed training agreement is required. (Pass/Fail grading). Prerequisite- CUL100.

Objectives:

1. Comprehend the responsibilities and expectations of the student while on externship.
2. Use the skill and techniques learned in previous prep class to obtain an extern position.
3. Engage in mock interviewing exercises.
4. Secure an externship position.

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CUL 115 Culinary Foundations

Culinary Foundations 1 will serve as an introduction to kitchen labs for the students. Class will teach basic knife skills and safety, vegetable cuts, basic stock and soup production, the mother sauces along with discussion given to derivative sauces, and introduction to basic cooking techniques and principles. Students will learn and become familiar with equipment used in professional kitchens. They will learn the basics of mise en place both mental and physical as they learn to set up their kitchen stations and as they employ the basics skills and techniques associated with timing, menu execution and plating. Students will learn an introduction to food costing and will build upon the knowledge of the brigade system and classical French culinary terminology acquired in previous classes. (3 credits) Formerly Food Skills Prerequisites: CUL145 AND HSP125 or BAK105 AND HSP125

Objectives:

1. Develop the foundation of a culinary skill set that will serve as a basis for the rest of their culinary education and professional work experiences.
2. Define food terminology and language and be able to operate proficiently in a professional kitchen environment.
3. Execute foundational cooking techniques accurately and according to industry time restraints.
4. Demonstrate competencies in plating.

CUL 130 Culinary & Hospit. Strategic Mgmt,

This class concentrates on the study of successes and failures in Culinary and Hospitality ventures via formulations of deliberate and emergent strategies. Students will learn how to form crisis intervention teams, discuss how technology and specifically internet commerce affects strategy and will discuss the responsibilities managers have to all culinary and hospitality stakeholders. The course will rely on textbook as well as current events and internet research to best understand and practically apply formulated strategies. Students will emerge with the ability to analyze the environments in which they will operate and will understand the basics of strategy formulation in order to realize success in the industry. (3 credits) Prerequisites: ENG105.

Objectives:

1. Describe industry leaders' successes and failures.
2. Apply critical thinking habits in various hospitality scenarios.
3. Show how to manage business resources including employees, assets, and guests and make decisions that will cause all three categories to grow and thrive.
4. Effectively develop and execute branding and marketing strategies in the culinary and hospitality industries.

CUL 140 Meat & Seafood Identification

This hands-on class will introduce students to the section of the industry concentrating on meat, poultry, fish and seafood items used in the professional kitchen. Students will learn the basics of purchasing meat and seafood with an eye for quality, receiving, handling, and storing. They will learn the primal cuts of meats used in the industry and sub cuts most often used in foodservice operations. Students will learn to break down whole fish as well as to butcher widely used cuts of meat and poultry used in professional kitchens into commonly used cuts. Students will learn to evaluate fish, shellfish, crustaceans as well as meat and poultry for marks of freshness and quality and will learn to apply proper cooking techniques and principles to each item. (3 credits) Prerequisites: CUL145 AND HSP125.

Objectives:

1. Contrast the primal cuts of beef, lamb, veal and pork as well as the anatomy and parts of chicken, turkey, duck and game birds.
2. Break down above-mentioned meats and whole fish into cuts and portions utilized in a professional kitchen.
3. Distinguish between the marks of quality and freshness for fish, seafood and crustaceans.

Objectives:

4. Apply cooking techniques to the various meat cuts, fish, seafood and crustaceans and identify which techniques and processes best suit a specific cut.

5. Demonstrate basic meat grinding and blending processes as well as describe charcuterie items.

6. Explain the health benefits of fish, safe storage, and service of fish as well as responsible, sustainable practices of fishing and farming.

CUL 145 Culinary Knowledge

This class will provide an introduction to the identification and use of the various edible tools of the trade- vegetables, fruits, herbs, nuts, grains, dry goods, prepared goods, dairy products, beverages and spices. Class time will be dedicated to the exploration of foods and ingredients, industry terminology and tool identification and will also identify how to evaluate products for marks of seasonality, freshness and quality. (3 credits)

Objectives:

1. Identify and explain the selection factors for fresh produce, nuts, herbs, certain dry ingredients and other perishable ingredients.

2. Explain how to effectively purchase, receive, store and issue perishables and dry goods.

3. Begin to build or to expand upon student's culinary palate to better create and execute outstanding recipes in a cost effective manner.

4. Comprehend the roots the Italian language has given our industry and be able to navigate and prepare Italian menus using authentic ingredients and cooking fundamentals.

5. Recognize the impact the French language and culture has had on our industry and to demonstrate proficiency in French cooking, menu terms, ingredients and cooking fundamentals.

CUL 150 Culinary Math

Culinary Math will prepare the student for responsible financial management in the culinary industry. Students will learn how to accurately convert recipes and cost ingredients in order to achieve a profitable food cost percentage. (3 credits)

Objectives:

1. Discuss common weight and volume measures in the U. S. customary system and in the metric system.

2. List and execute scaling factors and calculate a scaling factor using recipe yields.

3. List and correctly use: AP quantity, EP quantity, Yield percent, Trim loss and Trim loss percent.

4. Calculate the cost of an ingredient in a recipe.

5. Calculate the total cost of a recipe.

6. Calculate food cost percentage.

7. Apply kitchen ratios.

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CUL 200 Culinary Externship

Students will be required to complete a 300 hour externship with one of Lackawanna College's impressive industry partners. Externship will provide students the opportunity to reveal areas of specific interest through hands on hospitality experience. Students will explore and experiment in the chosen field while learning from industry professionals in a real working environment while gaining professional and resume building experience. (3 credits) Prerequisites: CUL100, CUL115, CUL140, CUL145, CUL150, CUL205, CUL227, CUL228, HSP105 AND HSP125 or CUL105 CUL100, CUL115, CUL140, CUL145, CUL150, CUL205, CUL227, CUL228, HSP105 AND HSP125

Objectives:

1. Comprehend the responsibilities and expectations of the student while on externship.
2. Use the skills and techniques learned in previous prep class to obtain an extern position.
3. Engage in mock interviewing exercisesf.
4. Secure an externship position.

CUL 205 Advanced Culinary Foundations

An in-depth study of the food preparation and serving techniques utilized in the professional kitchen. This course emphasizes team production, station setup, timing, service, and menu concept development and execution. Basic cooking and plating competencies will be reinforced and new skills specific to team preparation will be practiced. The course will introduce the student to foundational theories and techniques of basic protein, starch, and vegetable cookery. Cooking competencies include grain and legume cookery, pasta production and cooking, vegetarian and vegan cooking and, and cooking with consideration for dietary needs and restrictions. (6 Credits) Prerequisites: CUL115, CUL140, CUL145 AND HSP125

Objectives:

1. To prepare mother sauces, derivative sauces and all soup styles.
2. To compare and contrast the outcomes of acid and alkaline on vegetable cookery to ensure the best outcomes in taste, texture, color and nutritional content.
3. To demonstrate a basic knowledge of starch cooking ratios and outcomes by utilization of various cooking methods.
4. To apply the foundations methods of protein cookery by demonstrating the dry and moist heat cooking methods.
5. To explain the major food allergens and dietary restrictions the professional chef encounters today.
6. To create menus and recipes which demonstrate a knowledge of vegan and vegetarian diet restrictions, elimination of major and minor food allergens and special dietary restrictions.

CUL 227 Ala Carte Kitchen AM

Theories and cooking techniques from Culinary Foundations will be applied in a productions setting. Emphasis is placed on team as well as individual production. The focus is on cooking fundamentals, breakfast, brunch and lunch cookery, and batch cooking as executed in an ala carte style service. (3 Credits) Prerequisites:CUL115, CUL140, CUL145, CUL150, AND HSP125.

Objectives:

1. Apply learned techniques and skills to engage in team and individual production.
2. Execute breakfast, brunch, and lunch cookery in batch cooking fashion.
3. Demonstrate proficient station set-up and execution for AM ala carte service.

CUL 228 Ala Carte Kitchen PM

Theories and cooking techniques from Culinary Foundations will be applied in a productions setting. Emphasis is placed on team as well as individual production. The focus is on cooking fundamentals, ratios and formulas, dinner menus, and batch cooking as executed in an ala carte style service. Prerequisites: CUL115, CUL140, CUL145, CUL150 AND HSP125.

Objectives:

1. Using learned techniques and skills students will engage in team and individual production settings.
2. Demonstrate proficient station set-up and execution for PM ala carte service.
3. Execute dinner menus and batch cooking as it applies to ala carte service.
4. Perform calculations relating to kitchen ratios and formulas and to apply them in an ala carte setting.

CUL 238 Beverage Service Management

This course introduces the student to the history of the beverage industry as well as production and classification of beverage alcohol. Students will gain knowledge of beverages served in a variety of hospitality operations. Emphasis is placed on beverage sensory perception and food pairings, psychology of service, professional standards of performance for dining room personnel, service sequence, order taking, guest relations, and the liability of alcohol service. Creation of wine lists, beer lists and cocktail menus will also be examined, as well as strategies to effectively manage, market and set standards for beverage operations. A discussion on accountability and professionalism in a beverage environment will also be discussed. Both alcoholic and non-alcoholic beverages are examined. Prerequisite- Semester 1, 2, 3, externship (3 Credits) Prerequisite:ENG105.

Objectives:

1. Demonstrate proficiency in the standards of performance for dining room personnel, service sequence, guest relations, and the liabilities of alcohol service.
2. List the classifications of beverage alcohol.
3. Create menus and recipes utilizing wine, beer, spirits and non-alcoholic beverages and ingredients.
4. Identify areas of accountability and professionalism in a beverage environment.

CUL 242 Modern Restaurant Cuisine

This kitchen rotation relies on previously learned cooking fundamentals and techniques and applies them to specific cuisines, utilizing à la carte menu preparation in a contemporary restaurant setting. Students will further develop their ability to organize kitchen stations based on preparation methods. Emphasis will also be placed on the production of menu items, plate presentations, and cooking techniques as applied to specific cuisines. Prerequisite- Semester 1, 2, 3, externship (3 Credits) Prerequisites: CUL115, CUL140, CUL145, CUL200, CUL205, CUL227, CUL228 AND HSP125

Objectives:

1. Apply previously learned cooking fundamentals and techniques to specific cuisines.
2. Demonstrate their ability to organize kitchen stations based on preparation methods and ala carte preparations.
3. Appraise plate production and presentation skills.

CUL 245 Baking and Pastry Skills

Students will be introduced to the basic skills and techniques used in basic breads, desserts and pastries. Class will cover foundations lessons in yeast dough, laminated dough, basic cakes, ice creams and sorbets, custards and breads. (3 credits) Prerequisites: CUL115, CUL140, CUL145, CUL200, CUL205, CUL227, CUL228 AND HSP125

Objectives:

1. Obtain a solid theoretical and practical foundation of baking practices.
2. Practice basic theory, formulas, and measurements.

Objectives:

3. Demonstrate proficiency in procedures for basic breads, dough, cakes and icings.
4. Modify baking recipes for special dietary needs.

CUL 248 Advanced Baking & Pastry

Students will learn the principles and techniques needed for preparation and production of high-quality baked goods and pastries. Emphasis will be placed on fundamental production techniques, quality indicators, and baking and pastry ingredients and their functions. Students will gain a working knowledge of bread fermentation and productions, major mixing methods, dessert sauces, custards and frozen desserts. Students will also begin to examine different plating techniques for plated desserts. (3 Credits) Prerequisites: CUL115, CUL140, CUL145, CUL200, CUL205, CUL227, CUL228 AND HSP125

Objectives:

1. Students will become proficient in creation of cakes, icings, cut-in lamination and straight.
2. Students will learn the principles and techniques for decorating and assembling basic, filled and special occasion cakes.
3. Students will become proficient in the production of chocolates and confections and pastry and Danish.

CUL 250 Professional Table Service

Culinary students will learn the basics of professional table service in this hands on class. Topics of study will include exceptional guest service interactions from phone to hostess to table and bar, effective order taking and sales, proper table service and etiquette in different dining environments, Point of Sales systems, dining room set up and maintenance as well as management principles of food and beverage sales. (3 credits) Prerequisite: HSP105

Objectives:

1. Identify the classical styles of professional table service.
2. Demonstrate the skills required in professional American and French table service.
3. Practice and apply table service skills in a public restaurant environment.
4. List and define all tools of the professional dining room.

CUL 255 Contemporary American Kitchen

The foundations of knife skills, cooking techniques and principles will be applied in a production setting. Students will learn to apply individual skills learned to a team effort system. Studies will cover the menus and procedures of today's American chef in breakfast, lunch and dinner a la cart cookery. Multi-course menus will be prepared and executed in a timed setting with emphasis on precision, plating and vision appeal. (3 credits)
Prerequisites: CUL100, CUL115, CUL140, CUL145, CUL200, CUL205, CUL227, CUL228, HSP125 or CUL105, CUL115, CUL140, CUL145, CUL200, CUL205, CUL22, CUL228 AND HSP125

Objectives:

1. Compare and contrast regional American cooking styles and techniques.
2. Execute American style breakfast recipes and cooking techniques.
3. Execute American style lunch recipes and cooking techniques.
4. Execute American style dinner recipes and cooking techniques.

CUL 260 Cuisines of the World

Students will immerse themselves in studies of the cuisines of the different corners of the world, with an emphasis on South America, Asia and the Mediterranean regions. Ingredients indigenous to these regions will play key roles in learning the native dishes, food cultures and their cooking techniques. (3 credits) Prerequisites: CUL100, CUL115, CUL140, CUL145, CUL200, CUL205, CUL227, CUL228, AND HSP125 or CUL105, CUL115, CUL140, CUL145, CUL200, CUL205, CUL227, CUL228 AND HSP125

Objectives:

1. Identify and distinguish between the different ingredients used in the S. American, Asian and Mediterranean cultures.
2. Describe the flavor profiles that make up the cuisines of these cultures.
3. Practice ingredient preparation and different cooking techniques that are inherent to each culture's cuisine.

CUL 265 Garde Manger & Banquets

Students will learn the fundamentals of the cold kitchen. They will learn the concepts and execution of cold appetizers and salads as well as the fundamentals of buffet art and arrangement. Study will be given to sectors of the industry that rely heavily on the "visual" and "cold" kitchens such as cruise ships and catering and receptions. Students will take concepts learned and apply them to creative adaptation via plated appetizers and buffet displays. (3 credits) Prerequisites: CUL115, CUL140, CUL145, CUL200, CUL205, CUL227, CUL228 AND HSP125

Objectives:

1. Compare and contrast the techniques of operating a volume kitchen versus an a la carte kitchen.
2. Organize, plan and operate a banquet kitchen.
3. Prepare canapés, hot and cold hors d'ouvres, forcemeats, salads, and sausages. Curing and smoking techniques will also be practiced.
4. Examine varied ways in which banquet and catering events may be executed.
5. Describe the three main areas of the cold kitchen and apply skills of recipe adaptation and scaling to these three areas.

CUL 270 Culinary Practical Exam

This culinary examination tests students' understanding of fundamental and advanced competency in the principles of cooking. Students will prepare a menu for two that will include a soup, a first and a main course. They are also tested on station setup, preparation skills, product presentation and flavor, and ability to answer a range of questions posed by chef instructor. High Pass/Pass/Fail grading Prerequisites: CUL100, CUL115, CUL130, CUL140, CUL145, CUL150, CUL200, CUL205, CUL227, CUL228, CUL255, CUL260, HSP105 AND HSP125

Objectives:

1. Execute a three course meal in the allotted time period.
2. Demonstrate proper station set up and sanitation.
3. Correctly answer a range of culinary questions.
4. Apply techniques of plating to meal presentation.

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Cyber Security

CYB 105 Introduction to Cyber Security

CYB105-Introduction to Cyber Security-

With the explosion of our social presence in modern society, the threat of cyber security attacks has become a growing concern. No longer are the threats isolated to just email and computer systems. Now our phones, household electronics, and social media accounts are all vulnerable to attacks. This course will cover the everyday cyber security threats and what can be done to prevent a cyber security attack. 3 credits

Objectives:

1. Define the fundamental concepts and ideology behind a cyber threat.
2. Analyze potential cyber threats and the actors responsible for possible attacks.
3. Describe the role of social engineering to obtain confidential information for an attack.
4. Identify the federal, state, and local cyber defense partners and recognize their policies.

CYB 110 Linux Fundamentals

CYB110-Linux Fundamentals-

The hands-on laboratory portion of the cyber security program will be executed from the Linux CLI (command line interface). Therefore, it is essential to obtain this fundamental skill set. Students will be provided a Linux operating system account and environment to complete their program coursework. This course will initiate the CLI experience to become proficient with basic operating system commands. 3 credits

Objectives:

1. Describe the functions, roles, and services provided by an operating system.
2. Recognize how operating systems interact with hardware, software, and virtualization.
3. Identify and apply fundamental security design principals to a Linux operating system.
4. Execute and interpret Linux operating system commands via the command line interface.

CYB 120 Networking Fundamentals

CYB120-Networking Fundamentals-

An electronic device or computer system that is not connected to a data network has limited value in our modern world. Therefore, it is essential to understand how networks are built and operate. In this course, students will use network analysis tools to help identify and secure hosts within a networked environment. The technologies that will be covered include: IP, TCP, UDP, ICMP, NAT, LAN, and VLAN. 3 credits. Prerequisite: CYB110

Objectives:

1. Describe the fundamental technologies and components of a computer network.
2. Identify the key concepts and operational procedures which are applied to network defense.
3. Interpret the Open Systems Interconnection (OSI) conceptual model for standardization.
4. Apply network mapping tools to observe and diagram the flow of networked data packets.

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CYB 125 Database & Scripting Basics

CYB125-Database & Scripting Basics-

Scripting can be considered the glue that binds computer system components together. With a script you can capture the output of an application, manipulate the data, then input the result into another application. A potential course example would be to write a script that monitors a security log file for malicious activity, strip out the malicious code, and then input the violation into a database for metrics. 3 credits. Prerequisite: CYB110

Objectives:

1. Implement the automation of routine system administration tasks via scripting.
2. Apply basic scripting constructs such as variables, arrays, loops, and procedure calls.
3. Execute database operations leveraging SQL (structured query language) commands.
4. Analyze how to protect data confidentiality, integrity, and availability within a database.

CYB 200 Cyber Security Internship

CYB200 -
The internship is designed to provide students an opportunity for a meaningful career-related experience in a corporation, government, and/or a non-profit organization. Student interns are expected to extend their coursework knowledge and skill sets into a hands-on work environment. This experience should provide a better understanding of the information technology surroundings while facilitating the transition from the classroom to the career environment. Pre-reqs: CYB105, CYB110, CYB120, CYB125, ESW101. 3 credits.

Objectives:

1. Self-development: Presents a professional image and reaches out to co-workers. Seeks training, instructions, and feedback. Takes ownership of own development. Is inquisitive and seeks answers.
2. Productivity: Produces a reasonable amount of work in the time allotted. Completes activities in an organized, timely and efficient manner.
3. Job Knowledge: Understands duties and responsibilities. Seeks instructions and advice from key colleagues. Sets goals and is organized. Wants to learn new things and asks questions to clarify information.
4. Teamwork/Cooperation: Willingness and ability to work and cooperate with others. Solicits the advice and opinions of others and is open-minded. Seeks to collaborate with the team on solutions.

CYB 205 Cyber Security Design Principles

Cyber Security Design Principles- Cyber security design principles aid in the creation of trustworthy computer systems. A balance must be maintained between security and operability during the design decision phase. For given scenarios, the appropriate cyber security design principles will need to be identified, analyzed, and evaluated. The major design principles include: defense in depth, modularity, least privileged, and trust relationships. 3 credits

Objectives:

1. Define the cyber security design principles.
2. Describe the importance of each principle and how it enables the creation of security policies.
3. Analyze common security failures and identify design principles to prevent future violations.
4. Explain the appropriate measures to be taken should a cyber security violation occur.

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CYB 210 Linux Operating System Admin

CYB210-Linux Operating System Administration-

The administration and security hardening of a Linux operating system is an essential cyber security component. Many public and private sectors host their Internet based applications on Linux servers. Therefore, this course will provide the necessary administration material to train the student with hands-on laboratory exercises. This course is ideal for a working professional's continuing education. Prerequisite: CYB110. 3 credits

Objectives:

1. Apply basic operations involved in the administration of Linux operating systems.
2. Construct a configuration management plan for software updates and security patches.
3. Implement security design principals for access controls, auditing, and intrusion detection.
4. Plan and generate a disaster recovery solution leveraging backup and restore capabilities.

CYB 215 Introduction to Cryptography

CYB215-Intro to Cryptography-

A person may not realize that they use practical applications of cryptography in everyday life. Whether it is visiting a secure website, remote accessing their company network, or simply swiping their credit card. The protocols and standardizations to accomplish these tasks all have a foundation in cryptography. This course will focus mainly on the theoretical aspects of cryptography with basic mathematical concepts. 3 credits.

Objectives:

1. Identify the key elements that comprise a cryptographic system.
2. Recognize the appropriate cryptographic protocols and techniques for a given situation.
3. Describe the differences between symmetric and asymmetric algorithms.
4. Analyze how and where cryptography can be used in modern computer systems.

CYB 220 Network Design & Protocols

CYB220-Network Design & Protocols-

An improperly designed network increases the risk of a cyber security attack. Similarly, an open network protocol is analogous to an open window in a house, with obvious consequences. Students in this course will be provided network analysis tools to help configure network components (firewall, proxy, router) and secure applications using these network protocols: NTP, DNS, SMTP, SNMP, SSH, LDAP, and HTTP. Prerequisite: CYB120. 4 credits

Objectives:

1. Identify and secure the most commonly used and implemented network protocols.
2. Implement security design principals related to defense in depth and network hardening.
3. Apply network monitoring tools to observe the contents of networked data packets.
4. Design a secure network architecture, given a specific set of project requirements.

CYB 225 Database Administration

CYB225-Database Administration-

One of the most efficient methods to record and review information is to store it within a database. A properly designed database schema provides efficient data insertion and retrieval. In this course, the student will install and configure an open source database application. Database tables will be created with the required primary and foreign keys for normalization. Then finally populated with data imports. Prerequisite: CYB125. 4 credits

Objectives:

1. Design and deploy a relational database for a specified computer application.
2. Implement database access controls, privilege levels, and security design principals.
3. Identify common data structures for storing information in a database management system.
4. Create a database administration policy, given a specific set of project requirements.

CYB 230 Web Application Development

CYB230- Web Application Development-

It may appear that technology is constantly changing at the speed of light. However, there are web based technologies that have stood the test of time. Applications written in HTML, PHP, and Javascript continue to be developed while other programming languages have fallen to the waste side. Developing an HTML/PHP/JS web based application (with a backend database) is the focal point of this course. Prerequisite: CYB125. 4 credits

Objectives:

1. Describe the technology, tools, and practices associated with web based applications.
2. Apply the security design principals to support input validation and session management.
3. Identify the infrastructure architecture components required for a web based application.
4. Develop a secure web based application, given a specific set of project requirements.

Diagnostic Clinical

DCL 105 Sonography Clinical I

DCL 105 (Formerly CS 101) - Clinical Sonography I

This course will provide students with an observational experience in a hospital/clinical setting. Students will become exposed to all types of sonograms including abdomen, pelvic and small parts applications. The student will also be introduced to other important modalities useful in the correlation and treatment of sonographic findings. (2 Credits)

Objectives:

1. Maintain proper dress code as stated in handbook.
2. Use professional judgment and discretion, protect patients privacy rights, maintain confidentiality, and perform within the scope of practice.
3. Observe and identify pertinent patient history and physical examination.
4. Identify and complete the appropriate technical worksheets used in the patient evaluation.
5. Identify the function of equipment utilized.
6. Observe and become familiar with the function and responsibilities of each clinical area as it relates to the field of diagnostic ultrasound.
7. Observe and recognize basic departmental duties of staff members in each clinical area.

Objectives:

8. In an ultrasound laboratory, observe and recognize proper equipment transducer and techniques for requested scanning procedure.

9. In an ultrasound laboratory, observe and recognize correct manipulation of the ultrasound equipment for optimum image resolution.

DCL 110 Sonography Clinical II

DCL 110 (Formerly CS 102) - Clinical Sonography II

This course will provide continued hospital/clinic setting work experience. Students will continue to improve their clinical skills and gain more experience with limited hands on at their clinical sites. The student will be able to participate and assist in obtaining patient histories and vital signs. Any execution of sonographic examinations will be performed under direct supervision Refinement of equipment skills should occur as well as continued application of didactics and practical laboratory experience. (3 credits)

Objectives:

1. Maintain proper dress code as stated in handbook.

2. Use professional judgment and discretion, protect patient's privacy rights, maintain confidentiality, and perform within the scope of practice.

3. Perform all duties as assigned by office staff specific to the laboratory.

4. Perform proper billing and coding procedures as assigned specific to the laboratory.

5. Assess patient history and symptoms relative to the requested procedure.

6. Correlate appropriate laboratory values and other testing procedures relative to the requested procedure.

7. Perform complete non-invasive abdominal testing protocol with supervision.

8. Perform complete non-invasive retroperitoneum testing protocol with supervision.

9. Perform complete non-invasive pelvic testing protocol with supervision.

10. Perform complete non-invasive urinary tract testing protocol with supervision.

11. Perform complete non-invasive small parts testing protocol including thyroid, breast, scrotum and prostate protocol with supervision.

12. Perform complete non-invasive obstetrical testing protocol including with supervision.

DCL 205 Clinical Sonography III

In this final semester, the students will undertake intensive clinical training utilizing all prior skills obtained in didactic and practical application. The student will refine scanning skills and gain experience. With this experience, the student's comfort level will improve in equipment manipulation and patient interaction. Execution of sonographic examinations will be performed under direct and indirect supervision of the qualified clinical instructor. The student will be solely in the clinical environment preparing for their future career. (15 credits)

Objectives:

1. Maintain proper dress code as stated in handbook.

2. Use professional judgment and discretion, protect patients privacy rights, maintain confidentiality, and perform within the scope of practice.

3. Perform complete non-invasive abdominal testing protocol.

Objectives:

4. Perform complete non-invasive gynecological testing protocol.

5. Perform complete non-invasive obstetrical testing protocol.

6. Perform complete non-invasive small parts testing protocol.

7. Perform complete non-invasive carotid artery testing protocol.

8. Perform complete non-invasive venous extremity testing protocol.

9. Successfully challenge five of the following studies: Abdominal Evaluation, Gynecological Evaluation (transabdominal and/or transvaginal), Obstetrical Evaluation- First Trimester (transabdominal and/or transvaginal), Obstetrical Evaluation- Second or third Trimester, Renal/Urinary Tract Evaluation, Thyroid Evaluation, Breast Evaluation, Scrotal Evaluation, Soft tissue/Extremity Evaluation, Cerebrovascular Evaluation, Venous Extremity Evaluation, and/or Ultrasound Guidance for invasive procedure.

10. Apply the appropriate diagnostic criteria to each of the above listed testing protocols.

11. Successfully complete the Professionalism challenge.

12. Provide a complete and accurate assessment of all testing findings in a preliminary impression.

13. Describe and/or demonstrate appropriate procedures for assuring the accurate and timely interpretation of studies according to the clinical sites policies.

14. Assist and perform daily duties as assigned by clinical site Preceptor/instructor.

15. Demonstrate proficiency in all required competencies as listed in the Clinical Binder.

16. Maintain clear and accurate records/forms as required in the Clinical Binder.

17. Submit accurate and concise paperwork in a timely manner as required by the Clinical instructor (i.e., logsheets, timesheets, evaluation sheets, competencies, final summary sheets including hours and study volumes).

Developmental Education

DEV 010 Basic Writing Skills

DEV 010 (Formerly DE 010) - Basic Writing Skills

This three-credit course is designed to prepare the student to succeed in upper level writing courses. A basic review of grammar is coupled with extensive practice in sentence recognition and development. Special emphasis is placed on paragraph development techniques, sentence structure, usage and language mechanics. This course must be successfully completed with a C- (70%) or better before a student may enter ENG105 through ENG238. Failure in the course will result in repeating it the next semester. Students receiving less than a B- are required to enroll and successfully complete ENG102 Fundamentals of Writing. Students must successfully complete all prerequisite course work in order to enroll in any upper level writing course. The grade in the latter course is counted as part of a student's GPA. DEV 010 earns institutional credit only.

Objectives:

1. Recognize and correct common errors in grammar, sentence structure, usage, and conventions.

2. Practice prewriting using various tools, such as outlines, concept maps, freewriting, etc.

3. Use MLA style for proper formatting and citation within essays.

4. Apply the stages of the writing process to plan, compose, review, and revise five-paragraph essays that include clear thesis statements, effective transitions, and adequate support.

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DEV 020 Reading for College

DEV 020 (Formerly DE 020) - Reading for College

This three-credit course is designed to develop fundamental reading skills through extensive practice. The purpose of this course is to increase the student's ability to read efficiently and critically, to improve vocabulary, and to enable the student to make inferences from what is read. This course must be successfully completed with a C- (70%) or better in the first semester. Students receiving less than a B- are required to enroll in ENG 103 (Critical Reading). The grade received in the latter course is counted as part of a student's GPA. DEV 020 earns institutional credit only.

Objectives:

1. To determine the meaning of unfamiliar words using context clues.
2. To identify the topic and main idea of short passages, articles, and longer passages.
3. To distinguish between major and minor details.
4. To recognize transitions and patterns of organization in paragraphs, essays, or chapters.
5. To recognize the difference between fact and opinion.
6. To draw conclusions from written material based on knowledge, experience, logic and awareness of writing techniques.
7. To recognize the author's purpose and recognize bias.
8. To evaluate arguments and determine if the author's support is adequate and relevant to the argument.

DEV 030 Basic Math Skills

DEV 030 (Formerly DE 030) - Basic Math Skills

This three-credit course is designed to reinforce basic arithmetic skills while introducing some fundamental algebraic concepts in preparation for college level math. Concepts and skills are developed through the integration of algebra and arithmetic problem-solving applications. Students enrolled in Basic Math DEV030 must successfully complete the course with a C- (70%) or better in order to enroll in Introduction to Algebra MAT110 or Mathematics of Finance MAT105. Students who earn a D, D+, or F must repeat the course. DEV 030 earns institutional credit only. Students will not be allowed to enroll in Math for the Early Years MAT106, College Algebra MAT120 or Mathematical Reasoning MAT115 without completing Introduction to Algebra MAT110.
Students who fail a DE course (Reading for College, Basic Writing, or Basic Math) must retake the course in the next semester.
Students may not withdraw from a DE course without the permission of the Director of Developmental Education.

Objectives:

1. Demonstrate an understanding of how to correctly utilize basic operations (addition, subtraction, multiplication, and division) involving whole number concepts and integers, using order of operations.
2. Evaluate and simplify algebraic expressions and formulas using the distributive property; and apply the properties of equality to solve equations.
3. Add, subtract, and multiply polynomial expressions, including multiplication rules of exponents.
4. Add, subtract, multiply, and divide fractions including changing mixed numbers to improper fractions, and simplifying to lowest terms.
5. Write ratios and solve proportions; re-write fractions to decimals and percents; and solve problems involving real-world applications.
6. Develop, utilize, and demonstrate effective note-taking skills, study skills, and test-taking strategies.

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Diagnostic Medical Sonography

DMS 105 Intro to Vascular Technology

DMS 105 (Formerly DS 105) - Introduction to Vascular Sonography

This course will introduce the student to vascular sonography. The student will learn the gross and cross-sectional anatomy of the vascular system. It will include an introduction to the hemodynamics, pathology and pathophysiology of the vascular system. The student will learn normal and abnormal vasculature and the differentiation between the venous and arterial systems. Discussion will include the clinical signs and symptoms and the appropriate diagnostic testing and treatment of various vascular diseases. An introduction to vascular scanning protocols will be covered. The students will be introduced to other diagnostic testing methods, therapeutic and surgical intervention and pharmacology related to these structures. Lecture, visual aides and hands-on classroom demonstrations will coincide appropriately to facilitate a simultaneous understanding of didactic and practical application. (3 Credits)

Objectives:

1. Define vascular terminology.
2. Describe vascular procedures and their appropriate clinical indicators.
3. Recognize normal and abnormal vascular structures on a sonogram.
4. Distinguish between venous and arterial characteristics on a gray scale image.
5. Describe the hemodyna mics of the vascular system.
6. List the effects of respiration, augmentation and valsalva maneuvers on the venous system.
7. Describe the potential causes of pulsatile venous flow patterns.
8. Explain vascular protocols.
9. Demonstrate proper transducer and equipment selection for performing a vascular examination.
10. Identify the correct uses of applying various Doppler techniques.
11. Discuss the role of sonography and the vascular system.
12. Discuss vascular measurements and their clinical significance.
13. Diagram the normal vascular anatomy.
14. Describe the various types of vascular pathology and their sonographic characteristics.
15. Identify the appropriate testing methods for lower and upper extremity venous and arterial examinations.
16. Describe arterial testing methods such as segmental blood pressures, pulse volume recording, and plethysmography.
17. Discuss the advantages and usage of non-imaging examinations.
18. Discuss the importance of an arterial test performed at rest and after exercise.
19. Discuss the proper application of duplex sonography.
20. Discuss the various types of, interventional procedures and surgical procedures used for vascular diseases.
21. Identify and discuss behavior modification changes and pharmacological agents for patient's with vascular disease.
22. Identify appropriate laboratory values in reference to a vascular procedure.
23. Differentiate non-venous pathology from venous disease.
24. Compare acute and chronic deep venous thrombosis.
25. Describe venous insufficiency and explain how it is visualized by ultrasound.

Objectives:

26. Discuss the emergency vascular examination.

27. Discuss the clinical indications and testing for abdominal and pelvic vascular structures.

DMS 115 Pelvic Sonography and Lab

DMS 115 (Formerly DS 115) - Pelvic Sonography and Lab

Students will learn the gross and cross-sectional anatomy of the female pelvis. This course introduces and relates the knowledge of gynecology anatomy, pathology and diagnostic sonography. This course will focus on applying ultrasound as a diagnostic tool for evaluating the pelvis and adjacent structures. The student will become accustomed to the sonographic procedures used to properly image this anatomy. The students will become familiar with physiology and pathology of the pelvis. The students will be introduced to other diagnostic testing methods, therapeutic and surgical intervention, and pharmacology related to these structures. Coursework will include demonstrations and discussion on the proper scanning techniques, as well as patient preparations and positioning needed to obtain optimum diagnostic images. Lecture and classroom demonstrations will coincide appropriately to facilitate a simultaneous understanding of didactic and hands-on experience. (3 Credits)

Objectives:

1. Describe and explain the appropriate patient preparation relative to the sonographic procedure.

2. Identify normal pelvic anatomy through proper application of sonographic testing the reproductive. This includes the pelvic muscles, ligaments, vasculature, peritoneal spaces and system.

3. Identify pelvic abnormalities and disease processes such as endometriosis, pelvic inflammatory disease and trophoblastic disease.

4. Identify and list the types of contraceptive devices visualized by sonography.

5. Define and describe common infertility factors and procedures.

6. Describe the physiological functions of the female pelvis such as the menstrual cycle, pregnancy hormones and fertilization.

7. Identify and describe congenital uterine anomalies and uterine positions.

8. Define general descriptive gynecological terminology.

9. Modify the scanning protocol based on the patient body habitus, sonographic findings and the differential diagnosis.

10. Demonstrate appropriate scanning planes and patient positioning to obtain optimum images.

11. Apply patient history and symptoms, clinical laboratory values, and correlative studies to the sonographic procedure.

12. Recognize, identify and document the sonographic appearance of disease.

13. Identify, correlate and compare other testing modalities in relation to sonography.

14. Recognize appropriate pharmacological agents, interventional and surgical procedures relative to pelvic abnormalities.

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DMS 205 Laboratory Management

DMS 205 (Formerly DS 205) – Diagnostic Sonography Laboratory Management

Students in this course will gain basic entry-level knowledge and skills required for use in a Diagnostic Sonography Laboratory. This course includes an overall history of the AIUM standards on the safety and usage of ultrasound equipment. Students will review quality assurance and preventative maintenance issues. In addition, the student will learn the nature of data and statistics. Also covered is setting up a Chi square to determine sensitivity, specificity, positive predictive value, negative predictive value and overall accuracy. Healthcare organizations, societies and accreditation agencies also will be discussed (2 Credits).

Objectives:

1. Demonstrate knowledge and appropriate patient safety procedures and techniques.
2. Demonstrate knowledge of scanning ergonomics and personal safety.
3. Explain the purpose and value of quality assurance; explain the role of the test phantom.
4. Explain how to implement a 10 step quality assurance program.
5. Discuss credentialing bodies and the importance of ultrasound/vascular societies and organizations.
6. Explain the AIUM's statement of the safety effects of ultrasound.
7. Using data, set up a Chi-square and calculate true, positives, true negatives, false positives , false negatives, NPV, PPV and over all accuracy.
8. Demonstrate proper writing skills for technologist findings and preliminary readings.
9. 9.Understanding Group Dynamics Conflict Resolution.

DMS 210 Small Parts Sonography

DMS 210 (Formerly DS 211) - Small Parts Sonography

The students will learn the gross and cross-sectional anatomy, physiology, pathology and pathophysiology of the neck and thyroid, breast, scrotum, extremities and superficial structures. Coursework will familiarize the student with scanning protocols as well as normal and abnormal visualization using sonography. Techniques will include methods of applying the highest resolution and color flow Doppler. Discussion will include pertinent clinical history and symptoms. Correlation with clinical laboratory tests and other diagnostic procedures will also be covered. The students will be introduced to other diagnostic testing methods, therapeutic and surgical intervention, and pharmacology related to these structures. Lecture and classroom demonstrations will coincide appropriately to facilitate a simultaneous understanding of didactic and hands-on experience. (3 Credits)

Objectives:

1. Identify anatomical structures of the neck, including the thyroid, parathyroid, adjacent muscles and vessels.
2. Describe and identify normal and abnormal echogenicity of visualized structures.
3. Define pathology as visualized by sonography.
4. Correlate pertinent clinical history and symptoms, laboratory findings and other diagnostic testing methods.
5. Identify the anatomical structures of the breast.
6. Describe and identify pathology of the breast as seen with ultrasound.
7. Demonstrate proper correlation of breast sonography with other testing modalities, i.e. mammography.
8. Identify the anatomy of the scrotum and contents.
9. Identify normal and abnormal scrotal anatomy as seen with ultrasound.

Objectives:

10. Define the role of Doppler techniques utilized during scrotal scanning.

11. Identify the sonographic characteristics visualized in superficial structures.

12. Describe the pathology of superficial structures such as soft tissue structures, cyst, tumor, and hematoma, calcification and/ or abscess.

13. Identify proper techniques for imaging superficial structures including the use of a standoff pad.

14. Identify and describe findings in the region of the popliteal fossa and extremity.

15. Identify inflammatory processes, vasculature or lymphadenopathy as seen in superficial locations.

16. Identify the normal appearance of the anterior abdominal wall.

17. Describe pathology and sonographic appearance of the abdominal wall, such as lesions, hernias or hematomas.

18. Discuss important patient positioning, patient care and proper technique relative to the requested procedure.

19. Recognize appropriate pharmacological agents, interventional procedures and surgical procedures relative to small parts.

DMS 220 Obstetric Sonography & Lab

DMS 220 (Formerly DS 220) - Obstetric Sonography and Lab

The students will learn the gross and cross-sectional anatomy, physiology, pathology and pathophysiology as it relates to obstetrics in sonography. This course will familiarize the student with obstetrical imaging. Coursework will include the physiology of pregnancy, embryology, spermatogenesis, oogenesis, and the development of the fetus. Fetal development will include the three trimesters of pregnancy. Coursework will include the fetal biophysical profile, Doppler application and multiple gestations in pregnancy. The students will be introduced to other diagnostic testing methods, therapeutic and surgical intervention, and pharmacology related to these structures. Lecture and hands-on demonstrations will coincide appropriately to facilitate a simultaneous understanding of didactic and practical application. (3 credits)

Objectives:

1. Describe embryological development.

2. Identify laboratory tests for determining pregnancy and possible increased risk factors.

3. Describe the maternal changes involved in early pregnancy.

4. Describe the placental development, grade of maturity and location.

5. Define the protocol for the first trimester of pregnancy.

6. Demonstrate and identify the required images included on the sonogram throughout each trimester of pregnancy including the fetal heart, all fetal anatomy and adjacent relevant structures.

7. Identify and define terminolog y utilized during obstetrical sonograms and criteria used to determine fetal presentation.

8. Demonstrate correct and accurate measurements included in an obstetrical sonogram.

9. Describe methods for fetal dating and growth.

10. Define the differences in protocol for each trimester of pregnancy.

11. Demonstrate and identify the required images for each trimester of pregnancy.

12. Modify the scanning technique based on the patient body habitus and condition, fetal position and visual artifacts.

Objectives:

13. Explain the physiology, importance and assessment of amniotic fluid production.
14. Identify and define complications that can occur during pregnancy.
15. Describe methods of testing used for genetic screening, fetal maturity and other related applications.
16. Identify the clinical factors that place pregnancies in a high-risk situation.
17. Identify the types of intrauterine growth retardation.
18. Describe the Doppler evaluation of the umbilical cord.
19. Identify the normal and abnormal findings in a Doppler evaluation.
20. Describe the use of ultrasound in assessing fetal wellbeing including biophysical profile.
21. Define the role of stress and nonstress testing in pregnancy.
22. Identify and define special obstetrical interventional procedures and the role of ultrasound.
23. Identify the scanning techniques for a multiple gestation pregnancy.
24. Describe the placental development, grade of maturity and location in a multiple gestation.
25. Identify and define complications that can occur during a multiple gestation pregnancy.
26. Describe the stages of labor and delivery.

DMS 225 Fetal and Neonatal Anomalies

DMS 225 (Formerly DS 225) - Fetal and Neonatal Anomalies

This course will introduce the student to fetal abnormalities visualized in the first, second and third trimesters. Emphasis will be placed on identification of the pathological processes with sonography associated with the clinical history. This course will also include the normal and abnormal anatomy of the neonatal brain. The students will review physiology and pathology of the newborn. This will include an overview of neurosonography, pyloric stenosis, neonatal hips and urinary system. The students will be introduced to other diagnostic testing methods, therapeutic and surgical intervention, and pharmacology related to these structures. Lecture, visual aides and limited hands-on classroom demonstrations will coincide appropriately to facilitate a simultaneous understanding of didactic and practical application. (1 Credit)

Objectives:

1. Describe abnormal embryological development.
2. Identify the role of sonography in diagnosing early fetal abnormalities.
3. Identify fetal abnormalities involving the neural axis, face and neck and musculoskeletal system.
4. Identify abnormal fetal heart anatomy and the fetal echocardiography exam; congenital heart disease.
5. Identify abnormal fetal thorax; gastrointestinal tract and abdominal wall.
6. Identify chromosomal abnormalities.
7. Identify the role of sonography in neonatal testing.
8. Define and explain the protocol for performing a biophysical profile.
9. Describe neonatal brain protocols.
10. Describe neonatal hip protocols.
11. Demonstrate the sonographic techniques used in diagnosing pyloric stenosis on a newborn.
12. Identify the sonographic characteristics and echogenicity of the newborn kidneys and adrenal glands.

DMS 230 Abdominal Sonography

This course will focus on applying ultrasound as a diagnostic tool for evaluating the abdomen and all related structures. Coursework will include techniques for proper identification and representation of the normal and abnormal anatomical structures. Emphasis will be placed on the liver, gallbladder and biliary system, pancreas, spleen, urinary system, adrenal glands, GI system, peritoneum and retroperitoneum, male pelvis and non-cardiac chest. Lecture and laboratory experience will coincide appropriately to facilitate a simultaneous understanding of didactic and laboratory application. Students will need to show proficiency in the lab through hands on examination in the specialty areas described above. (5 Credits)

Objectives:

1. Describe and explain the appropriate patient preparation relative to the sonographic procedure.
2. Identify normal sonographic anatomy through the proper application of diagnostic testing. This includes the liver, gallbladder and biliary system, pancreas, spleen, urinary system, adrenal glands, GI system, peritoneum and retroperitoneum and non-cardiac chest.
3. Identify appropriate sonographic testing procedures used to visualize and diagnose the prostate when scanning the male pelvis.
4. Recognize the normal and abnormal prostate gland including benign prostatic hypertrophy, infection and prostate cancer when scanning the male pelvis.
5. Identify abnormal sonographic anatomy through the proper application of diagnostic testing.
6. Modify the scanning protocol based on the sonographic findings and the differential diagnosis.
7. Modify the scanning technique based on the patient body habitus and visual artifacts.
8. Demonstrate appropriate scanning planes and patient positioning to obtain optimum images.
9. Apply patient history and symptoms, clinical laboratory values and correlative studies to the sonographic procedure.
10. Recognize and identify the sonographic appearance of disease.
11. Recognize and document the sonographic representation of disease processes.
12. Identify and correlate other testing modalities in relation to the sonographic procedure.
13. Compare and contrast other methods of diagnostic testing.
14. Recognize appropriate behavior modifications and pharmacological agents relative to the abdomen.
15. Recognize appropriate interventional procedures and surgical procedures relative to abdominal abnormalities.

Early Childhood Education

ECE 110 Math for the Early Years

ECE110 (formerly MAT106) - Math for the Early Years

This course examines the basic concepts upon which higher level mathematical learning is built. It relates mathematics to the child's physical and social world and to real-life idividual, family, linguistic, cultural, cognitive, physical and social-emotional experiences from infancy through fourth grade. This course examines Pennsylvania Department of Education (PDE) Early Learning Standards, National Association for the Eudcation of Young Children (NAEYC) and National Council of Teachers of Mathematics (NCTM) Standards, inconjunction with one another, to enable students to generate developmentally approriate lessons, materials, and assessments for teaching math in the early years. Ten hours of field work is required. (3 Credits)

Objectives:

1. To identify and discuss current theories of mathematics education.
2. To examine applicable standards for student learning in regard to mathematics.

Objectives:

3. To observe appropriate practices (methods) in the creation of materials and the teaching of mathematics lessons, emphasizing cross-curricular approaches.

4. To practice teaching math lessons in a peer-reviewed setting.

5. To review and practice the appropriate informal and formal assessment methods for mathematics in the early years.

6. 10 hours of field observation are required and each hour must be recorded on the standardized observation form.

7. Any lesson plan completed in the course must be written using the standardized lesson plan format.

ECE 120 Development 1

Formerly EDU120
This course is designed to explore the development of the whole child from the pre-natal stage through pre-adolescence. Focus includes the study of the historical beliefs about child rearing as well as current parenting styles and practices, the various theories of development, the formation and stabilization of the personality, the assessment of the child and his/her environment, developmentally appropriate standards-based curriculum, and health and safety issues (3 Credits)
Prerequisite: EDU135 OR ECE140

Objectives:

1. To identify the areas of development including physical (fine & gross motor), social, emotional, cognitive and language (receptive & expressive).

2. To recognize the nutritional and health and safety needs of the developing child from the prenatal stage through grade 4, including emergency procedures for accidents and unexpected events.

3. To describe the major developmental milestones to be achieved during the period of prenatal development through grade four.

4. To reference the theorists whose work defines best (developmentally appropriate) practices in early childhood education and how they relate to child development.

5. To relate standards-based activities to the developmental levels of children and demonstrate the ability provide lessons that enhance that development.

ECE 125 Assessment I

ECE 125 -This course focuses on the linking of assessments to objectives, using diverse assessment methods to express learning more comprehensively and ensuring assessments that are appropriate to the developmental level and learning styles of young children. Students are offered opportunities to develop in-depth knowledge and skills through research, policy, and the use of best practices in observation, assessment and program evaluation. Ten hours of field work is required. (3 Credits)

Objectives:

1. To define in both verbal and written formats, the purposes of observation and assessment in ECE environments.

2. To identify in writing, the most common types of observations including anecdotal notes, running records, frequency counts (time and event sampling), rating scales, portfolios, and checklists and be able to state the purpose of each.

3. To be familiar with the Environmental Rating Scale series (ERS); the OUNCE and Work Sampling systems; and the Ages and Stages screening instrument and be able to describe their purpose as well as demonstrate their use.

4. To demonstrate, in actual early learning classrooms, the appropriate use of various types of observation and assessment instruments used in quality early learning classrooms.

ECE 130 Integrated Arts for ECE Teachers

This course emphasizes the importance of integrating the arts (music, dance, visual arts, theater, and physical education) into the traditional academic curriculum at the early childhood level. The course provides basic concepts, theories, and best practices and examines how the arts promote greater academic success and an inclusive school community. Students will design lesson plans to address the arts both as individual learning experiences to promote knowledge, skills, and arts appreciation, as well as to incorporate the arts as an interdisciplinary approach to all core subjects. The course offers opportunities to explore the impact of the arts on student learning, as well as to become active participants in the activities that serve as models for teaching. Students will also engage in 10 hours of required field experience to apply the course objectives.(3 credits) Pre-requisite EDU 110

Objectives:

1. Articulate sound educational rationale for integration of the arts into the early childhood core curriculum.

2. Identify basic arts terms, standards and methods relevant to early childhood education.

3. Create developmentally appropriate standards-based lesson plans and curricula to meaningfully integrate and assess the arts in diverse classroom settings including those with special needs children and English Language Learners.

4. Collaborate with peers to generate a personal journal of quality regional and national arts education materials and resources for future integration of the arts in their daily classroom instruction.

5. Complete 10 hours of arts (music, art, drama, dance, etc.) observation in an elementary school setting.

ECE 140 Methods/Materials Early Childhoood

ECE 140-This course is designed to bridge theory and practice, creating an opportunity for students to relate critical methods in ECE to the design and creation of learning materials appropriate for young children. Creating a comprehensive ECE curriculum is addressed, as well as emphasizing the writing and presenttion of lesson plans and the structuring of the environment as significant factors in the progressive growth and development of young children. Ten hours of field work is required. (3 credits)

Objectives:

1. Students will review the importance, to memory and retention, of the utilization of all senses in the presentation of material.

2. Students will identify the three major learning styles typically found in classrooms and how to meet the needs of the students displaying each style.

3. Students will be able to write effective lesson plans through a complete understanding of each of the component parts using the Lackawanna College Standardized Lesson Plan form.

4. Students will learn and practice a variety of teaching strategies adaptable to typically developing and challenged children.

5. Students will complete 10 hours of observation using the Lackawanna College Standardized Classroom Observation form to focus on teaching strategies used in early learning classrooms.

ECE 210 Early Child Spec Needs

ECE210 - This course reviews the historical positions and current legislation regarding early intervention services. It will identify challenges young children may bring to the classroom, including those characterized as physical, cognitive, sensory, communicative and behavioral. Adaptive programming will be explored and classroom management techniques will be integrated with developmentally appropriate practices. Students will become familiar with IFSP and IEP formats. Ten hours of field work is required. (3 Credits) Prerequisites: ECE125 and ECE120

Objectives:

1. To practice activities that sensitize students to the perspectives of the child, parents and teachers.

Objectives:

2. To identify challenges (including behavioral) often found in the early years and recognize how they affect the development of the child.

3. To relate current research in education and medicine to individuals with challenges.

4. To view assistive devices and their uses in the education of young children.

5. To be familiar with the signs and symptoms of child abuse and the responsibilities of mandated reporters.

6. To be familiar with developmentally appropriate and effective discipline strategies.

ECE 260 Field Studies I

ECE 260 (Formerly ED 267) – Practicum in Early Childhood Education Development
Field Studies I is a high-intensity, structured field experience in assigned early learning classrooms. Experiences are designed to provide practice in child oberservation and daily classroom routines, as well as in the creation and implementation of developmentally appropriate activities utilizing a variety of teaching techniques. Classroom attendance is required to analyze and discuss professional considerations and issues, as well as field experience issues. (3 Credits)
Prerequisites: A GPA of 3.0 or higher, Prerequisites: ECE120, ECE125 and EDU135 OR ECE120, ECE125 AND ECE140

Objectives:

1. To lead the components of a typical daily schedule in an early learning classroom.

2. To analyze the physical/social/emotional needs of young children and respond to them appropriately.

3. To assess the cognitive and language skills of young learners and create appropriate lessons to enhance their development.

4. To demonstrate the ability to utilize PA's Standards Aligned System in creating educational activities.

5. To demonstrate appropriate and effective behavior management techniques in the classroom.

6. To demonstrate ethical and professional behavior in all aspects of the field experience.

Ecological Sustainability

ECL 115 Sustainable Agriculture

AGR 120 - Plant Science
This course introduces the basic principles of botany that pertain to agricultural production. Emphasis is placed on the anatomy and physiology of flowering plants. Upon completion, students should be able to identify and explain systems. (3 Credits).

Objectives:

1. Review the economic, environmental, and social impacts of agriculture.

2. Review and apply ethical principles and examples to a variety of history, global and local communities.

3. Demonstrate critical thinking skills to analyze sustainable agriculture practices supported positions through debate, discussion, papers and presentations.

4. Explore areas in current topics in sustainable agriculture.

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Economics

ECO 105 Macroeconomics

ECO 105 (Formerly EC 101) - Macroeconomics

Macroeconomics is the study of the behavior and performance of an economy as a whole. It focuses on the aggregate changes in the economy such as unemployment, growth rate, gross domestic product and inflation. Governments and firms use macroeconomic models to help in formulating economic policies and strategies. Students will explore these concepts from the perspective of each decision-maker in the economy - firms, households, and governments. (3 credits)

Honors students in this course will conduct research on current global events as they apply to the state of the American economy. Furthermore, they will explore and reflect on their own roles in the economic life cycle from different perspectives (i.e., student, employee, household member, taxpayer, etc.). Honors students will provide regular analyses on the connection between economics and other business courses.

Objectives:

1. Define the concepts of scarcity and costs.

2. Describe the law of supply/demand and examine their part in determining price and quantity available in the marketplace.

3. Evaluate the current role of government, fiscal policy, how government raises and spends funds, and the effects those decisions have on the national/global economy.

4. Evaluate the causes and types of inflation and unemployment.

5. Evaluate classical employment theory, the employment theories of Keynes and the conditions of national/global employment from a historical perspective of the US economy.

6. Summarize the responsibilities of the Federal Reserve System and the board of governors, including their role in setting monetary policy, and the impact of the Fed on the national economy.

ECO 110 Microeconomics

ECO 110 (Formerly EC 102) - Microeconomics

Microeconomics deals with what choices people make, what factors influence their choices, and how their decisions impact markets by affecting the price, the supply, and the demand of goods and services. Students will study the behavior of individuals, households, and firms regarding decision-making and allocating resources. (3 credits)

Objectives:

1. Review the concepts of scarcity and costs.

2. Review the concepts of supply and demand and examine their part in determining price and quantity available in the marketplace.

3. Explain the differences between inelastic and elastic demand and supply schedules.

4. Explain the importance of fixed cost, variable cost, average cost, and marginal cost with regard to production.

5. Apply the concepts of 'perfect competition' and 'monopoly' to the current economy.

6. Apply the concept of 'oligopoly' and 'monopolistic competition' to the current economy.

7. Identify the determinants of wages, rents, interest, and profits, including factors related to diversity and equity in one's society.

8. Explore the concept of 'comparative advantage' and its importance to world trade.

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Education

EDU 100 PA State Certification Prep

This two-part course is designed to provide education majors with a forum for enhancing their skills in the area of writing, reading, math, speech, and test-taking strategies. Emphasis will be on preparation for the PRAXIS exams (0 Credits)

Objectives:

1. Identify personal weaknesses and locate corresponding resources to practice and increase critical reading, writing, and math skills.

2. Use test-taking strategies, including planning and preparation and time management, to complete practice tests.

3. Explain the basics of the exam format and logistics, including times and dates, costs, and required cutoff scores.

4. Employ Bloom's Taxonomy to reflect on learning improvements, to evaluate resources use, and to develop a comprehensive preparation plan.

EDU 110 Introduction to Prof of Education

EDU 110 - Through this course, students will experience a comprehensive introduction to the field of education and to the theorists who have contributed to building the knowledge base of education today. This course is designed to explore the background and development of education and to examine how this historical development has affected the various types of current educational programs, trends, issues and ethical considerations. The development of specialized branches of education, such as early learning and special education will be explored. The appropriate characteristics, behaviors and ethics of professionals in the field will also be emphasized. Ten hours of field work is required. (3 Credits)

Objectives:

1. To describe the actions and behaviors of a well-organized, ethical and responsible educator, and define in both verbal and written formats, professionalism and ethical practice within the field of education culminating in the creation of a personal philosophy of education.

2. To identify foundational contributors (theorists) to the field of education including (but not limited to) Luther, Comenius, Locke, Rousseau, Pestalozzi, Froebel, Dewey, Montessori, Vygotsky, Piaget, Skinner and Gardner.

3. To analyze and discuss the funding and governing of public and private education in the United States including the regulations directing the operation of early learning programs (preschools and child care centers).

4. To evaluate – through reading, research and observation – the current issues and trends in the field (including professional development) and their impact on students, parents, educators and the general public.

5. To be able to create a plan for a learning environment that is developmentally appropriate, goal-directed and focused on the accomplishment of the skills presented in their selected level of learning standards.

EDU 215 Language, Literacy & Play

EDU215 - This course is designed to inform students as to how the course of children's literature, specifically, has developed, as well as assisting students in discovering and evaluating current quality children's literary materials (for students from Birth through Grade Four) in multiple genres. Students study the nature of works for children and how the current literature compares with classic works such as fairy tales and myths. In addition, teaching methods for introducing literature in environments for young children will be explored, incorporating cross-curricular strategies. Ten hours of field work is required.
(3 Credits) Prerequisite: EDU135 OR ECE140

Objectives:

1. To analyze and select high quality and developmentally appropriate literature for children which shows an appreciation for diversity and omits references to racism, sexism, and other forms of discrimination and intolerance.

2. To describe the relationship between literature and language arts and importance of integrating literature across all areas of the curriculum.

Objectives:

3. To examine critically, how the development of children's literature (historically and in the present) reflects and promotes society's views of childhood, gender roles, parenting styles, social problems/values, etc.

4. To create age-appropriate activities designed to stimulate and extend children's literary experiences and the enjoyment of reading through a wide variety of language materials including board books, picture books, chapter books, videos, word walls, experience stories, poems, finger plays, etc.

5. To demonstrate the ability to choose literature that is designed to assist young children in coping with issues of development including physical challenges, emotional issues and issues of discrimination such as bullying.

English Language Learning

ELL 010 Writing and Grammar

ELL010- Writing & Grammar

This course is designed to prepare students to succeed in College Writing Courses and beyond. ELL students will be exposed to intensive grammar, the parts of speech and basic sentence structure, as well as concentrating on the 15 grammar keys. Students will develop sentence, paragraph and essay writing skills, focusing on learning grammatical structures and using this knowledge within the writing context. Students will learn new vocabulary to produce coherent essays in American English with a focus on the process of writing (prewriting activities, revising, editing), sentence structure and grammar. Students will be required to keep a journal in which they will practice new skills and express their views. Students must receive a C or better to successfully complete this course. (3 credits)

Objectives:

1. To identify the eight parts of speech.

2. To identify 15 grammar categories.

3. To write a paragraph on a familiar topic using a topic sentence and supporting sentences.

4. To recognize basic constructions such as subject-verb agreement in simple present/past or present progressive tenses and the appropriate use of pronouns.

5. To use specific modal auxiliaries to convey, to a limited degree, the different meanings of ability, possibility, or suggestion and the different meaning of order, advice or warning.

6. To demonstrate understanding of the mood of a message containing the imperative and specific modal auxiliaries.

ELL 020 Reading and Conversation

ELL020-Reading & Conversation

In this course students will develop and broaden their vocabulary and practice it in context while both reading and speaking. Reading as an essential means of processing forms and ideas will help develop the ability to think critically in English encompassing the skills of prediction, the comprehension of main ideas and details, and the importance of inferences. While improving students reading abilities, they will also become familiar with North American customs, popular idioms, phrases and expressions that are used in daily life such as asking and answering common questions, using possessive nouns and adjectives and describing events in time sequence. Students will engage in role-play and real-life activities to develop competency in natural conversation. Further development in listening comprehension will be achieved through awareness-building drills and exercises. Students must receive a C or better to successfully complete this course. (3 credits)

Objectives:

1. To successfully scan for specific information in simple life-skill materials related to immediate needs.

2. To predict the meaning of unfamiliar vocabulary by analyzing prefixes and suffixes and using context clues.

Objectives:

3. To analyze simple narrative or descriptive passages on familiar topics to distinguish fact from opinion.

4. To use context clues to make inferences in simple narrative or descriptive passages on familiar topics.

5. To demonstrate, through face-to-face conversation, the understanding of simple questions and answers in standard English.

6. To participate in simple conversations dealing with basic survival needs, to using yes/no questions, why questions and those including possessive noun and possessive adjectives.

7. To describe a sequence of events in the past dealing with his/her personal life.

Emergency Medical Services

EMS 105 Intro to EMS

This course introduces the student to the Emergency Medical Services (EMS). Topics covered include: Advanced Prehospital Care, The well-being of the Paramedic, EMS systems, Roles & Responsibilities of the Paramedic, Illness & Injury Prevention, Medical/Legal Aspects of Advanced Prehospital Care, and Ethics in Advanced Prehospital Care. This course utilizes Bledsoe, Cherry, and Porter Paramedic Care Volumes 1 through 5, 3rd Edition texts & lecture notes ppt. slides, student CD-Rom, to assist student learning. (3 Credits)

Objectives:

1. Describe the relationship between the paramedic and other members of the allied health professions.

2. Identify the attributes and characteristics of the paramedic.

3. Explain the elements of paramedic education and practice that support its stature as a profession. Define and give examples of the expanded scope of practice for the paramedic. The Well-Being of the Paramedic.

4. Discuss the concept of wellness and its benefits.

5. Define the components of wellness.

6. Describe the role of the paramedic in promoting wellness.

7. Discuss how cardiovascular endurance, weight control, muscle strength, and flexibility contribute to physical fitness.

8. Describe the impact of shift work on circadian rhythms.

9. Discuss the contributions that periodic risk assessments and warning sign recognition make to cancer and cardiovascular disease prevention.

10. Differentiate proper from improper body mechanics for lifting and moving patients in emergency and non emergency situations.

11. Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation.

12. Describe the considerations that should be given to using escorts, dealing with adverse environmental conditions, using lights and siren, proceeding through intersections, and parking at an emergency scene.

13. Discuss the concept of "due regard for the safety of all others" while operating an emergency vehicle.

14. Describe the equipment available in a variety of adverse situations for self-protection.

15. Describe the benefits and methods of smoking cessation.

16. Describe the three phases of the stress response.

17. List factors that trigger the stress response.

Objectives:

18. Differentiate between normal healthy and detrimental physiological and psychological reactions to anxiety and stress.

19. Identify causes of stress in EMS.

20. Describe behavior that is a manifestation of stress in patients and those close to them, and describe how that behavior relates to paramedic stress.

21. Identify and describe the defense mechanisms and management techniques common ly used to deal with stress.

22. Describe the research about possible problems in the use of critical incident stress management (CISM) and the appropriate mental health services that should be available to EMS personnel.

23. Describe the stages of the grieving process (Kubler-Ross).

24. Describe the unique challenges for paramedics in dealing with themselves, adults, children, and special populations related to their understanding or experience of death and dying.

25. Describe the Standard Precautions to take for personal protection from airborne and bloodborne pathogens.

26. Given a scenario where equipment and supplies have been exposed to body substances, plan for the proper cleaning, disinfection, and disposal of the items.

27. Given photos of various motor vehicle collisions, assess scene safety and propose ways to make the scene safer.

28. Given a scenario involving a stressful situation, formulate a strategy to help adapt to the stress.

29. Describe key historical events that influenced the national development of Emergency Medical Services (EMS) systems.

30. Define the following terms: EMS systems, Licensure, Certification, Registration, Profession, Professionalism, Health care professional, Ethics, Peer review, Medical direction, and Protocols.

31. Identify national groups important to the development, education, and implementation of EMS.

32. Discuss the role of national associations, the National Registry ofEMTs, and the roles of various EMS standard-setting agencies.

33. Identify the standards (components) of an EMS system as defined by the National Highway Traffic Safety Administration.

34. Differentiate among EMS provider levels: First Responder, Emergency Medical Technician-Basic, Emergency Medical Technician-Intermediate or EMT-Advanced., and Emergency Medical Technician-Paramedic.

35. Describe what is meant by 'citizen involvement in the EMS system.'

36. Describe the role of the EMS physician in providing medical direction.

37. Discuss prehospital and out-of-hospital care as an extension of the physician.

38. Describe the benefits of both on-line and off-line medical direction.

39. Describe the process for the development of local policies and protocols.

40. Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.

41. Describe the components of continuous quality improvement and analyze its contribution to system improvement, continuing medical education, and research.

42. Describe the importance, basic principles, process of evaluating and interpreting, and benefits of research.

43. Describe the attributes of a paramedic as a health care professional.

Objectives:

44. Describe the benefits of paramedic continuing education and the importance of maintaining one's paramedic license/certification.

45. List the primary and additional responsibilities of paramedics.

46. Define the role of the paramedic relative to the safety of the crew, the patient, and bystanders.

47. Describe the role of the paramedic in health education activities related to illness and injury prevention.

48. Describe examples of professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service.

49. Identify the benefits of paramedics teaching in their community.

50. Analyze how the paramedic can benefit the healthcare system by supporting primary care for patients in the out-of-hospital setting.

51. Describe how professionalism applies to the paramedic while on and off duty.

52. Describe the incidence, morbidity and mortality, and the human, environmental, and socioeconomic impact of unintentional and alleged unintentional injuries.

53. Identify health hazards and potential crime areas within the community.

54. Identify local municipal and community resources available for physical, socioeconomic crises.

55. List the general and specific environmental parameters that should be inspected to assess a patient's need for preventive information and direction.

56. Identify the role of EMS in local municipal and community prevention programs. Identify the injury and illness prevention programs that promote safety for all age populations.

57. Identify patient situations where the paramedic can intervene in a preventive manner.

58. Document primary and secondary injury prevention data.

59. Differentiate among legal, ethical, and moral responsibilities of the paramedic.

60. Describe the basic structure of the legal system and differentiate between civil and criminal law.

61. Differentiate between licensure and certification as they apply to the paramedic.

62. List the specific reportable problems or conditions encountered while providing care and identify to whom the reports are to be made.

63. Define the following terms: Abandonment, Advance directives, Assault, Battery, Breach of duty, Confidentiality, Consent (expressed, implied, informed, involuntary), Do Not Resuscitate (DNR) orders, Duty to act, Emancipated minor, False imprisonment, Immunity, Liability, Libel, Minor, Negligence, Proximate cause, Scope of practice, Slander, Standard of care, and Tort.

64. Discuss the legal implications of medical direction, including off-line medical direction and on-line medical direction, and its relationship to the paramedic's standard of care. Describe the four elements that must be present in order to prove negligence.

65. Explain liability as it applies to emergency medical services, including the physicians providing medical direction and the paramedic's supervision of other care providers. Discuss immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.

66. Explain the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.

67. Differentiate among the types of consent: expressed, informed, implied, and involuntary. Given various scenarios with a patient in need of care, describe the process used to obtain informed or implied consent.

Objectives:

68. Given several refusal-of-care scenarios, demonstrate appropriate patient interaction and documentation techniques.

69. Identify the legal issues involved in the decision not to transport a patient, or to reduce the level of care being provided.

70. Describe how hospitals are selected to receive patients based on patient need and hospital capability and the role of the paramedic in such selection.

71. Differentiate between assault and battery and describe how to avoid committing each. Describe the conditions under which the use of force, including restraint, is acceptable. Explain the purpose of advance directives and how they impact your patient care. Discuss the paramedic's responsibilities relative to resuscitation efforts for patients who are potential organ donors.

72. Describe how a paramedic may preserve evidence at a crime or accident scene.

73. Describe the importance of providing accurate documentation (oral and written) in substantiating an emergency medical services response.

74. Describe the characteristics of a patient care report required to make it an effective legal document. Review several patient care reports and evaluate the content from a legal and liability perspective.

75. Given several scenarios in which a patient is injured while a paramedic is providing care, determine whether the four components of negligence are present.

76. Given several scenarios, describe patient care behaviors that would protect the paramedic from claims of negligence.

77. Define ethics and morals.

78. Distinguish between ethical and moral decisions in emergency medical service.

79. Identify the premise that should underlie the paramedic's ethical decisions in out-of-hospital care.

80. Analyze the relationship between the law and ethics in EMS.

81. Compare and contrast the criteria used in allocating scarce EMS resources.

82. Identify issues surrounding advance directives in making a prehospital resuscitation decision.

83. Describe the criteria necessary to honor an advance directive in your state. Given several narrative circumstances, make decisions in keeping with the ethical principles associated with EMS.

EMS 112 General Pharmacy

This course deals with general pharmacological principles, FDA legislation, routes of drug administration, and phases of drug activity and the classifications of drugs. Paramedics have a fundamental knowledge of the medications they deliver to patients in emergency medicine. The student will study the application and administration of pharmacology in the context of various patient care delivery settings, drug interactions and special considerations given specific patients. This course utilizes Bledsoe, Cherry, and Porter Paramedic Care Volumes 1 through 5, 3rd Edition texts, workbooks, Drug Guide for Paramedics & lecture notes ppt. slides, student CD-Rom, Mikolaj, Drug Dosage Calculations 2nd edition and Foust, Easy 4-step Method to Drug Calculations to assist student learning. (1 Credit)

Objectives:

1. Describe important historical trends in pharmacology.

2. Differentiate among the chemical, generic (nonproprietary), official (USP), and trade (proprietary) names of a drug.

3. List the four main sources of drug products.

4. Describe how drugs are classified.

Objectives:

5. List the authoritative sources for drug information.

6. List legislative acts controlling drug use and abuse in the United States.

7. Differentiate among Schedule I, II, III, IV, and V substances and list examples of substances in each schedule.

8. Discuss standardization of drugs.

9. Discuss investigational drugs, including the Food and Drug Administration (FDA) approval process and the FDA classifications for newly approved drugs.

10. Discuss special considerations in drug treatment with regard to pregnant, pediatric, and geriatric patients.

11. Discuss the paramedic's responsibilities and scope of management pertinent to the administration of medications.

12. Review the specific anatomy and physiology pertinent to pharmacology.

13. List and describe general properties of drugs.

14. List and describe liquid and solid drug forms.

15. List and differentiate routes of drug administration.

16. Differentiate between enteral and parenteral routes of drug administration.

17. Describe mechanisms of drug action.

18. List and differentiate the phases of drug activity, including the pharmaceutical, pharmacokinetic, and pharmacodynamic phases.

19. Describe the processes called pharmacokinetics pharmacodynamics, including theories of drug action, drug-response relationship, factors altering drug responses, predictable drug responses, iatrogenic drug responses, and unpredictable adverse drug responses.

20. Differentiate among drug interactions.

21. Discuss considerations for storing and securing medications.

22. List the components of a drug profile by classification.

23. Review the specific anatomy and physiology pertinent to pharmacology with additional attention to autonomic pharmacology.

24. Review autonomic pharmacology.

25. List and describe common prehospital medications, including indications, contraindications, side effects, routes of administration, and dosages.

26. Given several patient scenarios, identify medications likely to be prescribed and those that are likely a part of the prehospital treatment regimen.

27. Given various patient medications, assess the pathophysiology of a patient's condition by identifying classifications of drugs.

EMS 120 Assessment - EMS

This course discusses how students can obtain a pertinent history of a patient, the various physical exam techniques, patient assessment in the field, clinical decision making, communications, documentation, therapeutic communication and life-span development. It begins by discussing appropriate interpersonal, communications, and questioning skills, then proceeds through an explanation of all the elements needed in a comprehensive patient history, an overview of a comprehensive examination, explains each component of a physical exam in detail, and discusses which type of assessment is most appropriate, what interventions are needed, and when the interventions should be performed. The student will explore situations that require them to make critical decisions on which a patient's life may depend; they will gather information, analyze it, form a field diagnosis, and devise a management plan, communicate various forms of information effectively with others involved in the call and examine the uses of the PCR and the elements of proper documentation. This course also discusses life-span changes. This course utilizes Bledsoe, Cherry, and Porter Paramedic Care Volumes 1 through 5, 3rd Edition texts, workbooks & lecture notes ppt. slides, student CD-Rom, to assist student learning.

* The subject material presented in this course discusses, in detail, the human body. Images and discussions included in this course may not be appropriate for individuals who are sensitive or easily offended by discussion of bodily functions, images of severely ill or traumatized human beings encompassing all age groups. (1 Credit)

Objectives:

1. Describe the techniques of history taking.

2. Discuss the importance of using open- and closed-ended questions.

3. Describe the use of, and differentiate between, facilitation, reflection, clarification, empathetic responses, confrontation, and interpretation.

4. Describe the structure, purpose, and how to obtain a comprehensive health history. List the components of a comprehensive history of an adult patient. The Physical Exam Techniques.

5. Define and describe the techniques of inspection, palpation, percussion, auscultation. Describe the evaluation of mental status.

6. Evaluate the importance of a general survey.

7. Describe the examination of the following body regions, differentiate between normal and abnormal findings, and define the significance of abnormal findings including: skin, hair, nails, head, scalp, skull, eyes, ears, nose, mouth, pharynx, neck, thorax (anterior and posterior), arterial pulse including rate, rhythm, and amplitude, jugular venous pressure and pulsations, heart and blood vessels, abdomen, male and female genitalia, anus and rectum, musculoskeletal system, peripheral vascular system, nervous system, and cranial nerves.

8. Describe the assessment of visual acuity.

9. Explain the rationale for the use of an ophthalmoscope and otoscope.

10. Describe the survey of respiration.

11. Describe percussion of the chest.

12. Differentiate the percussion notes and their characteristics.

13. Describe special examination techniques related to the assessment of the chest.

14. Describe the auscultation of the chest, heart, and abdomen.

15. Distinguish between normal and abnormal auscultation findings of the chest, heart, and abdomen and explain their significance.

16. Describe special techniques of the cardiovascular examination.

17. Describe the general guidelines of recording examination information.

18. Discuss the examination considerations for an infant or child. Patient Assessment in the Field.

19. Recognize hazards/potential hazards associated with the medical and trauma scene.

Objectives:

20. Identify unsafe scenes and describe methods for making them safe.
21. Discuss common mechanisms of injury/nature of illness.
22. Predict patterns of injury based on mechanism of injury.
23. Discuss the reason for identifying the total number of patients at the scene.
24. Organize the management of a scene following size-up.
25. Explain the reasons for identifying the need for additional help or assistance during the scene size-up.
26. Summarize the reasons for forming a general impression of the patient.
27. Discuss methods of assessing mental status/levels of consciousness in the adult, child, and infant patient.
28. Discuss methods of assessing and securing the airway in the adult, child, and infant patient.
29. State reasons for cervical spine management for the trauma patient.
30. Analyze a scene to determine if spinal precautions are required.
31. Describe methods for assessing respiration in the adult, child, and infant patient.
32. Describe the methods used to locate and assess a pulse in an adult, child, and infant patient.
33. Discuss the need for assessing the patient for external bleeding.
34. Describe normal and abnormal findings when assessing skin color, temperature, and condition.
35. Explain the reason and process for prioritizing a patient for care and transport.
36. Use the findings of the initial assessment to determine the patient's perfusion status.
37. Describe orthostatic vital signs and evaluate their usefulness in assessing a patient in shock.
38. Describe the medical patient physical examination.
39. Differentiate among the assessment for an unresponsive, altered mental status, and alert medical patient.
40. Discuss the reasons for reconsidering the mechanism of injury.
41. Recite examples and explain why patients should receive a rapid trauma assessment.
42. Describe the trauma patient physical examination.
43. Describe the elements of the rapid trauma assessment and discuss their evaluation.
44. Identify cases when the rapid assessment is suspended to provide patient care.
45. Discuss the reason for performing a focused history and physical exam.
46. Describe when and why a detailed physical examination is necessary.
47. Discuss the components of the detailed physical examination.
48. Explain what additional care is provided while performing the detailed physical exam.
49. Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient.
50. Differentiate between patients requiring a detailed physical exam and those who do not.
51. Discuss the rationale for repeating the initial assessment as part of the ongoing assessment.
52. Describe the components of the ongoing assessment.
53. Describe trending of assessment components.

Objectives:

54. Discuss medical identification devices/systems.

55. Given several preprogrammed and moulaged medical and trauma patients, provide the appropriate scene survey, initial assessment, focused assessment, detailed assessment, and ongoing assessments.

56. Compare the factors influencing medical care in the out-of-hospital environment to other medical settings.

57. Differentiate between critical life-threatening, potentially life-threatening, and non-life-threatening patient presentation.

58. Evaluate the benefits and shortfalls of protocols, standing orders, and patient care algorithms.

59. Define the components, stages, and sequences of the critical thinking process for paramedics.

60. Apply the fundamental elements of critical thinking for paramedics.

61. Describe the effects of the "fight-or-flight" response and its positive and negative effects on a paramedic's decision making.

62. Summarize the "six Rs" of putting it all together: Read the patient, Read the scene, React, Reevaluate, Revise the management plan, Review performance.

63. Given several preprogrammed and moulaged trauma and medical patients, demonstrate clinical decision making.

64. Identify the role and importance of verbal, written, and electronic communications in the provision of EMS.

65. Describe the phases of communications necessary to complete a typical EMS response.

66. List factors that impede and enhance effective verbal and written communications.

67. Explain the value of data collection during an EMS response.

68. Recognize the legal status of verbal, written, and electronic communications related to an EMS response.

69. Identify current technology used to collect and exchange patient and/or scene information electronically.

70. Identify the various components of the EMS communications system and describe their function and use.

71. Identify and differentiate among the following communications systems: Simplex, Duplex, Multiplex, Trunked, Digital communications, Cellular telephone, Facsimile and Computer.

72. Describe the functions and responsibilities of the Federal Communications Commission. Describe the role of emergency medical dispatch and the importance of prearrival instructions in a typical EMS response.

73. List appropriate caller information gathered by the emergency medical dispatcher. Describe the structure and importance of verbal patient information communication to the hospital and medical direction.

74. Diagram a basic communications system.

75. Given several narrative patient scenarios, organize a verbal radio report for electronic transmission to medical direction.

76. Identify the general principles regarding the importance of EMS documentation and ways in which documents are used.

77. Identify and properly use medical terminology, medical abbreviations, and acronyms.

78. Explain the role of documentation in agency reimbursement.

79. Identify and eliminate extraneous or nonprofessional information.

80. Describe the differences between subjective and objective elements of documentation.

81. Evaluate a finished document for errors and omissions and proper use and spelling of abbreviations and acronyms.

Objectives:

82. Evaluate the confidential nature of an EMS report.

83. Describe the potential consequences of illegible, incomplete, or inaccurate documentation.

84. Describe the special documentation considerations concerning patient refusal of care and/or transport.

85. Demonstrate how to properly record direct patient or bystander comments.

86. Describe the special considerations concerning multiple-casualty incident documentation.

87. Demonstrate proper document revision and correction.

88. Given a prehospital care report form and a narrative patient care scenario, record all pertinent administrative information using a consistent format; identify and record the pertinent, reportable clinical data for each patient; correct errors and omissions, using proper procedures; and note and record "pertinent negative" clinical findings.

89. Define communication.

90. Identify internal and external factors that affect a patient and bystander interview.

91. Identify strategies for developing rapport with the patient.

92. Provide examples of open-ended and closed, or direct, questions.

93. Discuss common errors made when interviewing patients.

94. Identify the nonverbal skills used in patient interviewing.

95. Summarize methods used to assess mental status based on interview techniques.

96. Discuss strategies for interviewing a patient who is not motivated to talk.

97. Differentiate strategies used when interviewing a patient who is hostile compared to one who is cooperative.

98. Summarize the developmental considerations of various age groups that influence patient interviewing.

99. Define the unique interviewing techniques for patients with special needs.

100. Discuss interviewing considerations used in cross-cultural communications.

101. Given several preprogrammed simulated patients, provide a patient interview using therapeutic communication.

102. Compare and contrast the physiological and psychosocial characteristics of the following life-span development stages.

EMS 125 Respiratory EMS

This course discusses airway management & ventilation, pathophysiology, assessment, and management of the most frequently encountered respiratory emergencies. Students will examine equipment, advanced techniques, complications, and management of patient airway. Students will also examine the epidemiology of pulmonary diseases, identification of respiratory distress & arrest, treatment and management of patients with airway compromise and pulmonary insufficiency. This course utilizes Bledsoe, Cherry, and Porter Paramedic Care Volumes 1 through 7, 4th Edition texts, workbooks, Drug Guide for Paramedics & lecture notes ppt. slides, student CD-Rom to assist student learning.

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Objectives:

1. Explain the primary objective of airway maintenance.

2. Identify commonly neglected prehospital skills related to the airway.

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Objectives:

3. Describe the anatomy and function of the upper and lower airway structures in detail, including landmarks for direct larygoscopy.

4. Explain the differences between adult and pediatric airway anatomy, discuss the following functions of the respiratory system: mechanics of ventilation, pulmonary circulation, gas exchange in the lungs, and diffusion of the respiratory gases.

5. Describe oxygen transport in the blood and factors that affect it.

6. Describe carbon dioxide transport in the blood and factors that affect it.

7. Describe the voluntary and involuntary regulation of respiration.

8. List the concentration of gases that comprise atmospheric air.

9. Describe the various measures of respiratory function, and give the average normal values for each, including the normal respiratory rates for the adult, child, and infant.

10. Describe assessment of the airway and the respiratory system.

11. Describe the modified forms of respiration and list the factors that affect respiratory rate and depth.

12. Discuss the methods for measuring oxygen and carbon dioxide in the blood and their prehospital use.

13. Define and explain the implications of partial airway obstruction with good and poor air exchange and complete airway obstruction.

14. Describe the common causes of upper airway obstruction, including: the tongue, foreign body aspiration, laryngeal spasm, laryngeal edema, and trauma.

15. Describe complete airway obstruction maneuvers, including: abdominal thrusts and removal with Magill forceps.

16. Describe causes of respiratory distress, including: upper and lower airway obstruction, inadequate ventilation, impairment of respiratory muscles, and impairment of nervous system.

17. Explain the risk of infection to EMS providers associated with airway management and ventilation.

18. Describe manual airway maneuvers, including: head-tilt/chin-lift maneuver, jaw-thrust maneuver, and modified jaw-thrust maneuver.

19. Discuss the indications, contraindications, advantages, disadvantages, complications, special considerations, equipment, and techniques of the following: upper airway and tracheobronchial suctioning, nasogastric and orogastric tube insertion, oropharyngeal and nasopharyngeal airway, ventilating a patient by mouth-to-mouth, mouth-to-nose, mouth- to-mask, one-, two-, or three-person bag-valve mask, flow- restricted oxygen-powered ventilation device, and automatic transport ventilator.

20. Compare the ventilation techniques used for an adult patient to those used for pediatric patients, and describe special considerations in airway management and ventilation for the pediatric patient.

21. Identify types of oxygen cylinders and pressure regulators, and explain safety considerations of oxygen storage and delivery, including steps for delivering oxygen from a cylinder and regulator.

22. Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for the following supplemental oxygen delivery devices: Nasal cannula, Simple face mask, Partial rebreather mask, Nonrebreather mask, and Venturi mask.

23. Describe the use, advantages, and disadvantages of an oxygen humidifier.

24. Describe the indications, contraindications, advantages, disadvantages, complications, equipment, and technique for the following: Endotracheal intubation by direct laryngoscopy, Digital endotracheal intubation, Dual lumen airway, Nasotracheal intubation, Rapid sequence intubation, Endotracheal intubation using sedation, Open cricothyrotomy, Needle cricothyrotorny (translaryngeal cannula ventilation), and Ext\Jpatlon.

25. Describe the Jse of cricoid pressure during intubation.

Objectives:

26. Discuss the precautions that should be taken when intubating the trauma atient.

27. Discuss agents used for sedation and rapid sequence intubation. panenr.

28. Discuss methods to confirm correct placement of the endotracheal tube.

29. Define the following: gag reflex atelectasis Fi02 hvnoxia distention, cricoid pressure, and laryngectomy. Hypoxia, hypoxemia, pulsus paradoxus, gastric.

30. Discuss the epidemiology.

31. Identify and describe pulmonary diseases and pulmonary conditions.

32. Compare various airway and ventilation techniques.

33. Review the of equipment utilized during the physical examination of patients with complaints associated with respiratory diseases and conditions.

34. Identify the epidemiology, anatomy, physiology, pathophysiology, assessment findings, and management (including prehospital medications) for the following respiratory diseases and conditions: Adult respiratory distress syndrome, Bronchial asthma, Chronic bronchitis, Emphysema, Pneumonia, Pulmonary edema, Pulmonary thromboembolism, Neoplasms of the lung, Upper respiratory infections, Spontaneous pneumothorax, and Hyperventilation syndrome.

35. Given several preprogramrned patients with nontraumatic pulmonary problems, provide the appropriate assessment, prehospital care, and transport.

EMS 130 Cardiology EMS

Paramedics confront emergencies involving the cardiovascular system on a daily basis. Due to large content of this course, it has been divided into three parts. Part 1 covers cardiovascular anatomy and physiology, ECG monitoring, and dysrhythmia analysis. Part 2 discusses the assessment and management of the cardiovascular patient and pathology of cardiac disease in the emergency setting. Part 3 covers 12-lead ECG monitoring and interpretation, evolution of Acute Coronary Syndrome and localization of Acute Myocardial Infarction. This course utilizes Bledsoe, Cherry, and Porter Paramedic Care Volumes 1 through 7, 4th Edition texts, workbooks, Drug Guide for Paramedics & lecture notes ppt. slides, student CD-Rom, and an abundance of various cardiac rhythm strips to assist student learning.

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Objectives:

1. Describe the incidence, morbidity, and mortality of cardiovascular disease.

2. Discuss prevention strategies that may reduce the morbidity and mortality of cardiovascular disease.

3. Identify the risk factors most predisposing to coronary artery disease.

4. Describe the anatomy of the heart, including the position in the thoracic cavity, layers ofthe heart, chambers of the heart, and location and function of cardiac valves.

5. Identify the major structures of the vascular system, the factors affecting venous return, the components of cardiac output, and the phases of the cardiac cycle.

6. Define preload, afterload, and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.

7. Identify the arterial blood supply to any given area of the myocardium.

8. Compare and contrast the coronary arterial distribution to the major portions of the cardiac conduction system.

9. Identify the structure and course of all divisions and subdivisions of the cardiac conduction system.

Objectives:

10. Identify and describe how the heart's pacemaking control, rate, and rhythm are determined.

11. Explain the physiological basis of conduction delay in the A V node.

12. Define the functional properties of cardiac muscle.

13. Define the events comprising electrical potential.

14. List the most important ions involved in myocardial action potential and their primary function in this process.

15. Describe the events involved in the steps from excitation to contraction of cardiac muscle fibers.

16. Describe the clinical significance of Starling's law.

17. Identify the structures of the autonomic nervous system and their effect on heart rate, rhythm, and contractility.

18. Define and give examples of positive and negative inotropism, chronotropism, and dromotropism.

19. Discuss the pathophysiology of cardiac disease and injury.

20. Explain the purpose of ECG monitoring and its limitations.

21. Correlate the electrophysiological and hemodynamic events occurring throughout the entire cardiac cycle with the various ECG waveforms, segments, and intervals. Identify how heart rates, durations, and amplitudes may be determined from ECG recordings. Relate the cardiac surfaces or areas represented by the ECG leads.

22. Differentiate among the primary mechanisms responsible for producing cardiac dysrhythmias.

23. Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.

24. Describe the .dysrhythmias originating in the sinus node, the A V junction, the atria, and the ventricles.

25. Describe the process and pitfalls of differentiating wide QRS complex tachycardias.

26. Describe the conditions of pulseless electrical activity.

27. Describe the phenomena of reentry, aberration, and accessory pathways, Identify the ECG changes characteristically produced by electrolyte imbalances and specify their clinical implications.

28. Identify patient situations where ECG rhythm analysis is indicated.

29. Recognize the ECG changes that may reflect evidence of myocardial ischemia and injury and their limitations.

30. Correlate abnormal ECG findings with clinical interpretation.

31. Identify the major mechanical, pharmacological, and electrical therapeutic objectives in the treatment of the patient with any dysrhythmia.

32. Describe artifacts that may cause confusion when evaluating the ECG of a patient with a pacemaker.

33. List the possible complications of pacing.

34. List the causes and implications of pacemaker failure.

35. Identify additional hazards that interfere with artificial pacemaker function.

36. Recognize the complications of artificial pacemakers as evidenced on an ECG, Part 2: Assessment and Management of the Cardiovascular Patient.

37. Identify and describe the details of inspection, auscultation, and palpation specific to the cardiovascular system.

38. Identify and define the heart sounds and relate them to hemodynamic events in the cardiac cycle.

39. Describe the differences between normal and abnormal heart sounds.

40. Define pulse deficit, pulsus paradoxus, and pulsus alternans.

41. Identify the normal characteristics of the point of maximum impulse (PM!).

Objectives:

42. Based on field impressions, identify the need for rapid intervention for the patient in cardiovascular compromise.

43. Describe the incidence, morbidity, and mortality associated with myocardial conduction defects.

44. Identify the clinical indications, components, and the function of transcutaneous and permanent artificial cardiac pacing.

45. Explain what-each setting and indicator on a transcutaneous pacing system represents and how the settings may be adjusted.

46. Describe the techniques of applying a transcutaneous pacing system.

47. Describe the characteristics of an implanted pacemaking system.

48. Describe the epidemiology, morbidity, mortality, and pathophysiology of angina pectoris.

49. Describe the assessment and management ofa patient with angina pectoris.

50. Identify what is meant by the OPQRST of chest discomfort assessment.

51. List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.

52. Identify the ECG findings in patients with angina pectoris.

53. Based on the pathophysiology and clinical evaluation of the patient with chest pain, list the anticipated clinical problems according to their life-threatening potential.

54. Describe the epidemiology, morbidity, mortality, and pathophysiology of myocardial infarction.

55. List the mechanisms by which a myocardial infarction may be produced from traumatic and nontraumatic.

56. Identify the primary hemodynamic changes produced in myocardial infarction.

57. List and describe the assessment parameters to be evaluated in a patient with a suspected myocardial infarction.

58. Identify the anticipated clinical presentation of a patient with a suspected acute myocardial infarction.

59. Differentiate the characteristics of the pain/discomfort occurring in angina pectoris and acute myocardial infarction.

60. Identify the ECG changes characteristically seen during evolution of an acute myocardial infarction.

61. Identify the most common complications of an acute myocardial infarction.

62. List the characteristics of a patient eligible for fibrinolytic therapy.

63. Describe the "window of opportunity" as it pertains to reperfusion of a myocardial injury or infarction.

64. Based on the pathophysiology and clinical evaluation of the patient with a suspected acute myocardial infarction list the anticipated clinical problems according to their life-threatening potential.

65. Specify the steps that may be taken to prevent or minimize complications in the patient suspected of myocardial infarction.

66. Describe the most commonly used cardiac drugs in terms of therapeutic effect and dosages, routes of administration, side effects, and toxic effects.

67. Describe the epidemiology, morbidity, mortality, and physiology associated with heart failure.

68. Identify the factors that may precipitate or aggravate heart failure.

69. Define acute pulmonary edema and describe its relationship to left ventricular failure. Differentiate between early and late signs and symptoms of left ventricular failure and those of right ventricular failure.

70. Define and explain the clinical significance of paroxysmal nocturnal dyspnea, pulmonary edema, and dependent edema.

Objectives:

71. List the interventions prescribed for the patient in acute congestive heart failure. Describe the most commonly used pharmacological agents in the management of congestive heart failure in terms.

72. Define and describe the incidence, mortality, morbidity, pathophysiology, assessment, and management of the following cardiac-related problems: Cardiac tamponade, Hypertensive emergency, Cardiogenic shock, and Cardiac arrest.

73. Identify the limiting factor of pericardia I anatomy that determines pericardial pressure.

74. Describe how to determine if pulsus paradoxus, pulsus altemans, or electrical aIternans is present.

75. Explain the essential pathophysiological defect of hypertension in terms of Starling's law of the heart.

76. Rank the clinical problems of patients in hypertensive emergencies according to their sense of urgency.

77. Identify the drugs of choice for hypertensive emergencies, cardiogenic shock, and cardiac arrest, including their indications, contraindications, side effects, route of administration, and dosages.

78. Describe the major systemic effects of reduced tissue perfusion caused by cardiogenic shock.

79. Explain the primary mechanisms by which the heart may compensate for a diminished cardiac output and describe the inefficiency in cardiogenic shock.

80. Identify the clinical criteria and progressive stages of cardiogenic shock.

8!. Describe the dysrhythmias seen in cardiac arrest.

81. Explain how to confirm asystole using the 3-lead ECG.

82. Define the terms defibrillation and synchronized cardioversion.

83. Specify the methods of supporting the patient with a suspected ineffective implanted defibrillation device.

84. Describe resuscitation and identify circumstances and situations where resuscitation efforts would not be initiated.

85. Identify communication and documentation protocols with medical direction and law enforcement used for termination of resuscitation efforts.

86. Describe the incidence, morbidity, mortality, pathophysiology, assessment, and management of vascular disorders, including occlusive disease, phlebitis, aortic aneurysm, and peripheral artery occlusion.

87. Identify the clinical significance of claudication and presence of arterial bruits in a patient with peripheral vascular disorders.

89. Describe the clinical significance of unequal arterial blood pressure readings in the arms.

90. Recognize and describe the signs and symptoms of dissecting thoracic or abdominal aneurysm.

91. Differentiate between signs and symptoms of cardiac tamponade, hypertensive emergencies, cardiogenic shock, and cardiac arrest.

92. Utilize the results of the patient history, assessment findings, and ECG analysis to differentiate between, and provide treatment for, patients with the following conditions Cardiovascular disease.

EMS 200 Capstone Field Experience

The course is to be completed by all Paramedic students requiring between 200 & 300 hours field internship time. The paramedic student will function as the "Team Leader" in the pre-hospital setting under the supervision of the Paramedic preceptor. The rationale and expectation of the student is to function at the level of a certified paramedic. EMS 200 can only be scheduled and completed once all other paramedic course requirements are met.
(3 Credtis)

Objectives:

1. The purpose of the clinical rotation is to provide students with an opportunity for reinforcement of the skills and development of entry level behaviors taught in the classroom through practice in clinical areas of approved healthcare facilities.

2. Each clinical area has objectives that are based on the knowledge and skills taught in the didactic setting. Additionally, the student is tested throughout all clinical rotations. It is the responsibility of the student to follow appropriate universal blood and body substance / fluid isolation precautions.

3. All clinical experiences are under the supervision of a designated preceptor. The student assists the preceptor in the completion of all required evaluation forms. A sample form is enclosed. The student is responsible for adhering to all policies, procedures and guidelines of Lackawanna College and each individual clinical facility.

EMS 225 Medical Emergency II - EMS

This course studies aspects of medical emergencies regarding patient population or populations of patients and specific needs given those populations. Topics of study will include: Obstetrics, Gynecology, Neonatology and Pediatrics, Geriatric Emergencies, Abuse & Assault, The Challenged Patient, and Acute Interventions for the Chronic Care Patient, Assessment-Based Management, Ambulance Operations, Medical Incident Management, Rescue Awareness Operations, Hazardous Materials Incidents, Crime Scene Awareness, Rural EMS, and Responding to Terrorist Acts. This course utilizes Bledsoe, Cherry, and Porter Paramedic Care Volumes 1 through 7, 4th Edition texts, workbooks, Drug Guide for Paramedics & lecture notes ppt. slides, student CD-Rom to assist student learning.

* The subject material presented in this course discusses, in detail, the human body. Images and discussions included in this course may not be appropriate for individuals who are sensitive or easily offended by discussion of bodily functions, images of severely ill or traumatized human beings
encompassing all age groups. (3 Credits)

Objectives:

1. Review the anatomic structures and physiology of the female reproductive system.

2. Identify the normal events of the menstrual cycle.

3. Describe how to assess a patient with a gynecological complaint.

4. Explain how to recognize a gynecological emergency.

5. Describe the general care for any patient experiencing a gynecological emergency.

6. Describe the pathophysiology, assessment, and management of the following gynecological emergencies: Pelvic inflammatory disease, Ruptured ovarian cys, Cystitis, Mittelschmerz, Endometritis, Endometriosis, Ectopic pregnancy, and Vaginal hemorrhage.

7. Describe the assessment, care, and emotional support of the sexual assault patient.

8. Given severalpreprogrammed gynecological patients, provide the appropriate assessment, management, and transportation.

9. Describe the anatomic structures and physiology of the reproductive system during pregnancy.

10. Identify the normal events of pregnancy.

11. Describe how to assess an obstetrical patient.

Objectives:

12. Identify the stages oflabor and the paramedic's role in each stage.

13. Differentiate between normal and abnormal deliveries.

14. Identify and describe complications associated with pregnancy and delivery.

15. Identify predelivery emergencies.

16. State indications of an imminent delivery.

17. Identify the contents of an obstetrical kit and explain the use of each item.

19. Differentiate the management of a patient with predelivery emergencies from a normal delivery.

19. State the steps in the predelivery preparation ofthe mother.

20. Establish the relationship between Standard Precautions and childbirth.

21. State the steps to assist in the delivery of a newborn.

22. Describe how to care for the newborn.

23. Describe how and when to cut the umbilical cord.

24. Discuss the steps in the delivery of the placenta.

25. Describe the management of the mother postdelivery.

26. Summarize neonatal resuscitation procedures.

27. Describe the procedures for handling abnormal deliveries, complications of pregnancy, and maternal complications of labor.

28. Describe special considerations when meconium is present in amniotic fluid or during delivery.

29. Describe special considerations of a premature baby.

30. Given several simulated delivery situations, provide the appropriate assessment, management, and transport for the mother and child.

31. Define newborn and neonate.

32. Identify important antepartum factors that can affect childbirth.

33. Identify important intrapartum factors that can determine high-risk newborn patients.

34. Identify the factors that lead to premature birth and low-birth-weight newborns.

35. Distinguish between primary and secondary apnea.

36. Discuss pulmonary perfusion and asphyxia.

37. Identify the primary signs utilized for evaluating a newborn during resuscitation.

38. Identify the appropriate use of the APGAR scale.

39. Calculate the APGAR score given various newborn situations.

40. Formulate an 'appropriate treatment plan for providing initial care to a newborn.

41. Describe the indications, equipment needed, application, and evaluation of the following management techniques for the newborn in distress: Blow-by oxygen, Ventilatory assistance, Endotracheal intubation, Oro gastric tube, Chest compressions, and Vascular access.

42. Discuss the routes of medication administration for a newborn.

43. Discuss the signs of hypovolemia in a newborn.

Objectives:

44. Discuss the initial steps in resuscitation of a newborn.

45. Discuss the effects of maternal narcotic usage on the newborn.

46. Determine the appropriate treatment for the newborn with narcotic depression.

47. Discuss appropriate transport guidelines for a newborn.

48. Determine appropriate receiving facilities for low- and high-risk newborns.

49. Describe the epidemiology, including the incidence, morbidity/mortality, risk factors and prevention strategies, pathophysiology, assessment findings, and management for the following neonatal problems: Meconium aspiration, Apnea, Diaphragmatic herni, Bradycardia, Prematurity, Respiratory distress/cyanosis, Seizures, Fever, Hypothermia, Hypoglycemia, Vomiting, Diarrhea, Common birth injuries, Cardiac arrest, and Postarrest management.

50. Given several neonatal emergencies, provide the appropriate procedures for assessment, management, and transport.

51. Discuss the paramedic's role in the reduction of infant and childhood morbidity and mortality from acute illness and injury.

52. Identify methods/mechanisms that prevent injuries to infants and children.

53. Describe Emergency Medical Services for Children (EMS C) and how it can affect patient outcome.

54. Identify the common family responses to acute illness and injury of an infant or child.

55. Describe techniques for successful interaction with families of acutely ill or injured infants and children.

56. Identify key anatomical, physiological, growth, and developmental characteristics of infants and children and their implications.

57. Outline differences in adult and childhood anatomy, physiology, and "normal" age-group-related vital signs.

58. Describe techniques for successful assessment and treatment of infants and children.

59. Discuss the appropriate equipment used to obtain pediatric vital signs.

60. Determine appropriate airway adjuncts, ventilation devices, and endotracheal intubation equipment; their proper use; and complications of use for infants and children.

61. List the indications and methods of gastric decompression for infants and children.

62. Define pediatric respiratory distress, failure, and arrest.

63. Differentiate between upper airway obstruction and lower airway disease.

64. Describe the general approach to the treatment of children with respiratory distress, failure, or arrest from upper airway obstruction or lower airway disease.

65. Discuss the common causes and relative severity of hypoperfusion in infants and children.

66. Identify the major classifications of pediatric cardiac rhythms.

67. Discuss the primary etiologies of cardiopulmonary arrest in infants and children.

68. Discuss age-appropriate sites, equipment, techniques, and complications of vascular access for infants and children.

69. Describe the primary etiologies of altered level of consciousness in infants and children.

70. Identify common lethal mechanisms of injury in infants and children.

71. Discuss anatomical features of children that predispose or protect them from certain injuries.

72. Describe aspects of infant and child airway management that are affected by potential cervical spine injury.

Objectives:

73. Identify infant and child trauma patients who require spinal immobilization.

English

ENG 102 Fundamentals of Writing

ENG 102 (Formerly EN 100) – Fundamentals of Writing

The purpose of this course is to help students develop a clear understanding of grammar, punctuation, and usage, in order to effectively produce academic essays in a knowledgeable manner. Students will be required to critically analyze literary works and refine their analysis as they prepare academic essays. ENG102 does not fulfill the writing core curriculum requirement. This course may be used for matriculation. (3 Credits)

Objectives:

1. Improve reading, writing, and communication skills.
2. Improve sentence-editing.
3. Understand and generate the writing involved in ENG105 and other upper-level courses.
4. Recognize strengths and weaknesses in writing.
5. Exercise analytical and creative skills.
6. Utilize peer editing and revision techniques to develop a better paper.

ENG 103 Critical Reading

ENG 103 - Critical Reading

The primary purpose of this course is to prepare students for college reading material – textbooks, journals, articles and newspapers. The emphasis is on active reading and developing specific strategies for understanding assigned college reading materials. The course begins with basic reading strategies, including vocabulary development and then moves into more advanced strategies for comprehension, study reading, and specialized reading. This course may be used for matriculation (3 Credits).

Objectives:

1. Determine the meaning of unfamiliar words using context clues, word analysis, etymology, connotation, and denotation.
2. Identify the main idea, supporting details, and transitions of paragraphs and longer passages (articles, chapters, newspapers) at a college reading level.
3. Become active readers and learners.
4. Recognize patterns of organization in reading material.
5. Draw conclusions from written material based on knowledge, experience, logic and awareness of writing technique.
6. Distinguish fact from opinion
.
7. Recognize author's purpose, tone, bias, and differentiate between literal and figurative Meanings.
8. Evaluate and interpret poetry.
9. Interpret photos, tables, charts, diagrams, and infographics.
10. Evaluate electronic sources for purpose, source, and accuracy.

Objectives:

11. Develop and practice critical reading skills necessary for success in content area courses by interpreting, evaluating, and applying what one reads to real-life situations.

ENG 105 College Writing

ENG 105 (Formerly EN 105) - College Writing

English 105 strives to familiarize students with the writing process, empowering them to effectively produce polished, coherent academic essays, which employ critical, analytical and research skills. This course applies a holistic approach to academic writing while helping students to develop clear, thoughtful essays in standard academic forms. Specifically, students' writing experience will culminate in the production of a properly organized, fully documented research paper (3 Credits).

ENG105HR - College Writing Honors

ENG 105 Honors strives to familiarize students with the writing process, empowering them to effectively produce polished, coherent academic essays, which employ critical, analytical and research skills. This course applies a holistic approach to academic writing while helping students to develop clear, thoughtful essays in standard academic forms. Specifically, students' writing experience will culminate in the production of a properly organized, fully documented research-based paper.

As a class, we will ask ourselves and examine the following five questions: 1. How well represented is the notion of writing on a worldly basis? 2. How does the writing process help solidify one's perception of moral and ethical purpose? 3. What social, cultural, and anthropological elements affect writing? 4. What constitutes "good writing" and how/why does it change over time? 5. Why is it useful to analyze how college papers are both produced and understood? 6. How do newer approaches to writing differ from more antiquated approaches?

Objectives:

1. To compose essays demonstrating ability to present a concise yet critical/analytical summary of a scholarly work.

2. To examine an issue and present well planned, carefully supported arguments in a research essay on an approved topic: 5-7 page original, fully documented academic essay in MLA style utilizing at least 5-6 sources.

3. To enable students to critically analyze their own writing and thought processes for bias and flawed logic, striving to correct these through self and peer editing.

4. To utilize various forms of print and electronic references, evaluating each of these for logic, validity, and reliability.

5. To base style and language choice upon sound analyses of audience and purpose.

6. To subject a hypothesis to critical analysis utilizing data, facts, and authoritative expertise either to confirm or refute individual points of view.

7. To recognize that effective writing involves processes of: thinking, discovering, planning, revising, editing, and proofreading.

8. To understand the protocol of writing in standard, formal English for academic and professional purposes.

9. Demonstrate an understanding of the key differences between MLA and APA formatting styles and citation practices.

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ENG 110 Introduction to Literature

ENG 110 (Formerly EN 106) - Introduction to Literature

English 110 introduces students to poetry, prose and drama while acquainting them with critical frameworks for interpreting literature. The course will employ a holistic approach to writing as a process, requiring students to compose original, critical essays that discuss primary literary works. While requiring classes to employ sound research skills, the course will allow individual students to develop critical approaches related to their academic and personal experiences (3 Credits). Prerequisite: ENG 105.

Objectives:

1. To compose a 6-page MLA documented research essay performing critical analysis of a text and utilizing a minimum of 8 academic sources.

2. To explain our own roles in interpreting a literary work as we bring values, experience, interdisciplinary knowledge, and beliefs to the interpretation.

3. To develop and utilize various critical approaches to literature.

4. To critically analyze our own reading skills, writing skills, and thought processes for bias and flawed logic.

5. To demonstrate cultural and gender sensitivity by effectively self-identifying and eliminating language bias in our own writing and speech.

6. To utilize various forms of print and electronic references, evaluating each of these for logic, validity, and reliability.

7. To subject a hypothesis about literature to critical analysis utilizing data, facts, and authoritative expertise either to confirm or refute a point of view.

8. To recognize that any form of reading engages a dialogue with the text. This dialogue, when written, helps us to develop response statements.

9. To compose in an electronic environment and use the resources of word processing software to improve writing.

ENG 115 Business Communications

ENG 115 (Formerly EN 111) - Business Communications
ENG115 is a practical course that introduces students to various media and the standard protocols of business communications, helping them to become competent, dependable communicators. Although written communication is the primary focus of the course, students will also investigate other forms of communication, including electronic mail and networking. This course employs a process approach to message development and empowers students as informed and effective listeners, speakers and writers (3 Credits). Prerequisite: ENG105

Objectives:

1. Understand and demonstrate the use of basic and advanced proper writing techniques that today's technology demands, including anticipating audience reaction.

2. Write effective and concise letters and memos.

3. Prepare informal and formal reports.

4. Proofread and edit copies of business correspondence.

5. Complete an accurate, complete resume and cover letter.

6. Conduct excellent interviews and complete follow-up employment correspondence.

7. Use career skills that are needed to succeed, such as using ethical tools, working collaboratively, observing business etiquette, and resolving workplace conflicts.

8. Plan successfully for and participate in meetings and conduct proper techniques in telephone usage.

Objectives:

9. Use e-mail effectively and efficiently,10. Develop interpersonal skills that contribute to effective and satisfying personal, social and professional relationships.

11. Utilize electronic presentation software.

ENG 215 Survey of American Literature

ENG 215 (Formerly EN 231) - Survey of American Literature to 1900
English 215 is a one semester course designed to provide the student with an appreciation of American poetry, fiction and drama by presenting the achievements of classic American writers of the late seventeenth, eighteenth and nineteenth centuries in their historical context. By reading and discussing in class a number of representative works from William Bradford, Benjamin Franklin, James Fenimore Cooper, Ralph Waldo Emerson, Nathaniel Hawthorne, Herman Melville, Mark Twain, Walt Whitman, Emily Dickinson and others, students should develop greater analytic power, literary insight and deeper understanding of the main currents of American thought (3 Credits). Prerequisites: ENG105 and ENG110

Objectives:

1. Read, analyze, and understand important texts of American literature.

2. Write personal analyses and notes on observations regarding styles, content and connections to other texts.

3. Write a fully documented essay in MLA style on an approved topic related to American literature.

4. Identify and explain the historical, cultural, and literary connections between texts.

5. Identify the roles of religion, government, nature, and other forces as they relate to American literature.

6. Compose coherent, well-written essays in in-class exams.

ENG 220 Women's Literature

This course will recognize the changing role women have experienced culturally, sexually, and psychologically through their writing. The course will also question biases and stereotypes that have defined women's roles in the United States and compare them to contemporary attitudes toward women and their culture. (3 Credits) Prerequisites: ENG105 and ENG110

Objectives:

1. To read, analyze, and understand important texts of literature written by women.

2. To write personal analyses and notes on observations regarding styles, content, and connections to other texts.

3. To write a fully-documented, six-page essay in MLA style on an approved topic related to women's literature.

4. To identify and explain the historical, cultural, and literary connections between texts.

5. To determine how social attitudes have shaped perceptions of women in literature and women's perceptions of themselves.

6. To utilize sources, as necessary and required, for supplementing understanding of texts.

7. To investigate how the margins are being redefined in women's writing and how the canonical center is being relocated or undermined.

ENG 240 African American Literature

In this course, students will read, analyze, and discuss literary works written by African Americans. Beginning with works written by enslaved African Americans, this course will include writings representative of Reconstruction, The Great Migration, The Harlem Renaissance, Black Realism, The Black Arts Movement, Modernism, and Post-Modernism. Genres studied will include poetry, fiction, drama, historical narratives, biography, film and music, specifically jazz, blues, and hip-hop. This course will also look at the connection between culture and politics by reading the texts of key writers such as Frederick Douglas, W.E.B. Du Bois, Langston Hughes, Zora Neale Hurston, Gwendolyn Brooks, James Baldwin, and others. (3 Credits)
Prerequisites: ENG105 and ENG110

Objectives:

1. Read, analyze, and understand important texts of African American literature, including fiction, poetry, historical narratives, biography, and drama.
2. Write personal analyses and notes regarding styles, content, and connections to other texts.
3. Write a fully documented research paper in MLA style on an approved topic related to African American literature.
4. Identify and explain the historical, cultural, and literary connections between texts.
5. Compose coherent, well-written essays and in-class exams.
6. Give a 5-7 minute presentation on an approved topic related to African American literature.

ENG 305 Introduction to Creative Writing

Intro to Creative Writing introduces students to three genres of writing: poetry, fiction, and creative nonfiction. Students will practice writing in different forms and learn the basic tools necessary to produce a piece of creative writing. Learning to analyze writing critically is another key component of this course. After all, reading is an essential part of becoming a strong creative writer. The class will a foster a workshop environment in which students will peer edit and provide feedback on each other's work, using guidelines and criteria provided by the instructor. Feedback given by the students and instructor will assist the student during the revision process. Shorter, spontaneous assignments will combine with longer assignments to refine student writing. Prerequisite: ENG105. (3 credits)

Objectives:

1. Explore the creative process through writing.
2. Analyze literature from the perspective of a writer.
3. Become familiar with the conventions of craft and form (per genre).
4. Learn how to critique writing constructively.
5. Reinforce revising skills, not only of language, but also of ideas and structure.
6. Prepare a final portfolio of creative work representative of poetry, fiction, and non-fiction.

ENG 310 The Novella

This course will examine the genre of the short novel—or novella—especially its traditional and innovative narrative techniques, its various ways of constructing authorial point-of-view, its mode of plot compression, its diverse range of styles, and its respective place among canonical texts. Authors may include Graham Greene, Truman Capote, Nella Larson, Honoré de Balzac, Agatha Christie, Robert Louis Stevenson, Don DeLillo, Thomas Mann, Franz Kafka, Joyce Carol Oates, Alice Munro, and John Steinbeck. (3 credits) Prerequisites: ENG105 and ENG110

Objectives:

1. Read, analyze, and understand novellas from a diverse selection of renowned authors.
2. Construct literary analyses based on the relationship between form and content.

Objectives:

3. Identify and explain cultural, historical, thematic, and stylistic connectivity between and among texts.

4. Form original, debatable arguments to evidence grasp on literal, inferential, and evaluative understandings of assigned texts.

5. Construct thorough literary analyses to support original, debatable arguments.

6. Understand purposes of literary criticism, and directly apply schools of literary theory.

7. Compose 8-10 page, research-based persuasive essay with MLA or APA documentation.

ENG 315 Professional and Technical Writing

Professional and Technical Writing familiarizes the student with both business correspondence and the technical writing skills required by business and industry. The course emphasizes gathering and synthesis of information in the compilation of written and oral projects. The student will complete the following technical documents: informational reports, progress reports, recommendation reports, proposals and grants, definitions, and instructions. Some reports are compiled collaboratively. Some of these projects require the creation/inclusion of infographics and may be delivered as oral reports and/or uploaded for online viewing. (3 Credits) Prerequisite: ENG105

Objectives:

1. Prepare technical documents, including proposals, informational and recommendation reports, definitions, descriptions, and instructions, for both print and online publication.

2. Emphasize assertion-based evidence in the design and presentation of infographics.

3. Use online telecommunication software such as SKYPE to present and receive information.

4. Effectively deliver oral reports that include the use of presentation software such as PowerPoint and Prezi.

5. Emphasize the Communication-by-Objective approach in mastery of general business communication skills including letter writing, memos, emails and text messaging.

6. Apply APA standards in collecting, evaluating, and incorporating published information into oral and written technical documents.

7. Demonstrate job search skills, including the ability to use online job search engines and company websites and produce a resume and cover letter.

ENG 320 Horror Literature and Film

Often considered low-brow entertainment, the horror film has been a staple of film history since Nosferatu stalked the screen during the silent movie era. Horror Literature and Film not only makes the case for the horror genre as serious art, but it also addresses adaptations of classic 19th Century Gothic fiction, such as Mary Shelley's Frankenstein, Bram Stoker's Dracula, and Edgar Allan Poe's short stories. The course will also feature contemporary horror, such as Stephen King's best-selling novels and the TV adaptation of Robert Kirkman's popular comic book The Walking Dead. Not only will this course cover techniques and styles of horror literature and film, it will also illustrate how the genre has served as a platform to address more serious issues, such as race, gender, class, social unrest, religion, and science. (3 Credits) Prerequisites: ENG105 and ENG110

Objectives:

1. Develop an understanding of the key techniques, tropes, narrative conventions, and styles of the horror genre in literature and film.

2. Express your understanding of course material through carefully and clearly written analysis, presentations, and classroom discussions.

3. Complete reaction papers and journal entries on the assigned films and texts.

4. Complete in-class examinations that demonstrate a clear understanding of course material and content.

Objectives:

5. Complete a 10-page, fully-documented, MLA-style research paper pertaining to horror film and literature.

6. Understand the horror genre as an artistic means to address issues of race, class, gender, science, religion, and social unrest.

ENG 325 Introduction to Poetry

Introduction to Poetry is a creative writing class that focuses on the genre of poetry. Students will learn and employ the basics of the genre, such as figurative language, similes, metaphors, line breaks, and concrete imagery. Students will also practice writing in different poetic forms, such as the sonnet, villanelle, narrative poetry, and free verse. The course will include a study of classic and contemporary poetry and entail in-class and out-of-class writing assignments. Students will produce a final portfolio of work drafted, workshopped, and revised during the semester. (3 credits)
Prerequisites: ENG105

Objectives:

1. Learn and employ basic poetic tools, such as figurative language and concrete imagery.

2. Learn and practice different poetic forms, such as the sonnet, villanelle, and free verse.

3. Read and study work by classic and contemporary poets.

4. Participate in peer editing and in-class workshops.

5. Draft and revise poetry to produce a final poetry writing portfolio.

ENG 330 Literature and the Environment

Literature and the Environment will address the role that literature can play in our understanding of the environment. The course will cover a wide timespan and various genres, including investigative journalism, fiction, nonfiction, and poetry. Texts covered may include the American Transcendental period of the 1800s, investigative environmental writing of the 1960s, and contemporary fiction, poetry, and nonfiction. We will also identify techniques though which poets, essayists, journalists, fiction, and nonfiction writers have addressed environmental questions through the form and context of their works. Lastly, through close reading, critical thinking, class discussions, and analytical writing, we will investigate the ways in which literature can impact how people relate to nature and the environment. (3 Credits) Prerequisites: ENG 105 and ENG 110

Objectives:

1. Express your understanding of course material through carefully and clearly written analysis, presentations, and classroom discussions.

2. Identify the ways in which writers address environmental questions in their work.

3. Complete reaction papers and journal entries on the assigned texts.

4. Identify works of environmental writing in their cultural and historical contexts.

5. Explore the relationship between humans and nature as expressed in literature.

6. Complete in-class examinations that demonstrate a clear understanding of course material and content.

7. Complete a 10-page, fully-documented, MLA-style research paper pertaining to literature and the environment.

ENG 335 Intro to Prose

This course will primarily focus on the genres of fiction and creative nonfiction. Writing assignments may include flash fiction, short stories, feature writing, and memoir writing. Short, spontaneous writing prompts will be used to generate ideas for longer, graded assignments. The writing process will include peer editing and feedback to assist with the revision process. Students will also be required to study the work of contemporary authors. At the end of the semester, students will produce a portfolio of final work. Prerequisite: ENG105. (3 credits)

Objectives:

1. Explore the creative process through writing.
2. Analyze prose writing from the perspective of a writer.
3. Demonstrate and understand the basic elements of prose writing, including character development, plot, narrative arc, conflict, and resolution.
4. Prepare a final portfolio of prose writing drafted and revised during the semester.
5. Reinforce revision skills, not only of language, but also of ideas and structure.

ENG 340 Grant Proposal Writing

Students will learn the process of grant writing and understand meeting the requirements of a request for proposal. After completing this course students will have the basic foundation for writing grant applications. (3 credits)
Pre-requisites: ENG105

Objectives:

1. Search for funding sources.
2. Develop initial ideas that could be the basis for a proposal.
3. Practice developing a letter of inquiry.
4. Review sample successful proposals.
5. Review and analyze "Request for Proposals" or "Request for Applications".
6. Understand and create budgets.
7. Develop timelines.
8. Complete a proposal.

ENG 345 Structure of Linguistics

Designed for students in communications, English, education, and related areas who require a sense of the historical development of the English language, Structure of Linguistics will [1] introduce the major grammar systems (traditional, structural, and transformational), [2] review classical diagramming, [3] explore theories of language acquisition, [4] Consider the social and cultural dimensions of language use. Prerequisite: ENG105.
(3 credits)

Objectives:

1. Develop measurable appreciation of language's properties, systems, patterns, and universals.
2. Employ reason and logic regarding language acquisition, use, and manipulation.
3. Assess the nature of social identity and the ways in which languages impacts selfhood.
4. Identify how incorrect assumptions and prejudices distort our basic understanding of language.
5. Demonstrate an evolved understanding of linguistic and cultural variation around the world.
6. Evaluate popular views on the nature of human languages, speakers, and acquisition.

Objectives:

7. Expand awareness of our own preexisting beliefs about and attitudes towards language.

8. Unearth and recognize what makes different languages simultaneously distinct and similar.

9. Apply strategies and techniques used in linguistic analysis to deepen one's reasoning abilities.

10. Establish confident opinions regarding the meaningful and arbitrary nature of derivation.

11. Demonstrate understanding of morphology, syntax, phonetics, and semantics, as well as specific branches of linguistics including sociolinguistics, dialectology, psycholinguistics, computational linguistics, historical-comparative linguistics, and applied linguistics.

ENG 350 Peer Collaboration

This course introduces students to the history, theory, and practice of peer-to-peer writing center collaboration and tutoring. Students will learn how to apply best practices in writing center tutoring with a focus on improving the writer rather than the product. Using a theoretical approach, participants will modify tutoring sessions to appropriately meet the diverse needs of each writer. Students will also study various tutoring methods, different learning styles, and revision strategies and thoroughly review genres of writing, the writing process, and MLA and APA documentation systems. Students will participate in observing, analyzing, and reflecting on collaborative tutoring sessions and the collaborative tutoring process.

This course is highly interactive, and fieldwork is a requirement. Students who successfully complete this course may apply to work in the Writing Center for the subsequent semester. (3 Credits) Prerequisite: ENG105

Objectives:

1. Analyze and critique texts on peer tutoring pedagogy.

2. Receive, observe, and facilitate both one-on-one and group setting consultations.

3. Engage in the conventions of disciplinary writing.

4. Evaluate written texts for a variety of issues in the areas of audience and task orientation, idea development, focus, organization, research, coherency, clarity, style, mechanics, and grammar.

5. Apply appropriate tutoring methods for those with varied backgrounds, learning styles, and levels of writing proficiency.

6. Implement strategies to support multilingual writers.

7. Examine the roles Writing Centers play in helping students navigate college literacy.

8. Practice problem solving techniques in regard to tutor challenges presented in the WC.

9. Implement basic philosophical principles and best practices of modern writing centers.

Earth Science

ESC 105 Earth Science

ESC 105 (Formerly ES 101) – Earth Science

This course provides a survey of physical geology, meteorology, oceanography and astronomy using a systems approach, treating earth materials (including air, water, and land), society, and the environment as interconnected systems. Human impacts, natural hazards, natural resources and global change are addressed. Two hours lecture and two hours of laboratory per week (3 Credits).

Objectives:

1. Define science and explain the steps of the scientific method; differentiate between hypotheses and scientific theories; list several scientific theories and their application to various scientific disciplines.

Objectives:

2. Define earth science and explain how the four earth "spheres" inter-relate with each other; describe the structure of the earth's interior and cite the types of evidence indicating its structure and composition; describe the properties of minerals and the formation and alterations of rocks in the rock cycle.

3. Identify locations on earth's surface influenced by plate tectonic activity; describe the types of plate boundaries; differentiate between crustal spreading centers and subduction zones; relate the crust-shaping processes of tectonic and gradational forces to rock cycle transformations; understand hot spots activity and their influence on the crust.

4. Describe how earthquakes are measured, the types of waves generated, how they are used to locate an epicenter, and their role in estimating destruction; explain tsunami generation and its potential for destruction; identify types and locations of volcanoes and be able to relate lava composition to eruption characteristics.

5. List the various intervals of geologic time and describe the major events and life forms on the earth during its history; explain the influences of life on the evolution of earth's atmosphere, and vice versa; describe how astronomical motions of the earth influence global climate change; describe causes of climate change and their effect of life, including mass extinction events.

ESC 115 Environmental Quality

ESC 115 (Formerly ES 111) - Environmental Quality

This interdisciplinary course will allow students to assess the quality of local environments, particularly streams, and to determine the extent of pollution. Biological, chemical and hydrological attributes will be examined in the field and the laboratory. Two hours lecture/discussion and two hours of laboratory per week (3 Credits).

Objectives:

1. To review the biological and ecological aspects of ecosystems.

2. To integrate ecological concepts into an understanding of the complexity of environmental problems.

3. To explain the hydrologic cycle, major sources of water pollution, and air quality.

4. To understand the role of increasing population, automobiles, and advanced civilization have had on energy consumption.

5. To explain the effects of fertilizers, erosion, pesticides, and mono-culture farming on soil.

6. To understand worldwide solid waste disposal and its relationship to landfills, recycling, and saving our planet.

7. To understand the need for field work in evaluating environmental quality in many different locations.

8. To utilize laboratory methods, techniques, and equipment to measure water pollution, air pollution, and soil composition quality.

ESC 125 Environmental Science

ESC 125 (Formerly ES 102) - Environmental Science

This course provides an overview of current environmental issues from a local and global perspective. Students will develop an understanding of the nature and impact humans have made on ecosystems using an interdisciplinary approach to learning. Topics include matter and energy in the environment, population growth, energy sources, air and water pollution, and environmental policy (3 Credits).

Objectives:

1. To define science (and non-science) and review the scientific method from an environmental perspective.

2. To illustrate how physical components (matter and energy) are linked with the biological environment.

3. To review levels of biological organization, emphasizing populations, communities, and ecosystems.

Objectives:

4. To understand the basic principles of ecology and describe how living things interact with their environment.

5. To describe qualitatively and quantitatively the extent and controls of global human population growth.

6. To describe renewable and nonrenewable energy sources, their consumption by the human population, and the generation of environmental pollutants as a result.

7. To be familiar with the chief types of air pollution and water pollution and methods of prevention and treatment.

ESC 126 Environmental Science Laboratory

The course allows students to explore the environment and human impacts to it through a combination of interdisciplinary field and laboratory exercises in an ecological context. Students will use the scientific method and analyze real data to draw their own conclusions. One three-hour laboratory period per week (1 Credit). Co-requisite: ESC 125 Environmental Science.

Objectives:

1. Design controlled scientific experiments to test hypotheses and draw conclusions by objectively analyzing observational and experimental data.

2. Sample and characterize habitats and perform a niche analysis.

3. Measure and evaluate the effects of soil characteristics on plant growth.

4. Evaluate the impacts of chemical pollutants on water quality and aquatic life.

5. Describe qualitatively and quantitatively growth trends of humans and other populations.

6. Analyze graphical representations of global indicators of climate change.

ESC 130 Intro to Environmental Studies

ESC 130 (Formerly ES 105) – Introduction to Environmental Studies
The interdisciplinary nature of environmental studies is the focus of this course. The course tracks the history of the environmental movement and predominant environmental issues will be introduced and discussed. Varying philosophical and ethical stances regarding stewardship of the natural environment will be reviewed. The basic argument of economy versus the natural environment will be analyzed and debated. (3 Credits)

Objectives:

1. To introduce the student to the basic concepts and terminology necessary for discussion and analysis of those issues inherent within the realm of environmental studies.

2. To introduce the student to the history of the environmental movement and its key thinkers.

3. To acquaint the student with the economic vs natural environment spectrum of perspectives that inform the analysis and debate in the realm of environmental studies.

4. To cultivate an ability in students that allows for independent thought, analysis and understanding regarding the various circumstances, theories and schools of thought related to environmental studies.

ESC 135 Physical Geography

This course examines the physical environment of the Earth and how humans interact with it. Topics include map use and interpretation, landforms, plate tectonics, Earth-Sun relationships, weather and climate, vegetation, soils, natural resources, and population growth. Lecture two hours and laboratory two hours per week. (3 Credits)

Objectives:

1. To explain the properties of maps, such as direction, coordinate system, projection, and scale.

2. To understand the composition of the internal Earth and how it influences surface landforms.

Objectives:

3. To explain how tectonic and gradational processes shape the lithosphere.

4. To understand the astronomical relationships between the Earth and Sun and how they influence spatial and temporal variations in climate.

5. To understand the determinants of weather and climate, and the impacts of global change.

6. To describe the distribution and development of soils and vegetation and their latitudinal variations.

7. To explain the spatial distribution of human populations and qualitatively and quantitatively examine the controls on human population growth.

8. To explore the above physical geographic concepts in a laboratory environment using a combination of case studies, real and virtual maps, computer animations/simulations, and the scientific method on samples of the natural environment.

ESC 140 Climate Science

ESC140 - Introduction to the science of Earth's climate system, the consequences of future climate on Earth, strategies for how to minimize the effects of and adapt to a changing climate. (3 credits)

Objectives:

1. Explain how the climate system works, including its natural variability and the factors that drive climate change.

2. Evaluate how scientists approach the question of climate change through a combination of data, models, and hypotheses.

3. Analyze the basic principles of climate models including their limitations and their uses, and what they predict about our future climate.

4. Investigate the primary consequences of climate change for water and food supplies, coastal damages, relocation costs, energy consumption, and economic growth.

5. Discuss the options for minimizing the effects of climate change and for adapting to a changing climate.

ESC 155 Introductory Astronomy

This course involves the study of celestial objects and the space-time relationships of the Earth-Sun system. Topics include the night sky, the nature of time, apparent motions of the sun, moon, and planets, the solar system, stars, and galaxies. Computer simulation software will be used to explore astronomical concepts and phenomena to understand the nature of the universe. Two hours lecture and two hours of laboratory per week (3 credits).

Objectives:

1. Locate and identify the major constellations in the night sky.

2. Explain the apparent motion of the sun, moon, planets, and stars with reference to the geocentric and heliocentric models of the solar system.

3. Describe the physical and chemical characteristics of the planets and their moons.

4. Classify stars based on their spectral characteristics, describe their life cycles, and predict their ultimate fate.

5. Interpret historical and modern astronomical measurements of the universe obtained from telescopes and space probes.

6. Apply the scientific method to analyze observational and experimental data to evaluate hypotheses and draw conclusions.

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ESports

ESP 105 Introduction to ESports

This course introduces the student to esports. Topics will include the difference between a video game and an esport, game development companies, professional and collegiate leagues, esports facilities, competitive and industrial history, and context with relation to traditional sports. This course will also examine the future of esports and issues facing esports fan, players, and organizations. Students will be taught to view esports from various perspectives other than simply as a "gamer" or "esports fan," and they will develop concept ideas on how to improve infrastructure and processes for their areas of interest. (3 Credits)

Objectives:

1. Define the differences between gaming in general and the various levels of esports collegiately and professionally.
2. Describe the state of esports today.
3. Explain how collegiate esports fits into the esports ecosystem and what the future of collegiate esports might look like.
4. Explain what effective organizations and leagues have done historically to this point in esports.

ESP 205 ESports Media Production I

This course serves as an introduction to the world of esports streams and productions. Students will experiment with several parts of a production: casting, observing, producing, running lobbies, compiling Twitch clips, editing live streams, and more. This course will require project time with the esports program's student athletes, teams, and facilities. Students will learn to use OBS with integrations to Twitch, Skype, OBS Ninja, and more. (3 Credits)

Objectives:

1. Explain the different roles of an esports production and how they collaborate to form one cohesive broadcast team.
2. Identify the areas on Twitch.TV, from the viewer side, moderator side, and production side that need to be coordinated for any production.
3. Properly implement each role and piece of the process to produce a provided streamed match.
4. Successfully broadcast a match or series of matches on a streaming platform.
5. Create an esports production portfolio for career areas of interest.

ESP 305 ESports Media Production II

This course will offer students the opportunity to refine their skills in a particular area of interest while becoming more involved with implementing the process. It will focus on deeper skill sets across the production team as well. This course will require project time with the esports program's student athletes, teams, and facilities. (3 Credits) Prereq: ESP205

Objectives:

1. Identify key stakeholders of the esports ecosystem and how each part interacts with others.
2. Discuss the barriers to entry into esports for players and staff, including but not limited to, economic factors and racial and gender discrimination.
3. Explain issues in the current talent pipeline for amateurs to enter professional esports.
4. Produce an improved model of talent acquisition from the high school and collegiate levels through semi-professional and professional tiers.
5. Develop models for career pipelines for both amateur and collegiate esports participants.

Objectives:

6. Analyze and create individual job descriptions and roles individuals participating in high school through professional esports organizations.

Finance

FIN 210 Personal Finance

This course teaches our students the skills necessary to make wise financial choices to attain the financial literacy necessary to establish financial responsibility and sound decision making. Topics covered include income and careers, planning and money management, credit and debt, risk management and insurance, and saving and investing. (3 credits)

Objectives:

1. Describe the techniques used to establish good spending habits and responsible use of credit.
2. Identify the components of income planning, including income sources, taxes, and inflation.
3. Define the importance of financial planning and budgeting in terms of establishing financial responsibility.
4. Identify the components of saving and investing, including how to research, buy, and sell investments.
5. Define the elements of risk management and decision-making skills for personal finance.
6. Prepare and analyze a financial portfolio, including information pertaining to planning and money management.

FIN 325 Financial Management

This course builds upon the basic financial decision-making process with emphasis on corporate structures, and develops problem-solving skills unique to financial management. Topics include financial statement analysis, time value of money, bonds, stocks, risk and return, cash flow estimation, capital budgeting, cost of capital, dividends, financial planning and international financing. Financial calculator/spreadsheet software is used in problem solving.
Pre-requisites: ACC105. (3 credits)

Objectives:

1. Relate financial principles to the financial decision-making process.
2. Describe the fundamental principles of corporate finance.
3. Outline the process of financial management of a firm.
4. Analyze financial statements and apply concepts the use of financial ratio analysis to financial planning and international financing scenarios.
5. Compute financial management calculations to determine time value of money, risk and return, cash flow estimation, and capital budgeting.

History

HIS 105 U.S. History I

HIS 105 (Formerly HI 101) - U.S. History I
U.S. History I is a survey course which reviews American history from the pre-Colonial era (1600) to the Civil War era (1865). The course is designed to acquaint the student with the major political, economic, social and cultural developments of these eras with emphasis on the rise of Colonial America and the Constitution, Westward Expansion, the Age of Jackson, Antebellum America and the Civil War era (3 Credits).

Objectives:

1. To analyze the major political, economic, social, and cultural developments of these epochs.

Objectives:

2. To critique specific emphasis of the CHARACTER and PERSONALITIES of many individuals whose lives and contributions helped shape the American experience, the rise of Colonial America and the break with Great Britain, the formation of the Constitution, slavery and race in America, Westward Expansion, the Age of Jackson, Antebellum America and the defining moment of American history, the Civil War.

3. To review the many dynamic and varied forces which have influenced the development of the United States as well as enabling you to see the relationship between the past and the present and understand that issues and events in human history are often very complex.

HIS 110 US History II

HIS 110 (Formerly HI 102) - U.S. History II

In HIS 110, the period from the Civil War to the present is examined in light of the important social, economic, political and cultural events of those years. This survey course highlights America's growing impact on world events and the contribution of various ethnic groups to American civilization. Also examined are the issues of industrial growth, the world wars, and American diplomacy and international relations (3 Credits).

Objectives:

1. To distinguish the contours of American history, from the era of The Civil War (1861 - 1865) to the modern era (1950 - present).

2. To review the major political, economic, social, and cultural developments which transformed the United States from an agrarian, rural nation to a world-class industrial power of the twentieth century. Included in this study will be some of the many individuals whose actions contributed to the shaping of those eras and thus became 'historical.'

3. To analyze those major developments shaping modern American history; some of those eras to be studied include the trauma of The Civil War, the transforming fire of the Industrial Revolution and the rise of modern America, the emergence of the labor movement and its struggles, the settling of The West and subsequent destruction of the Native Americans inhabiting those regions, America's Age of "Manifest Destiny and Mission," the "Gilded Age and the 'Roaring Twenties," the appearance of "The New Deal," World War II and the rise of the Cold War.

4. To critique the many individuals whose lives and contributions wove the rich, multifaceted tapestry known as American history. The study of these individuals and these eras will enable the student to understand the many dynamic and varied forces which have influenced the development of the United States.

5. To practice reading skills and subsequent comprehension skills; to demonstrate and strengthen critical thinking and analytical skills to enable the student to see the cognitive and causal relationships existing among many components of knowledge.

6. To practice the writing/communications skills demanded in both the academic and professional worlds, as well as those demanded by everyday living.

7. To use writing skills so to perform effectively the many tasks that will be assigned in the future, both inside and outside the academic world.

8. To cultivate the requisite literacy expected from you, regardless of the life path you choose to take.

HIS 118 American Government

HIS 118 (Formerly HI 111) - American Government

This is an introductory course that surveys the rise, development, structure, operations and problems of American government. It offers an analysis of the historical and intellectual forces shaping government in America, as well as providing an analytical framework to help the student understand the structure, functions and problems of American federal government (3 Credits).

Objectives:

1. To analyze the rise, development, structure, operations, and problems of American government, with an emphasis upon American national government.

2. To offer an analysis of the historical and intellectual forces which have shaped the formation of government in America, from the Colonial era to modern America.

3. To analyze the framework supporting the structure of government in America, as well as review the many functions of government in America, from the local level to the national level.

4. To review and analyze the major documents creating government, including the Declaration of Independence, the Articles of Confederation, the Constitution, and the Bill of Rights, in order to identify and understanding the philosophical and intellectual influences shaping these documents. Included in this review is the Philadelphia Convention of 1787 -- the Constitutional Convention -- and the dynamics of that gathering which gave the Constitution its unique structure, powers, and controversy.

5. To analyze the origins and development of political parties and their appeal and impact upon the whole spectrum of American political history.

6. To critique the varied issues confronting Americans today, derived from such topics as Civil Liberties, Civil Rights, and what they mean; the separation of powers and the concomitant issue of the balance of powers among the three branches of government -- as well as the balance of power between federal government and state government.

7. To practice reading/comprehension skills essential for successful work both inside of and outside of college.

8. To practice writing/communications skills demanded by today's world, regardless of where an individual chooses to go.

9. To conduct critical thinking and analytical skills; to enable one to identify and understand the cognitive and causal relationships existing among the many components of knowledge and to apply these skills with confidence as one journeys through life.

10. To cultivate the requisite literacy expected from individuals, regardless of the life path one chooses to take.

HIS 130 World History

HIS 130 (Formerly HI 106) - World History

This is a global history course focusing upon the twentieth century. It reviews the major political, social and economic events that have shaped the history of the modern world, including American, European, Asian, Middle Eastern and Latin American civilizations. Emphasis is placed upon the two world wars, the breakup of the European colonial empires, the rise of Third World nationalism and the pressing global issues that now threaten life on our planet (e.g. famine, overpopulation, unequal distribution of resources, etc.) Prerequisite: ENG105. (3 Credits).

Objectives:

1. Demonstrate student knowledge about, and awareness of, twentieth century world history.

2. Analyze the foundation of global issues that occurred during the twentieth century and issues that continue to grow and threaten our planet.

3. Critique how these events have shaped the world we live in today.

Objectives:

4. Compose electronically an MLA research paper dealing with World History in the twentieth century.

HIS 138 The Vietnam War

HIS 138 (Formerly HI 170) - The Vietnam War

America's involvement in Vietnam and the war's continuing impact on American life and thought form the basis for this course. Beginning with a survey of Vietnamese history and culture, America's growing role in Vietnam is traced from the arrival of the first American soldiers to their final withdrawal. The role of women and ethnic groups in the war as well as Vietnam's deep imprint on American culture are examined (3 Credits).

Objectives:

1. To analyze the history of the Vietnamese, as well as their culture and their institutions.

2. To analyze the evolving relationship between the Vietnamese and the Western Powers, especially the French and the Americans and its impact upon both.

3. To analyze the impact of the French upon the Vietnamese and their society.

4. To analyze the origins and development of the American involvement in Vietnam, as well as the evolution of American policies toward the Vietnamese -- both Northern and Southern.

5. To analyze the impact of the American involvement upon both the Vietnamese and the United States -- and its legacy upon both peoples.

6. To practice the requisite study and communications skills students need for successful entry into the business/professional/academic worlds.

HIS 140 U.S.Presidents

This course willl offer students a unique opportunity to study a part of U.S. history that is taken for granted and often overlooked by the American public. Through the use of lectures, videos, texts and other sources, the student will be given the chance to learn the personal history of the individuals who have served in the nation's highest office and how they have influenced the history of not only the United States in particular, but of the world in general. This course will offer the student a different way of looking at history...that through biographical materials. (3 Credits)

Objectives:

1. To critique the people who have occupied what has been called, "The most powerful political office in the world ", that of the President of the United States. Use biographical material/information to learn about both the person who held this office and the history of this country as it pertained to the times of the president in question.

2. Test student knowledge about, and awareness of, the role of the President and the history of those that have held that role.

3. Analyze the foundation of the importance of this position and how different actors have changed the course of events by occupying this position.

4. Assess how these events have shaped the world we live in today.

HIS 155 Women's History

HIS 155 (Formerly HI 165) - Women's History

This course surveys the multi-faceted role women have played in American history from the first days of settlement to the present. Many of the continuing struggles of American women as well as those women's (3 Credits)

Objectives:

1. To identify major events, women and ideas which contributed to the development of world attitudes or institutions.
2. To develop concepts and methods which give meaning and order to our recorded past.
3. To practice critical and analytical skills on historical controversies involving women and history.
4. To familiarize students -through lecture and readings- with women, gender and culture.
5. To critique feminist views and theories as points of both intellectual departure and critical inquiry.
6. To recognize a wider political, economic and cultural perspective which spotlights the human experience in our world.
7. To analyze the specific contributions and perspectives of women in society.
8. To analyze the link between gender and social life.
9. To critique how women's influence has affected our contemporary events and problems.

HIS 215 African American History

This course surveys key concepts and defining moments in African American history, beginning with the Transatlantic Slave Trade and continuing to the present day. Students will explore various aspects of the African American experience, touching on historic, cultural, economic, political, religious, literary, and social issues, among others. Special emphasis will be placed on the role of protest and resistance throughout African American history, allowing students to understand how both enslaved and free African Americans lived and defined themselves as part of American society. (3 credits)

Objectives:

1. Trace African American history from the earliest days of colonial America to the present.
2. Examine foundational texts and primary sources as well as contemporary writings to understand the African American experience.
3. Identify prominent leaders throughout African American history and evaluate their respective methodologies and importance in American history as a whole.
4. Develop a connection between past and present by investigating issues facing African Americans today and, using lessons of the past, theorize future effects on society as a whole.
5. Construct arguments, both written and verbal, that demonstrate critical thinking regarding historic and contemporary issues of race and racism, particularly as they apply to African Americans.

HIS 220 America in the 1960's

This course focuses explicitly on the transformative decade that was the 1960s and the legacy that persists into the 21st century. Students will review the political leadership of the decade, centering on the four men that served as president in this time frame, but will also evaluate other prominent politicians and political activists. The various efforts to promote social change – the Civil Rights movement, the birth of the modern (or third-wave) feminist movement, and the work of student-led organizations, among others – will also be considered. No study of the decade would be complete without an investigation of the Vietnam War, including its origins, escalation, and legacy. Finally, the influence of popular culture on American society during the era, including, but not limited to, music, film, and art, will also be examined. Pre-requisite: ENG105 (3 credits)

Objectives:

1. Examine the prominent historical, political, social, and cultural elements of the 1960s.

2. Investigate various primary sources reflective of the decade, ranging from song lyrics to inaugural speeches, and explain their significance in the historical record.

3. Construct arguments in favor of or in opposition to some of the divisive issues of the decade, both through written work and in-class discussions.

4. Compare and contrast the political leadership of one or more individuals during the decade of the 1960s, taking into consideration the unique challenges they faced, the position of their party, and whether or not their efforts can be described as successful.

5. Describe the various tactics that groups working toward social change used to achieve their respective goals, and assess their overall efficacy.

6. Demonstrate critical thinking and analysis about the historical legacy of the 1960s through written assignments and in-class discussions, ultimately culminating in a position paper that incorporates both primary and secondary sources.

HIS 305 America at War

HIS305 (formerly HIS205)

This course is a survey of America's military history from Colonial times to the present. It is designed to ask and answer the questions of, why we took action, who we took action against, when and where these actions took place and how the action was taken. The course will also investigate the effects of the military action(s) taken…politically, militarily and socially, particularly here in the United States. (3 credits) Prerequisites - ENG105 and HIS105 OR ENG105 AND HIS110

Objectives:

1. To have the student recognize/understand the nature of America's military growth throughout its history.

2. To have the student describe/understand the nature of conflict/war throughout America's history.

3. To have the student assess/understand the political, economic, social and cultural impact of the military and its' actions on America and the rest of the world.

4. To have the student analyze/understand military ideology, strategy and practices both in general and in particular situations.

5. To have the student express his/her thoughts verbally and in writing, pertaining to what they learned in class and/or outside the classroom.

HIS 310 Holocaust

This course will examine and discuss an event that shook the world during the middle of the 20th century…the extermination of millions of Europeans. The Holocaust did not target just the Jewish peoples of Europe, but included other enemies of Nazi Germany. This course is designed to touch on numerous aspects of this tragic event. It will begin with the preconditions. Particularly that of anti-Semitism. The course will cover ideologies, causes, events and results of the Holocaust…how it affected the world then, now and will in the future. The course will be presented through lecture, various forms of media, reading assignments, class discussions, short research papers and, if possible, personal accounts of this historical phenomenon. (3 credits) Prerequisites: ENG105 and HIS130 OR ENG105 and HIS105 OR ENG105 and HIS110 OR ENG105 and HIS118 OR ENG105 and HIS120 OR ENG105 and HIS140 OR ENG105 and HIS155 OR ENG105 and HIS138

Objectives:

1. To have the student recognize/understand the roots of anti-Semitism and other hatreds throughout history, not only in Europe, but throughout the world and how they led to the Holocaust.

2. To have the student understand/describe the rise of Hitler and the Nazi Party in Germany and the overall effects that both had in Europe and the world.

3. To have the student understand/diagnose the process and procedures implemented/practiced, outright and secretly, by the Nazi Party against their enemies.

4. To have the student understand/appraise the opposition to, and the fight against, the Holocaust.

5. To have the student understand/assess the aftermath, the legacy and the scars/memories of the Holocaust and how each is expressed in today's world through various media sources and other disciplines.

HIS 320 Violence in America; A Historical P

In this course, the concept of violence – excluding the violence of war – will be examined within a historical framework. The social foundations that help give rise to various acts of violence will be considered within the realm of historical scholarship, as will the cultural and political implications of these acts. Emphasis, however, will be placed on instances of violence throughout history, considering legal, illegal, and extra-legal forms of violence over time. Students will examine these occurrences; interpret the events, as well as the historic pathways that led to them; and assess the position of these incidents in the historical narrative of the United States, as well as the level of threat they pose/posed to overall social stability, both in the past and the present. Pre-Requisite: ENG105, HIS105 OR HIS110 (3 Credits)

Objectives:

1. Understand and explain the historic foundations of violence throughout American history.

2. Examine the short- and long-term impact of various types and instances of violence on American culture, society, and history.

3. Differentiate between legal, illegal, and extra-legal forms of violence; classify historic instances of violence into these broad categories; and reflect on each form of violence, taking into consideration the time period, the social and political structures in place, and the cultural impact of each.

4. Investigate connections or parallels between instance of violence in America's past and instances of violence in America's present.

5. Develop critical thinking and analytical skills, both through written works and classroom discussions, as they pertain to the concept of violence in American history, paying particular importance to the ability to engage others in open, reflective, and respectful dialogue.

Objectives:

6. Craft a synthesis paper demonstrating analysis of multiple primary and secondary sources through arguments supporting a central thesis linking source material in an insightful manner.

Honors

HON 101 Honors Seminar

This course provides the student with a realistic overview of the Honors program at Lackawanna College. It is built around the basic functions that students must perform in order to strengthen learning skills, study skills, presentation skills, and teamwork. The course acquaints the student with the system and expectations from each honors course they will be required to take throughout their degree process. A variety of exercises, independent reading assignments, and assessments will be provided in order to ensure the student is capable of balancing honors coursework with traditional classes at Lackawanna.

Objectives:

1. Complete basic College business for all Freshmen (e.g. advising and registration, financial aid, writing center, student wellness, and learn to navigate the portal, Canvas, and Starfish).

2. Examine ethical issues in academia and appropriate responses.

3. Demonstrate the ability to concentrate on, and successfully retain, learning material in a disruptive environment.

4. Engage in self-reflection, self-discovery, and problem-solving to identify and assess personal strengths and weaknesses; the analysis will be used to define personal values and goals.

5. Identify benefits and challenges to diversity in academia.

6. Investigate community-based problems in the geographic region of Lackawanna's campus and demonstrate critical thinking and leadership skills to solve it.

Hospitality Management

HSP 105 Intro to Gastronomy and Hospitality

Students will be introduced to the foundations of the culinary and hospitality industries. Discussions will explore the events, people and traditions that have formed and continue to shape how culinary and hospitality professionals operate and do business. Students will explore current industry trends in order to see how current events drive decisions and dictate industry history in years to come. Class will allow students to realize the skills and level of dedication and professionalism necessary to succeed and thrive in the culinary and hospitality industries and will explore career options available upon graduation. (3 credits)

Objectives:

1. Identify the characteristics of the hospitality and culinary industries.

2. Describe the basics of service and to become fluent in the industry terms and practices.

3. Recognize the types of jobs available within the hospitality and culinary industries.

4. Explain and describe the "moments of truth" in our industry that shape guest satisfaction and how satisfaction affects business.

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HSP 110 Sustainable Hospitality

Students will be introduced to Lackawanna College's dedication to sustainability within both our world and our bodies. Students will learn to think critically as they explore the impact of both the food they serve and the environments in which they provide hospitality services by understanding the dynamic between hospitality and the Earth and its environment. This course will engage students in responsible hospitality practices both in the areas of sustainability and nutrition. (3 credits)

Objectives:

1. Describe the environmental issues the world is facing and how these issues affect business management strategies in the Hospitality and Tourism industries.

2. Ddentify specific practices that need to be managed more responsibly in the hospitality and culinary industries.

3. Apply knowledge and resources to be an agent of change within the industry seeking ways to improve sustainable practices in nutrition and services.

HSP 115 Front Office Operations

Students will learn skills necessary to organize and perform duties in this important link in the hospitality chain. The front office is where a business makes its first and last impression on its guest and this class will engage students in the theories and practices to ensure unparalleled guest satisfaction. Students will learn ways to capitalize on each "moment of truth" with guests in order to meet and exceed their needs with the goal of providing exceptional customer service to ensure a successful hospitality venture. (3 credits)

Objectives:

1. Identify the positions and job descriptions of each member of the front office staff of the hotel.

2. Explain what is involved to be an effective first and last link to the customer in the hotel sector of the hospitality industry.

3. Develop strategic thinking and apply marketing skills necessary to attract and retain customers to the hotel with unparalleled customer service.

4. Identify methods that hotels use to predict sales, fill rooms, deliver healthy P&L's and harness the power of the internet to succeed in front office operations.

HSP 125 Food Safety & Sanitation

This class serves as an introduction to food production practices governed by changing federal and state as well as local regulations. Topics to be covered include prevention of food-borne illness through proper handling of potentially hazardous foods, HACCP procedures, legal guidelines, kitchen safety, facility sanitation, and guidelines for safe food preparation, storing, and reheating. Students will also take the National Restaurant Association ServSafe® examination. (3 credits) Formerly Servsafe

Objectives:

2. Create a plan, design and layout for a commercial foodservice establishment.

3. List the principles and practices in food safety and sanitation as regulated by the U.S. Department of Agriculture.

4. Recite state and federal food codes and regulations.

5. Identify three types of contamination associated with food and the methods used for prevention.

6. Successfully pass the Servsafe Food protection manager certification exam.

HSP 135 Foundations of Tourism

This course will investigate the question "What is Tourism?" and explain many of the different aspects that affect tourism. Students will study the types, forms and components of tourism and their impact on global economies. Students will also learn the historical development of tourism and how it impacts today's society. The students will learn the major concepts in tourism, what makes tourism possible and how tourism can become an important factor in the wealth of any nation. (3 credits)

Objectives:

1. Describe what tourism is and its effects on the economies of the world.

2. Evaluate different job opportunities within the tourism field and discover which ones might match a student's interests and abilities.

3. Assess the importance of transportation, lodging, and food service in tourism.

4. Examine the sociology of tourism.

HSP 140 Introduction to Hotel Operations

This course is designed to introduce students to the operations of the hotel and its organizational structure, the scope of the hotel within the industry, and teach skills necessary to organize and perform the duties of front office. Students will learn ways to capitalize on each "moment of truth" with guests in order to meet and exceed their needs with the goal of providing exceptional customer service to ensure a successful hospitality venture. (3 credits)

Objectives:

1. Students will identify the revenue centers and support centers of the hotel and describe the roles and interdependencies of each department.

2. Students will demonstrate proficiency in the housekeeping and bellman areas of the hotel by successfully passing a skills assessment practicum.

3. Students will analyze the impact and interdependencies of each center of the hotel on the hotel as an entity and within the hospitality industry.

4. Students will examine best practices in housekeeping guest service and experience, sustainable practices and guest safety.

HSP 145 Hospitality Culinary Foundations

HSP145 (formerly Hotel Culinary Foundations)
This course is designed to introduce students to the basic systems, operations, techniques and terminology practiced in the professional kitchen. Focus will be given to basic knife skills, cooking techniques and preparations of basic stock, soup and classic sauce productions. Content will focus on basic breakfast cookery techniques most often used within the hotel and resort sectors of the industry.

Objectives:

1. Students will demonstrate proficiency in basic knife skills.

2. Students will list and identify the commonly used tools, ingredients and equipment in the professional kitchen.

3. Students will practice basic stock, soup, classic sauce techniques.

4. Students will demonstrate proficiency of the basic cooking methods by successfully passing a cooking practicum.

5. Students will create and execute a simple continental and hotel- batch breakfast menu and will execute production of that menu in a timed cooking practicum.

HSP 150 Hosp Social Media and Business Com

HSP150 (formerly Hotel Social Media and Business Comm
This course will expose students to the role social media plays in promotion of the hospitality enterprise. Study will be given to current platforms commonly used by guests and the hotel and will focus on systems of monitoring of and responding to guest/hotel interactions via the media. (3 Credits)
Prerequisite: ENG105

Objectives:

1. Students will identify current best practices in building and maintaining healthy customer relationships through social media channels.

2. Students will analyze case studies focused on hotel social media brand creation and brand management practices.

3. Students will monitor guest/hotel interaction within the Lackawanna College guest rooms at the Radisson Lackawanna Station Hotel and will compose appropriate and effective responses.

4. Students will design a social media initiative focused on promotion of the Lackawanna College guest rooms at the Radisson Lackawanna Station Hotel through: construction of an online community, increased interactions between visitors, consumers and stakeholders, demonstration of innovation leadership and increased online visibility.

HSP 205 Event Management

HSP205 (formerly Catering, Conferencing & Mtgs,)
This introduction to planning and executing special events and food functions emphasizes marketing, budgeting, organization, hiring and training, food production and presentation. Students will learn how to apply standards of quality and service to complement the venue; coordinate food and beverages; select décor, themes and entertainment; communicate with media; and negotiate contracts with an understanding of the legal parameters involved with both on premise and off premise events. (3 credits)

Objectives:

1. Define planned event vocabulary, standard operating procedures, and methods of costing and billing specific to this sector of the industry.

2. Emerge with knowledge of the catering and event planning sector of the hospitality industry.

3. Use the fundamentals necessary to plan and execute successful events and meetings.

HSP 210 Food & Beverage Management

This course offers an introduction to food, beverage and labor cost controls as students prepare for careers in food and beverage management in the hospitality industry. Class will define a number of key industry terms and concepts and working definitions of the concepts as they pertain to the basics of cost/volume and profit analysis. Course will discuss the application of the four-step control process to food, beverage and labor operations. Discussion will include monitoring devices, menu analysis and several approaches to sales control. Time will be dedicated to computerized ways to manage food and beverage costs as well. (3 credits)

Objectives:

1. Identify formulas necessary to responsible food and beverage management as well as to compute cost percent and sales price of consumables.

2. Prepare and enforce an operational budget.

3. Formulate educated cost controlled business decisions.

4. Apply knowledge of reading and generating invoices and daily reports, requisitions, SOPs, food and beverage inventories and reports to actual situations.

HSP 225 Hospitality/Tourism Law

Class will introduce students to a wide array of legal issues facing the hospitality industry. Topics include: contracts in the hospitality industry; discrimination in the workplace, including sexual harassment; duties and obligations to guests as a hospitality operator ;anatomy of a personal injury lawsuit; liability for guest's property and insurance. (3 credits)

Objectives:

1. Describe the many legal issues that affect the hospitality industry.
2. Avoid liability through proactive management.

Human Service

HSV 125 Introduction to Human Services

This course is designed to help students to be more responsive to individual, group, community, and structure of human services. Concepts of organizing, integrating, and implementing a network of different human services are discussed, as are services in relation to broader social, economic and cultural issues and values. (3 Credits)

Objectives:

1. Students will demonstrate a basic foundation in counseling skills.
2. To enhance their own career paths through the principles, skills, knowledge, and application of concepts learned in the classroom.
3. To apply students the appropriate tools to be more effective in organizations.

HSV 310 Helping Skills

This course provides a basic introduction to concepts of helping. Students will develop interviewing skills with a focus on individual skill development, enhanced self-awareness and ways in which these skills can impact the helping relationship. Emphasis is placed on the application of skills and knowledge to human service settings. (3 credits) Prerequisite: HSV125

Objectives:

1. Examine the construct of attending behavior.
2. Explore and develop of personal style.
3. Demonstrate ways in which the human services professional can elicit information from clients.
4. Develop reflective listening skills.
5. Identify ways to enhance intentionality in interpersonal communications.
6. Describe ways to encourage clients.
7. Identify ways to enhance influencing skills.
8. Enhance observation and listening skills.
9. Reflecting feeling and content of interpersonal exchanges.
10. Integrate skills from a multicultural perspective.

HSV 320 Exploring Research

This course will introduce some of the skills necessary for understanding critical analysis. It will also assist one to use empirically based research in the field of practice and application. (3 credits) Prerequisite: HSV125

Objectives:

1. To find, evaluate, critically analyze and communicate the literature pertinent to a specific topic, issue or question.
2. To apply empirically based knowledge to practice.

Objectives:

3. Demonstrate the ability to identify scholarly, peer reviewed research.
4. Demonstrate understanding of ethical research.
5. Demonstrate skillful use of high quality, credible and relevant sources.
6. Contrast and compare between the types of descriptive, correlational, and qualitative research.
7. Compare major research designs and discuss the strengths and weaknesses of each.
8. Articulate the advantages of the scientific approach to human service practice.
9. Describe how the scientific approach may be used to test the efficacy of social interventions.
10. Students will be able to apply the common core elements of how to write in APA style: paying attention to general document guidelines.

HSV 330 Theories of Counseling

This course will consist of some of the counseling theories and methods used for working with individuals in different facets of human service agencies. (3 credits) Prerequisite: HSV125

Objectives:

1. Demonstrate Counseling theory and skills based on those theories.
2. To identify the importance of the use of self.
3. To demonstrate how to write a social history.

HSV 340 Advanced Issues in Human Services

HSV340 (formerly Human Service Technology)
The Human Service Technology concentration focuses on the prevention and remediation of problems for individuals, families and communities such as homelessness, hunger, family crises, parenting skills, and building stronger communities to benefit all people.
This concentration prepares students for careers in a variety of careers in the social service field, such as county social service agencies, shelters for the homeless, youth homes, and domestic violence shelters. (3 credits)
Prerequisite: HSV125

Objectives:

1. Demonstrate a working knowledge of agencies by submitting an outline that includes a mission statement, services, fees, and referral source.
2. Describe verbal and non-verbal cues of clients through observations in a helping interview.
3. Summarize and successfully describe a specific issued concerning a target population.
4. Describe a specific issue concerning a target population.
5. Demonstrate how to complete documents and forms used in agencies.

HSV 345 Behavioral/Process Addictions

HSV345 - This course provides an overview of the history, theory, and current research perspectives in the etiology, assessment, diagnosis and treatment of behavioral/process addictions. Specific attention will be paid to examining the similarities and differences between chemical/substance addictions and behavioral/process addictions. This course will cover theories of addictive behavior related to behavioral/process addictions including the physiological, psychological, and sociocultural aspects, legal/ethical concerns and most importantly assessment, diagnosis, treatment plan and relapse prevention.
3 credits. Prerequisite: PSY245

Objectives:

1. Identify the historical and cultural influences on the identification, diagnosis, and treatment of behavioral/process addictions.

2. Describe the impact of behavioral/process addictions on client's functioning, as well as describe the nature with co-occurring behavioral/process addictions and substance addictions.

3. Demonstrate the ability to plan treatment interventions for behavioral/process addictions, as well as co-occurring addictions (i.e., individuals addicted to both substance(s) and behavior/process).

4. Articulate an understanding of contextual variables such as culture, race, class, and gender on patterns of behavioral/process addictions.

5. Understand and demonstrate the role of professionals in assisting clients with locating the complexity of services available for behavioral/process addictions (e.g., self help groups, outpatient counseling, inpatient counseling, therapeutic communities).

HSV 355 Addictions/Special Populations

HSV355 - This course examines the degree to which ethnicity, cultural factors, sexual identity, and incarceration can contribute to the misuse of alcohol and other drugs. Discussions include various ethnic populations as well as gender, age, sexual orientation, and life span issues related to substance use and abuse. 3 credits. Prerequisite: PSY245

Objectives:

1. Demonstrate knowledge of treatment modalities including individual and group psychotherapy, and preferred models of treatment such as motivational interviewing, cognitive-behavioral therapy, family and couples therapy and 12 step facilitation groups.

2. Apply treatment modalities as they relate to special issues faced by diverse populations.

3. Identify special issues affecting people from diverse cultures in the prevention, identification and treatment of substance use disorders.

4. Identify special issues in the treatment of adolescents with substance use disorders.

5. Identify special issues in the treatment of incarcerated individuals and individuals returning to society with substance use disorders.

HSV 375 Introduction to Adlerian Psychology

This course affords students the opportunity to engage in studies with internationally recognized leaders and experts in the field of Adlerian Psychology. The course curriculum is based on offerings at the annual two-week international Rudolf Dreikurs Summer Institute sponsored by the International Committee of Adlerian Summer Schools and Institutes (ICASSI). Participants and presenters attending the conference come from over twenty different countries. Students will be immersed in a diverse international collegial community that provides unique instruction and experiential learning. (3 credits)
Prerequisite: PSY105

Objectives:

1. Identify and describe concepts of Adlerian Psychology through instruction and experiential learning.

Objectives:

2. Demonstrate an understanding of Adlerian principles related to human behaviors and working with people.

3. Analyze differences between cultures and how they approach working with individuals, groups, couples, and families.

4. Incorporate current research and personal experience to evaluate own knowledge within the field of human services.

HSV 401 Contemp Issues in HS

This capstone course enables the students to apply and reflect upon their education experiences in the Human Services program. This process culminates with the presentation of a professional portfolio that highlights the knowledge, skills, resources, and tools developed and gathered over the course of their studies in human services to demonstrate their academic, personal, and professional development.

Objectives:

1. Complete contemporary issues in Human Services required to transition from college students to working professionals (graduation application, financial aid exit interview, graduation survey, portfolio components, interviewing skills, etc.)

2. Demonstrate professional aptitude as LC alumni with a focus on their personal impact on their greater communities and the significance of their life choices.

3. Evaluate and reflect upon their educational experience and goals by meeting with outside organizations within the human service field to create a path toward future success.

HSV 410 Substance Abuse

Students will explore concepts of substance use and abuse and the various theories of addiction. The impact of substances on bio-psycho-social realms will be explored. The learner will also develop a basic understanding of the pharmacological effects of drugs within major drug categories. Intervention models, treatment, and prevention of substance abuse are explored. (3 credits) Prerequisite: PSY245

Objectives:

1. To identify the various pharmacological, psychological, social and emotional effects of drugs within major drug categories.

2. To describe the major theories of addiction and models of chemical dependency.

3. To be knowledgeable of the process of intake and intervention.

4. To explore the substance abuse treatment facilities and treatment methods.

HSV 415 Psychological Trauma

HSV415 -In this course, the student will learn PTSD symptoms contained within five (rather than the traditional three) symptom clusters, and spell out target objectives for treatment.
This course integrates holistic, organismic framework, while presentations of core therapeutic approaches, including acute posttraumatic interventions, cognitive-behavioral approaches, pharmacotherapy, group psychotherapy, and psychodynamic techniques, as well as approaches to working with specific populations, including children, refugees, and the dually diagnosed are discussed. Pre-reqs: PSY105, HSV125, SSc105

Objectives:

1. Introduce Theory, Models, & Clinical Paradigms of different treatment for Trauma that mental health professionals use in treatment for patients/clients. Students will complete role playing class activities where they will take turns being the patient/clinician presenting different types of traumatic situations and different treatment methods a mental health professional would use to treat the patient.

2. Students become familiar and learn a Holistic, Organismic Approach to Healing Trauma and PTSD. Students will complete a chart where the students would match the appropriate approach to the type of trauma that will be presented.

3. Students will learn why it is important to understand the Clinical Considerations and Principles in the Treatment of PTSD when working in the mental health/human services field. Students would complete an observation report after hearing a speaker in the course and the speaker's struggle and treatment for PTSD so that students can understand a real life situation and how important Clinical Considerations are in practice and why they cannot be overlooked.

4. Students will learn various clinical treatment approaches for special trauma populations (Such as victims of assault, rape, abuse, military PTSD. Students will complete an exam that would test their knowledge of the various clinical treatment approaches for special trauma populations so students would be able to comprehend the difference in treating special populations.

5. Students will examine case history analysis and practical considerations when working with clients who experience trauma in order to provide effective counseling and case management services in the human services field. Students will complete a paper summarizing the case analysis listing practical considerations to utilize in treatment as a mental health professional.

HSV 420 American Social Policy

This course provides the student with an overview of the impact of American social policy on the human services field. Emphasis is placed on the interrelationship between government supported, private, and volunteer programs. Problems of service delivery and issues related to family care, child care, health care, drug policy, tax policy and other evolving topics are explored. (3 credits) Prerequisite: HSV125

Objectives:

1. To explore the historical roots, and the social, political, and economic structures that currently form the foundation of social welfare programs and services in the United States.

2. To describe the role of social welfare policy in service delivery, practice and the attainment of optimal individual and social well-being.

3. To be aware of the political process and various sources of information that are useful to understanding contemporary American social welfare policies.

4. To explore the concepts of distributive justice, human and civil rights, and the global interconnectedness of oppression.

HSV 425 Human Dev & Psych in Film/TV

This course will examine human behavior across major fields of human development & psychology through film. Students will explore developmental & psychological principles including: personality, stereotypes and prejudice, moral development, psychopathology (i.e. depression, obsessive compulsive disorder, etc.), memory, substance abuse, treatment, and suicide. Prerequisite: PSY105

Objectives:

1. Identify and describe major concepts of human development & psychology through film and TV.
2. Demonstrate an understanding of developmental and psychological principles related to human behavior.
3. Analyze differences between reality and fictionalized descriptions of developmental and psychological principles.
4. Critically evaluate the portrayal of human development and psychology in film and TV.
5. Incorporate current research to describe and analyze characters dealing with developmental and psychological issues.

HSV 430 Group Theories and Practices

The learner is introduced to the concepts of group theory which will serve as the foundation for work with individuals in groups. Emphasis is placed on the group as treatment modality and students will learn basic knowledge, skills and values related to the group work. (3 credits) Prerequisite: HSV125

Objectives:

1. To identify the basic principles and theoretical concepts of the human services profession as they apply to working with groups.
2. To explain the ethical standards for human services practice with groups.
3. To characterize the basic concepts of group development.
4. To explain the learning skill-based competencies in planning, facilitating, observing and evaluating small groups.

HSV 435 Working with Diverse Populations

This course will examine knowledge, skills, and attitudes for working with persons different from that of the student. Concepts regarding culture, race, gender, sexual orientation, physical disabilities, and religious preference will be examined in order to develop awareness of one's values, attitudes, and beliefs as they relate to working with diverse populations. (3 credits). Prerequisite: SSC105

Objectives:

1. Identify and describe major multicultural trends, characteristics, and concerns between diverse groups domestically and internationally.
2. Develop an understanding of one’s own values, attitudes, and beliefs.
3. Analyze barriers and tools to effectively work with persons different from that of oneself.
4. Critically evaluate the role of a helping professional in social justice, advocacy, and conflict resolution.
5. Incorporate current research to describe and analyze theories of identity development and multicultural competencies.
6. Examine ethical and legal considerations related to social and cultural diversity.

HSV 440 Case Management

This course introduces the student to learn the theory of case management and explores models of case management. Students will learn the skills needed to function effectively in the case management role. Coordination of services among multiple entities (professional and medical) is emphasized. Special populations are also examined regarding need for case management services. (3 credits) Prerequisite: HSV125

Objectives:

1. To develop the ability, knowledge, and skills necessary to function in a case management role.
2. To differentiate between case management roles.
3. To identify the current use of psychotropic medications and practice guidelines concerning the case manager's role in their application.

HSV 445 Behavioral Neuroscience for HSV

This course will examine the anatomy and physiology of the brain and its connection to behavior. Effects on neurological functioning, behavior, and life outcomes due to aging, disease, and trauma will be explored from a human services perspective with a focus on individuals and families. (3 Credits). Prerequisites: PSY105 AND HSV125

Objectives:

1. Identify and explain the anatomy and physiology of the nervous system.
2. Examine the effects on human behavior due to differences in neurological health.
3. Analyze the effects of trauma, disease, and aging on neurological functioning.
4. Understand the repercussions of neurological damage throughout the lifespan on the quality of life of individuals and families to determine appropriate services.

Health Care

HTH 100 Medical Terminology

HTH 100 (Formerly SD 125)
Within this course the student will gain use of medical language for appropriate and accurate communication in patient care and professional situations. This course presents a study of basic medical terminology. Prefixes, suffixes, word roots, combining forms, special endings, plural forms, abbreviations, and symbols are included in the content. Emphasis is placed on spelling, definition, usage and pronunciation. Abbreviations will be introduced as related terms are presented. Basic anatomical knowledge will also be presented including anatomical landmarks, direction and positioning, planes of the body and other related material. (1 Credit)

Objectives:

1. Develop a medical vocabulary and knowledge of medical terminology.
2. Utilize medical terminology in communications (verbal and written) with colleagues, and others involved in patient care.
3. Adapt usage of medical terminology based on communicating with health professionals, patients, and non-health professionals.
4. Compare and contrast the role of the relationship of healthcare providers and how it is reflected in written documentation.
5. Define basic documentation format for allied health professions and how medical terminology is implemented into a daily note.

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HTH 102 Pharmacology

HTH 102 - Pharmacology
This course provides the student with a comprehensive overview of pharmacology and anesthesia concepts. The student will examine the application of pharmacology and anesthesia concepts in the context of various patient care delivery settings. Pharmacology provides the learner with knowledge of medications, solutions, and their methods of delivery to ensure safe practices and the delivery of quality patient care in the surgical setting. The student will gain knowledge of their vital role with medication and solution use in all three phases of surgical case management. The student will obtain an understanding of the principles and practice of anesthesia as it relates to the surgical patient. (1 Credit)

Objectives:

1. Analyze the principles of anesthesia administration as well as be able to explain the necessity of each component of anesthesia preparation of the surgical patient.
2. Compare and contrast methods, agents, and techniques of anesthesia administration and preparation.
3. Correlate anesthesia monitoring devices with patient homeostasis.
4. Explain anesthesia complications and interventions.
5. Calculate medication conversions and dosages.
6. Apply general terminology to medications and solutions.
7. Prepare and manage medications and solutions.
8. Use medications in the care of the surgical patient. Understand the basic concepts of Pharmacology.
9. Identify protocols and recommended practices required of the registered nurse and the surgical technologist for medication delivery in an operating room environment.
10. Interpret the magnitude and significance of medication safety concepts utilized in the surgical environment.
11. Demonstrate the duties and role of the surgical technologist when handling & labeling medications in the sterile field.

HTH 105 Intro to Patient Care

HTH 105 (Formerly HC 105) – Introduction to Ultrasound and Patient Care Beginning students in health career programs will gain basic entry-level knowledge and skills required for a variety of health occupations. The course includes an introduction to healthcare systems and agencies, legal, personal, and ethical responsibilities, basic medical terminology, the promotion of safety, infection control, vital signs, and CPR. The course includes 7 hours of integrated clinical experience per week (2 Credits).

Objectives:

1. Discuss ethical, legal, and moral issues as they relate to health careers.
2. Identify and discuss and demonstrate effective communications styles.
3. Demonstrate proficiency in patient transfer from wheel, bed and stretcher.
4. Demonstrate proficiency in the American Heart Association CPR.
5. Describe the purpose and action of Standard Precautions.
6. Describe the steps of and measure vital signs.
7. Demonstrate knowledge and appropriate patient safety procedures and techniques.
8. Converse using proper medical terminology.

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HTH 125 Anatomy & Physiology

HTH 125 Anatomy and Physiology
Description: This course is an in-depth study of the structure and function of the systems and organs of the human body and the interrelationships of the body's systems. Emphasis is on the musculoskeletal, digestive, reproductive, nervous and cardiovascular systems. 3credits

Objectives:

1. Define the levels of Organization of the Human Body.
2. Identify body cavities and body sections and regions.
3. Identify parts of the human cell.
4. Explain the process of cell metabolism and its related reactions and pathways.
5. Describe the structure and function of the skin including accessory organs of the skin.
6. Describe the general function of bone and list the function of its parts.
7. Describe the function of skeletal muscle contraction.
8. Explain the major functions of the peripheral and autonomic nervous systems.
9. Identify the major blood vessels of the human body.
10. Describe the structure and function of the cardiac system.
11. Describe the structure and function of the renal system.
12. Describe the structure and function of the reproduction system.
13. Describe the structure and function of the digestive system.

HTH 135 Intro to Ultrasound Physics

HTH 135 (Formerly PH 110) – Intro to Ultrasound Physics

Introduction to Ultrasound Physics is a course designed to acquaint the student with the fundamental principles of mechanical waves, thermodynamics, electricity and magnetism and the mathematics used to explain and express these phenomena. Students will become familiar with the laws of motion and how these are affected by the various forces. Mechanical waves and thermal properties will be described. Students will gain an understanding of basic electronic components (3 Credits).

Objectives:

1. Explain motion in one or multiple dimensions.
2. List Newton’s Laws.
3. Discuss Exponents and Logarithms.
4. Define Metric abbreviations.
5. Define work, force and energy.
6. Discuss linear and quadratic equations.
7. Describe, mathematically, wave motion.
8. Explain constructive and destructive interference.
9. Define the First Law of Thermodynamics.
10. Define the trigonometric functions.

Objectives:

11. Discuss electronic components.

HTH 140 Ultrasound Physics I

HTH 140 (Formerly PH 131) –Ultrasound Physics I

Ultrasound Physics I is a course on the fundamental principles of sound, ultrasound and the physical properties of ultrasound physics. Students will learn the definition of sound and ultrasound, how it is created and propagates through tissue. Students will learn how to measure the frequency and velocity of sound through various mediums and how ultrasound is reflected and absorbed in tissue. (3 Credits). Prerequisite: MAT120

Objectives:

1. Define sound versus ultrasound.
2. Explain the Piezoelectric effect.
3. Define ultrasound frequency and attenuation.
4. Calculate the propagation velocity in various soft tissues.
5. Define the four acoustic variables.
6. Define the relationship between amplitude and intensity.
7. Define acoustic impedance.
8. Define the attenuation coefficient.
9. List the four major types of ultrasound transducers.
10. List the four major modes of ultrasound display.

HTH 145 Ultrasound Physics II

HTH 145 (Formerly PH 132) – Ultrasound Physics II

Ultrasound Physics II is an advanced course that focuses on Doppler and color-flow Doppler ultrasound. Students will learn how Doppler is acquired, maximized and measured. The Doppler effect and equation will be reviewed in depth so that the student can apply the principles in the laboratory setting. Special emphasis will be paid to spectral analysis and color Doppler. Finally, students will learn about ultrasound quality assurance and ultrasound safety.
(3 Credits) Prerequisites: DCL105 and HTH140 or CDS105 and HTH140 or HTH140 and VCL105

Objectives:

1. Explain the Doppler shift.
2. Explain the role of angles in the Doppler equation.
3. Differentiate between continuous wave and pulsed Doppler and explain the advantages and disadvantages of each.
4. Explain how spectral analysis if obtained.
5. Define aliasing and how it is limited.
6. Explain how color Doppler is obtained.
7. Define imaging and Doppler artifacts and give three examples of each.
8. Explain the role of a phantom and give five types of test that can be performed.
9. Explain the value of quality assurance.

Objectives:

10. Explain the AIUM's statement of the safety effects of ultrasound.

Mathematics

MAT 110 Intro to Algebra

MAT 110 (Formerly MA 112) – Introduction to Algebra

This course concentrates on basic numerical and algebraic skills. Specifically, students cover polynomials, fractions, decimals, signed numbers, solving first-degree equations of one variable, exponents, and a number of word problems and applications. (3 Credits).

Objectives:

1. To understand numbers and their properties, with integers being an essential part of simplifying expressions and solving equations.
2. To analyze and solve first-degree equations of one variable, inequalities, and word problems.
3. To evaluate and simplify integral exponents.
4. To write, graph, and analyze graphs of linear equations and functions.
5. To apply slope and point slope forms of the equation of a line to solve problems.
6. To solve systems of equations in two and three variables.
7. To solve equations and inequalities involving absolute value.

MAT 120 College Algebra

MAT 120 (Formerly MA 116) – College Algebra

This college-level course is designed to prepare students for further study of college mathematics. It commences with a review of intermediate algebra concepts and progresses through subject matter within college algebra. Topics to be covered include algebra and problem solving, factoring techniques, linear functions and inequalities, systems of linear equations, polynomials, polynomial functions, rational expressions and functions, radicals, radical functions, rational exponents, imaginary and complex numbers, quadratic equations and functions, exponential and logarithmic functions, graphing techniques and analysis (3 Credits).

Objectives:

1. Simplify polynomials by adding, subtracting, multiplying and dividing. Use the formulas for special products. Apply concepts regarding functions and their graphing techniques using rectangular coordinates, set and interval notation.
2. Factor polynomials using G.C.F, Trinomials, Special Factors and Factor by grouping concepts.
3. Simplify rational expressions by adding, subtracting, multiplying and dividing. Apply concepts regarding functions and their graphing techniques using rectangular coordinates.
4. Divide Polynomials including concepts regarding Long Division, Synthetic Division and The Remainder Theorem. Solve polynomial equations by factoring. Solve rational equations.
5. Evaluate radical expressions using the properties of exponents including fractional exponent and rational exponent concepts. Multiplying and Simplifying Radical Expressions. Apply concepts regarding functions and their graphing techniques using rectangular coordinates. Solve Radical Equations. Understand Complex numbers.
6. Solve and graph linear, quadratic, higher degree types of equations and inequalities.

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MAT 135 Intro Statistics & Data

MAT 135 (Formerly MA 118) – Introductory Statistics and Data Analysis

This course introduces descriptive and inferential statistics with an emphasis on techniques and applications to real-world situations. Topics include descriptive statistics, statistical distributions, confidence intervals, hypothesis testing, contingency tables, regression, and correlation. Prerequisites: MAT115 or MAT120 or MAT150 or NURS41 (3 Credits)

Objectives:

1. Identify branches of statistics, types of data, four basic sampling techniques and observational and experimental studies.

2. Organize and represent data in frequency distributions using histograms, frequency polygons and ogives.

3. Analyze data using measures of central tendency, variation and position including mean, median, mode, midrange, range, variance, standard deviation, percentiles, deciles, quartiles and boxplots.

4. Determine the probability of an event(s) using classical or empirical probability utilizing addition, multiplication and counting rules including permutations and combinations and conditional probability.

5. Construct a probability distribution for random variables using mean, variance, standard deviation for discrete random variables including binomial and normal distributions.

6. Identify properties of normal distribution, symmetric or skewed and applying z values to determine, area, probability, percentages and normal approximation.

7. Formulate null and alternate hypotheses, use critical values and p-values to test a hypotheses, correctly formulate a decision connected to a particular hypothesis and be able to identify what Type I and Type II errors are and compute the probability of a Type II error.

MAT 150 Mathematics for PNG

This course will provide a foundation of mathematics for the PNGT program. The student will study algebra, geometry and trigonometry with a focus on mastering mathematical operations that will be applied to calculation of real-world science and engineering in PNGT. Problem-solving skills will be emphasized, both with and without a scientific calculator. The class will also emphasize development of algorithmic thought processes and structured problem-solving skills. Students will be encouraged to explore how to create a process for solving a problem and apply those analysis skills to general problem solving. PNGT industry examples are used in class to expose students to situations from oil and natural gas production technology sectors. (3 credits)

Objectives:

1. Use the TI 30 Multiview scientific calculator to calculate mathematical operations including square and higher-level roots, log, trigonometric functions.

2. Evaluate linear equations for given values, demonstrate graphing linear equations.

3. Evaluate polynomials.

4. Solve a polynomial equation for a particular variable, read values from the graph of a polynomial, to read and interpret graphs of polynomials.

5. To evaluate and solve expressions including roots, radicals, exponentials and logarithms

6. Evaluate perimeter and area for 2 dimensional figures, to evaluate surface area and volume for 3 dimensional figures.

7. Solve right triangles, similar triangles, use trigonometry to calculate angles and/or distances for applied problems.

8. Solve work, motion, and mixture applied problems and to manipulate various equations used in PNG operations.

MAT 220 Precalculus

MAT 220 (Formerly MA 220) - Pre-Calculus
This course will cover pre-calculus concepts all college students need as prerequisites to calculus and related courses required in many undergraduate majors. Specific topics include algebraic expressions, polynomial and rational functions, exponential and logarithmic functions, and trigonometric functions (4 Credits). Prerequisite: MAT 120.

Objectives:

1. Showcase a competent or better understanding via problem solving of Fundamental Algebraic Concepts.
2. Showcase a competent or better understanding via problem solving of Functions and their Graphs.
3. Showcase a competent or better understanding via problem solving of Polynomials and Rational Functions.
4. Showcase a competent or better understanding via problem solving of Exponential and Logarithmic Functions.
5. Showcase a competent or better understanding via problem solving of Trigonometric Functions of Real Numbers.
6. Showcase a competent or better understanding via problem solving of Trigonometric Functions of Angles.

MAT 225 Calculus I

MAT 225 (Formerly MA 230) – Calculus I

This course presents differential calculus, emphasizing functions and graph, limits, derivatives, and concepts of integration and differential equations. Topics include exponential, logarithmic, and trigonometric functions, limits, derivatives, and integration (4 Credits). Prerequisite: MAT 220

Objectives:

1. Recall, discuss, analyze and execute Real Numbers.
2. Recall, discuss, analyze and execute Integer Exponents.
3. Recall, discuss, analyze and execute Functions.
4. Recall, discuss, analyze and execute Derivatives and their uses.
5. Recall, discuss, analyze and execute Exponential and Logarithmic Functions.
6. Recall, discuss, analyze and execute Integration.

Management

MGT 105 Principles of Management

MGT 105 (Formerly MG 111) - Principles of Management

This introductory management course provides a basic understanding of management, its practices and its techniques. Students will learn cooncepts and terminology useful in many managerial situations (3 credits).

Objectives:

1. Describe and illustrate the four major management functions: planning, organizing, leading and controlling.
2. Demonstrate effective leadership decision-making, communication and teamwork.
3. Recognize scientific management practices as used in modern business practice to optimize efficiency and productivity.
4. Describe the manager's role in organizational and process design, business culture, strategy, and planning at different levels within an organization.
5. Identify how leaders navigate emerging trends in management practice, such as data management, innovation and organizational change, technology, and globalization.

Objectives:

6. Recognize a manager's role in encouraging diversity and in exhibiting social responsibility and ethical behavior.

MGT 110 Entrepreneurship for Everyone

MGT110 - This course provides students from various fields the chance to learn how to start their own business with an emphasis on microenterprises and "side hustles" relevant in today's Gig Economy. Over the course of the semester, students will work on developing a business idea of their own such as monetizing a blog or social media following, turning freelancing work into a business venture, or building a financial plan for artistic endeavors. These lessons will also have application for launching more traditional businesses. Students will be introduced to some of the basic concepts and strategies used by successful startups for marketing, sales, financing, and product development. The course is designed for students with limited prior business coursework.

Objectives:

1. Identify the steps required to start a company in Pennsylvania.
2. Develop a business model around a startup idea.
3. Analyze industries, customers, and competitors using basic tools and strategies applicable for small ventures.
4. Create a basic financial plan that captures relevant costs and forecasts revenue.
5. Author a simple startup business plan.

MGT 205 Human Resource Management

MGT 205 (Formerly MG 210) - Human Resources Management

This course surveys modern human resources management functions. Students will learn how organizations build effective teams of employees through engagement practices that lead to job satisfaction. As an introductory course, its content is designed for all management students, not just for those whose career interests point them to human resources. (3 Credits).

Objectives:

1. Describe human resource functions as they fit within the operation of successful companies.
2. Describe ethical issues associated with human resource management and discuss appropriate responses.
3. Identify current laws relating to human resource management related to business functions such as hiring, retention, and firing.
4. Describe management's role in providing motivation in the workforce to maintain/increase employee morale.
5. Recognize how emerging technologies impact human resource management practices.
6. Explain the impact of unions on human resource management.
7. Identify benefits and challenges of a diverse workforce, including regarding international organizations, gender equality, and race representation.

MGT 235 International Business

MGT 235 (Formerly MG 215) - International Business

This course will introduce the complexity of global trade. Students will examine the factors that drive globalization and how governments independently and through multinational organizations to structure trade agreements, apply tariffs to protect domestic markets, and attract foreign investment. Students will also learn to evaluate foreign markets by examining their financial, cultural, socioeconomic, political and legal environment. (3 credits)

Objectives:

1. Describe the forces accelerating the pace of globalization, including the transformational impact of internet technologies.

2. Evaluate foreign markets to select an appropriate business opportunity for an internationally expanding domestic firm based on a review of each country's financial, political, cultural, economic, legal, and technological infrastructure environment.

3. Explain the importance of international events to businesses operating across national borders.

4. Identify appropriate international market entry methods given a set of specific business or market conditions.

5. Explain the role of international trade organizations, tariffs, trade agreements, and related actions by governments to control international trade.

6. Define a firm's social and environmental responsibilities when operating in a foreign market.

MGT 240 Business Law I

This course is a general introductory course dealing with basic legal principles as they apply primarily to courts and the judicial process, torts and contractual relationships. (3 credits)

Objectives:

1. Explain the origin of, and different types of, American laws.

2. Examine key elements of the American judicial system and our constitutional rights, including the Bill of Rights and alternative dispute resolution.

3. Identify the fundamental elements of legal contracts and quasi contracts, including: third party contractual rights, defenses to contract enforceability, remedies for contractual breach, and product/service warranties.

4. Examine the law of torts, including intentional torts, unintentional torts, and strict liability torts.

5. Explain product liability and professional / malpractice liability.

6. Define real, personal, and intellectual property and the different manners in which property can be held, transferred, and/or protected. This should include tenancy, gifts, and bailment as they apply to organizations that handle property rentals.

7. Critique the differences among trademarks, patents, copyrights, and trade secrets as they apply to intellectual property rights.

8. Identify potential options if a business needs to declare bankruptcy and the ramifications from each type of bankruptcy filing.

9. Examine international business laws and internet laws as they apply to different types of organizations.

10. Review the importance in making ethical decisions when preparing policies and responding to legal challenges in the workplace.

MGT 265 Ideation and Innovation

MGT265 - This course will explore how businesses and entrepreneurs create new ideas for products and services. Students will gain an understanding and appreciation of ideation strategies, creative thinking techniques, and product development processes and frameworks. The course will examine how inventors create new technology-based products as well as how entrepreneurs and business leaders pursue market and process innovations. 3 credits
Prerequisites: BUS 105, MKT 105

Objectives:

1. Explain the role of innovation in business performance as well as regional and national economic growth.

2. Define important concepts in innovation management, including innovation networks, the advantages of culturally and ethnically diverse perspectives, open innovation, innovation portfolio management, and iterative innovation.

3. Describe the strengths and weaknesses of large businesses, small businesses, and startups in terms of innovation capacity and opportunity exploitation.

4. Compare a variety of entrepreneurial and business research and development (R&D) operating environments to determine which are more likely to produce marketable business ideas.

5. Apply a variety of creative thinking and brainstorming techniques to create new business ideas.

6. Evaluate innovative business ideas with commercial application potential.

MGT 270 Iterative Prod Design/Development

MGT270 - In this course students will learn how companies bring new products to market through invention, prototyping and technology commercialization. Students will engage in hands-on prototype design activities using the 3D printers in the Venture Lab's Fabrication Center. The course will explore product design and development frameworks used by industry. Students must have access to the Scranton Campus or a 3D printer (if taking the course online). 3 credits

Objectives:

1. Describe commonly used approaches to new product design and development including the Technology Readiness Levels (TRL) Framework and Agile-based iterative models.

2. Compare the costs and benefits of additive and subtractive manufacturing methods to product design, development, and production operations.

3. Explain the 3D printing process from conceptual design to post-print finishing activities.

4. Create 3D printable digital renderings of new product ideas using basic or intermediate-level open source design software.

5. Build and improve a new product prototype using an iterative design process.

6. Conduct simple market research activities to evaluate new product design ideas and concepts.

MGT 305 Labor Relations

The field of Human Resources Management includes an important component related to the unionization of employees. This course focuses on the history of major labor unions, primary labor laws, and the general process of labor negotiations in a variety of work environments.
Union certification, collective bargaining, and dispute resolution will be covered in detail. In order for students to gain a clearer understanding of labor relations, they will participate in mock contract negotiations and grievance resolutions. (3 credits)
Prerequisites: MGT205 and MGT240

Objectives:

1. Demonstrate an understanding of the perspectives, theories, and concepts in the field of labor and employment relations.

Objectives:

2. Define unions, their organizational structures, their organizing tactics, and management's response to union organizing campaigns.

3. Analyze the process of contract negotiations.

4. Explain contract administration and describe the use of grievance procedures and binding arbitration to resolve disputes over the interpretation and application of a collective bargaining agreement.

5. Demonstrate an understanding of international labor relations in countries that are current primary trade partners with the United States.

6. Explain the decision-making process involved with ethical negotiations.

7. Describe the historical role of labor unions in diversity and minority representation in the workplace.

MGT 310 Small Business Management

This course examines effective small business management practices and fosters critical thinking and problem-solving skills related to small business management. Students will study the characteristics of small businesses including staffing, product and service development, marketing and sales, and financial planning and accounting. Students will have this opportunity to learn from, and interact with, a diverse group of small business leaders in the local community. Students will personally develop and craft their own skills through case studies and simulations including financial and narrative reports, business presentations, and role-playing scenarios. (3 credits)

Objectives:

1. Identify important issues specific to small businesses.

2. Demonstrate essential management and leadership skills necessary for career success in small business management.

3. Describe the relationships of social responsibility, ethics, and law in small business.

4. Examine the role of strategic human resource planning in support of organizational objectives.

5. Recognize the ways in which to attract, build, and maintain strong customer relationships in order to operate a viable small business in various and diverse communities.

6. Develop an understanding of a firm's financial statements and their use in effective management.

7. Identify the various global opportunities available for small business.

MGT 320 Online Retail Management

This course combines major concepts from marketing, finance, and management to prepare students for exciting careers in retail management, buying, merchandising, and more. Students will study planning methods of online retailers as a way to predict and respond to changes in consumer behavior and the market. In addition, the processes of how fashion merchandise is developed, marketed, and distributed will be covered. (3 credits)

Prerequisite: MKT105 AND MGT105

Objectives:

1. Explain current issues related to fashion merchandising in America and internationally.

2. Evaluate management strategies for online retailers.

3. Describe the impact of technology on retailers and how organizations can leverage technology to increase sales.

4. Review financial statements and explain how they can guide a retailer's decision-making process for reaching new consumer markets.

Objectives:

5. Describe the impact of online fashion retail businesses on minority populations and subcultures

MGT 330 Global Management

This course examines the impact of operating internationally on a company's organizational culture, social responsibilities, business strategy, and operations with a focus on exploring effective management practices and leadership decision-making. Students will learn how cultural differences complicate a manager's role in business negotiation, communication, and decision-making. The course will use case studies to highlight best practices in global management practice.
Prerequisite: MGT235

Objectives:

1. Compare the differences in the communication skills, leadership styles, decision-making approaches, team-building activities, and related disciplines between domestic and global managers .

2. Describe how leaders manage interdependence by implementing social responsibility, ethics, and sustainability practices.

3. Formulate strategies for international operations that reflect global best practice.

4. Explain human resources management on a global level by exploring organizational structure, staffing, gender and race relations, training, and global compensation.

MGT 340 Business Law II

MGT340 - This course provides a deeper exploration of the legal responsibilities and relationships of running an organization. Students will learn about common challenges that business leaders face when dealing with employment law, breach of contract, product liability, and bankruptcy. Ethical standards will be discussed from the perspectives of multiple stakeholders. (3 credits)
Pre-requisite: MGT240

Objectives:

1. Identify the limitations regarding written contracts and the relationships among parties in a third-party contract.

2. Define the types of negotiable instruments as they apply to warranties and defense to product liability.

3. Analyze debtor-creditor relationships as they relate to bankruptcy.

4. Explain employment laws as they apply to FMLA, discrimination, and agency relationships.

5. Document the legalities of insurance, wills, and trusts for business owners and estates, including the potential liability of accountants/auditors for a business.

6. Critique the differences among trademarks, patents, copyrights, and trade secrets as they apply to intellectual property rights.

7. Review and analyze international business contracts.

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MGT 350 Entrepreneurship I

This course that provides students with an opportunity to learn about the successes and challenges of creating a business venture. Throughout the semester, students will become familiar with concepts and terminology that will be useful in developing a business model and finding potential funding sources for their business. In addition, they will conduct market research, create a company profile, and develop a startup business plan. Toward the end of the semester (if taken in the Fall), students will be required to attend the Entrepreneurship Institute, sponsored by TecBridge (a local organization) - a local one-day conference. During the workshop, students will be provided networking opportunitities to meet with local entrepreneurs, professionals, and coaches to receive suggestions and feedback on their business concepts. If taken online or in the Spring, students will be provided an alternative activity or assignment to interact with local entrepreneurs and entrepreneurial support organizations. (3 credits) Prerequisites: MGT105 AND MKT105 AND ACC105

Objectives:

1. Conduct market research and analysis to validate a new business and/or product idea.
2. Describe the role of US intellectual property laws in entrepreneurship, including trademarks, copyright, patents, and trade secrets.
3. Explain the importance of ethics, social responsibility, and philanthropy in new business creation.
4. Identify the steps in selecting a business structure and launching a business in Pennsylvania.
5. Collaborate with classmates to complete a startup business plan for potential investors.
6. Create a financial plan for the business, to include anticipated funds to launch the business, projected profit and loss tables, sales forecasts, breakeven analysis, and cash flow analyses.
7. Present a business pitch.
8. Demonstrate practices that support the creation of new innovative ideas and business concepts (i.e. ideation).

MGT 410 Supply Chain Management

As Supply Chain Management continues to be one of the most critical business disciplines in the manufacturing and service sectors, the demand for qualified professionals and opportunities for career mobility are increasing. Synchronizing the flow of products, information, and funds is becoming increasingly complex with products that move across the world with deadlines that directly affect a company's profitability.
Students will learn about global dynamics that impact a business's ability to remain competitive when working with suppliers. In addition, the following topics will be covered: supply chain strategy and network design, purchasing and negotiations, inventory cost analysis, planning and control, performance measurement, information technology and decision support, transportation systems operation, and third-party logistics services providers. (3 credits)

Prerequisites: MGT105 and MKT105 and ECO105

Objectives:

1. Conduct inventory cost analyses and apply the findings to real-world scenarios.
2. Identify which supply chain strategies are most successful for different business challenges.
3. Explain how advances in technology are impacting supply chain management.
4. Conduct performance measurements for global supply chain improvements.
5. Describe how major third-party logistics service providers enable increased productivity and profitability among small and large organizations across the world.

MGT 450 Entrepreneurship II

This course is an advanced study in entrepreneurship, giving students an opportunity to practice skills in business startup management. This will be accomplished by working with local entrepreneurs on their business challenges, participating in a business plan competition, and/or starting a company in a virtual market simulation. Student teams who worked on a business plan together in Entrepreneurship I may submit their plan for evaluation in a local or regional competition. These competitions typically provide monetary awards to the winner, but all participants benefit from the networking opportunities and interactions with local business leaders. (3 credits) Prerequisites: MGT350 and MGT240 OR MGT260 and MGT240

Objectives:

1. Demonstrate entrepreneurial skills such as market selection, product development, customer development and startup business operations management.
2. Identify the various exit strategies used by entrepreneurs.
3. Explain effective practices for managing innovation and product/service development.
4. Identify common challenges to startup success and best practices used by entrepreneurs to respond to them.
5. Explain the role of entrepreneurial support organizations and ecosystems in fostering new business creation, including programs to promote diversity and minority participation.
6. Present a business plan to local judges for evaluation and participate in the networking and coaching opportunities provided by the competition program.

Marketing

MKT 105 Principles of Marketing

(Formerly MK 101) This course provides the student with an insight into, and an understanding of, a modern marketing system. Students will learn about the 4P's (price, product, place, and promotion) and gain an understanding of their interdependent relationship. Throughout the course, common technological methods for research and promotional efforts will be addressed. (3 credits).

Honors students in this course will examine their role in environmental influence, consumer behavior, and diversity within the realm of marketing. These students will conduct marketing research to use the data in a final project related to supporting the marketing goals of an existing business.

Objectives:

1. Recognize the environmental factors that impact the decision-making processes of companies with regard to marketing.
2. Identify behaviors of consumer and business markets.
3. Describe the psychology behind creating a product, setting prices, promoting a brand, and distributing products efficiently.
4. Identify means of collecting data for promotional ideas.
5. Identify the benefits and challenges of diversity in the marketing field.

MKT 215 Advertising

MKT 215 (Formerly MK 211) - Advertising

This course will introduce students to the fundamentals of advertising and the role it plays in business and marketing. Topics that are covered include: the evolution, environment, and business of advertising. Students will learn how segmentation, targeting, and the marketing mix affect communication and consumer behavior. Advertising planning and research, and the creative process will also be covered. During the semester, students will create and "pitch" a multiplatform ad campaign. (3 Credits).

Objectives:

1. Discuss the history and evolution of advertising in America.
2. Explain the concept of advertising and its role in informing, persuading, and reminding consumers of a brand, as well as the economic effects advertising has on firms and households.
3. Recognize the variety of advertising platforms available to a marketing team.
4. Identify methods used for market segmentation and audience targeting.
5. Discuss how psychology and perceptions influence the needs and wants of customers.
6. Explain the social, ethical, and legal implications of advertising.
7. Demonstrate an understanding of integrated marketing communication by developing an advertising campaign.

MKT 230 Salesmanship and Sales Management

This course will explore the importance of strategic planning aspects for sales and marketing organizations. Students will focus on the complete personal selling process, from prospecting to closing a sale. Additional topics include customer relationship management, customer buying behavior, sales strategies, and distribution issues. (3 credits) Prerequisite: MKT105 OR SPT220

Objectives:

1. Describe sales concepts and how they differ between Business-to-Consumer (B2C) and Business-to-Business (B2B) interactions.
2. Summarize the duties and responsibilities of sales managers, including their role in hiring employees who represent diverse populations as a way to strengthen reach among customers.
3. Recognize cultural differences in domestic and international markets and how diverse markets impact sales processes.
4. Discuss the importance of recognizing the interdependence of the 4P's (product, price, place, and promotion).
5. Recognize common tools and technology used to gather and analyze sales data.

MKT 310 International Marketing

This course will equip students with the tools and terminology to explore and understand marketing practices in a global environment. Students will learn the scope and challenges of international marketing, the dynamic environment of international trade, and the culture, political, legal, and business systems of global markets. Global market opportunities and ways to develop global marketing strategies will be discussed. (3 credits)

Prerequisites: MKT105 and MGT235

Objectives:

1. Identify different cultures and recognize their impact on marketing for different businesses within various industries.
2. Explain how businesses can modify their global marketing strategies in response to changing environmental factors, including sociodemographic dimensions like diversity and inclusion.

Objectives:

3. Conduct a market and economic audit of a specific country, and prepare a marketing plan in response to the findings.

4. Utilize information technology and online media to document trends in international trade.

MKT 320 Consumer Behavior

This course will bring the student into the minds of the consumer and what influencces them. Through psychology and sociology, marketers understand how the consumer makes decisions. Students will learn how memory, personality, perception, learning, and individual attitudes influence consumption; how consumption changes over one's life cycle, and the impact of cultural and subcultural influences have on the consumer. (3 credits)

Objectives:

1. Explain how and why consumers make purchasing decisions.

2. Discuss the strategic implications for decisions that firms make regarding the pricing and advertising of products/services.

3. Debate how culture and subculture influence consumer consumption habits and decisions.

4. Analyze the impact that consumer behavior has on society and that society has on consumer behavior.

MKT 325 Marketing Research

Marketing research can give a company a picture of what characteristics, spending habits, location, and needs it faces in terms of the company's target market, industry. and competitors. It is a process that provides relevant data to help solve marketing challenges and guide planning efforts for how and where a company markets its products to increase revenue. This course is designed to teach the basic principles and tools in marketing research, including research design, data collection methods, sampling processes, and data analyses. (3 credits) Pre-requisite: MKT105 Principles of Marketing

Objectives:

1. Explain the key steps in the marketing research process.

2. Explain the differences between quantitative and qualitative research.

3. Utilize the QualtricsXM™ software and the Statistical Discovery software to conduct data collection and data analyses.

4. Compare the purpose of conducting marketing research for a local start-up entrepreneurship, an established domestic organization, and an international company.

5. Consider the analyst’s perspective in designing market research and the client’s perspective in evaluating research findings.

6. Discuss the value of an integrated approach to sharing research results with decision-makers throughout a company.

7. Demonstrate understanding of the potential impact that bias and conflict of interest could have in designing and conducting a study.

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Nursing

NUR 105 Introduction to Nursing Care

This course provides the basic foundation for a student to comprehend and utilize their acquired nursing knowledge and nursing skills by providing bio-psychosocial, spiritual and cultural nursing care to patients in acute care settings. An introduction of nursing concepts are provided include activities of daily living, comfort processes, positioning, ambulation, infection control measures, safety measures, elimination, wound care, and assessment techniques. A student begins to research evidence-based practices to the relevance of fundamental nursing care. This course includes clinical, laboratory, and classroom experiences (6 CREDITS). Co-requisite: BIO 205; NUR 110 (Concepts of Nursing); NUR 115 (Pharmacology I)

Objectives:

1. Distinguish the meaning of critical judgment and critical thinking in planning care for patients in various acute care settings.

2. Identify the steps of the nursing process to assess, develop, implement, and evaluate patient's care, medication administration, and IV therapy.

3. Perform competent nursing skills in the nursing lab such as medication administration, wound care, ADL care, transferring, elimination, nutrition, oxygen therapy, IV therapy, and so forth.

4. Explain various forms of documentation.

5. Apply safety measures related to all aspects of patient's care.

6. Describe measures to develop therapeutic communication.

7. Compare and contrast spiritual and cultural nursing care.

NUR 110 Concepts of Nursing

This course reviews the historical foundation of the nursing profession along with the nursing process, legal and ethical issues relating to the nursing profession, and the various roles of the professional nurse in a variety of healthcare settings. A student will be provided information on the meaning and development of therapeutic communication with patients, family members, and healthcare teams (3 CREDITS). Co-requisite: NUR 115 (Pharmacology I); NUR 105 (Introduction to Nursing Care); BIO 205

Objectives:

1. Identify various stages on the history of the nursing profession and key historical individuals who affected the changing of the paradigm in the nursing profession.

2. Assess the healthcare delivery system based on positive and negative qualities of resources.

3. Distinguish the different phases of the nursing process and the significance in the utilization of the nursing process for providing competent nursing care.

4. Explain the importance in adhering to legal nursing standards.

5. Discuss and classify the various roles of the professional nurse.

6. Determine the principles related to therapeutic communication in dealing with patients, family members, and healthcare personnel.

7. Evaluate the meaning and behavior of professionalism.

8. Compare and contrast various ethical, moral, and legal issues.

NUR 115 Pharmacology I

This course examines principles of responsibility/accountability in medication administration, patient safety and processes/practices to reduce medication errors. Emphasis is placed on assessment, evaluation and effective interventions for pain and infection control management along with consequences of medication error. Introduction to drug classification, actions, dosage, adverse effects, interactions, and medication teaching for the following: analgesics, anti-infective, anti-viral, anti-inflammatory, and anesthesia. Medication calculations introduced for oral and parenteral medications (1 CREDIT). Co-requisite: BIO 205; NUR 105 (Introduction to Nursing Care); NUR 110 (Concepts of Nursing)

Objectives:

1. Describe concepts of pharmacokinetics, pharmacodynamics, and pharmacogenetics.

2. Examine the role of the professional nurse as it relates to responsibility and accountability for safe medication administration such as oral, topical, parenteral, and IV infusion.

3. Explain assessment, evaluation and interventions for pain and infections control management such as oral, topical, parenteral, and IV infusion.

4. Identify medications under analgesic, anti-infective, anesthesia, anti-inflammatory, sensory, integumentary, and reproductive classifications.

5. List actions, adverse effects, interactions, and medication teaching for analgesics, anti-infective, anti-viral, anti-inflammatory, anesthesia, sensory, integumentary, and reproductive.

6. Examine both nurse-driven and interdisciplinary systems to reduce medication errors.

7. Design a plan for ongoing enhancement of medication knowledge and safety practices.

8. Examine high risk populations that pose an increased risk for medication errors.

9. Calculate oral and parenteral medications.

NUR 120 Nursing Care I

This course builds on previous nursing contents which focus on acute and rehabilitative phases of nursing care for patients with cardiovascular, respiratory, hematologic, and musculoskeletal systems disorders. Review of interventions provided includes holistic patient care, nutrition, pharmacology, psychosocial, and spiritual needs. Emphasizes is on evidence-based practice relevant to cardiovascular, respiratory, hematologic, and musculoskeletal systems disorders and efficacy in patient care. The course accentuates application of scientific principles and critical thinking in acute care settings on the beginning application of clinical judgement. This course provides classroom and clinical experiences (6 CREDITS). Prerequisite: NUR 105 (Introduction to Nursing Care); NUR 110 (Concepts of Nursing); BIO 205; Co-requisite: BIO 235, BIO 220; NUR 115 (Pharmacology II)

Objectives:

1. Integrate critical reasoning and critical thinking in making clinical judgments related to nursing care for patients with cardiovascular, respiratory, hematologic, and musculoskeletal systems disorders in various acute care setting.

2. Discuss the steps of the nursing process to assess, develop, implement, and evaluate patient's care for patients with cardiovascular, respiratory, hematologic, and musculoskeletal systems disorders.

3. Explain nursing interventions that relate to cardiovascular, respiratory, hematologic, and musculoskeletal systems disorders.

4. Compare signs and symptoms for patients with cardiovascular, respiratory, hematologic, and musculoskeletal systems disorders.

5. Apply safety measures related to all aspects of patient's care.

6. Differentiate measures to develop therapeutic communication.

7. Interpret evidence-based practices for cardiovascular, respiratory, hematologic, and musculoskeletal systems disorders.

NUR 125 Pharmacology II

This course emphasizes assessment, evaluation, and effective interventions relating to pharmaceutical management for cardiovascular, respiratory, hematologic, endocrine, and musculoskeletal systems disorders. Introduction to drug classification, actions, dosage, adverse effects, interactions, and medication teaching management for the following: cardiovascular, respiratory, hematologic, endocrine, and musculoskeletal systems disorders. A review is provided on genetics and patient characteristics effect on certain medications. Introduction provided on calculating and titrating medications specific to cardiovascular, respiratory, hematologic, endocrine, and musculoskeletal systems pharmacology. Medication calculations and titrating introduced for cardiovascular, respiratory, hematologic, endocrine, and musculoskeletal pharmacology (1 CREDIT). Prerequisite: NUR 115 (Pharmacology I); NUR105 (Introduction to Nursing Care); NUR 110 (Concepts of Nursing); BIO 205; Co-requisite: BIO 235, BIO 220; NUR 120 (Nursing Care I)

Objectives:

1. Explain assessment, evaluation and interventions relating to pharmaceutical management for cardiovascular, respiratory, hematologic, endocrine, gastrointestinal, genitourinary, and musculoskeletal systems disorders.

2. Identify medications relating to pharmaceutical management for cardiovascular, respiratory, hematologic, endocrine, gastrointestinal, genitourinary, and musculoskeletal systems disorders.

3. List actions, adverse effects, interactions, and medication teaching relating to medications utilized for cardiovascular, respiratory, hematologic, endocrine, gastrointestinal, genitourinary, and musculoskeletal systems disorders.

4. Discuss how the response of medications can be affected by patient characteristics and genetics.

5. Devise a plan for ongoing enhancement of medication knowledge and safety practices.

6. Decide high risk populations that pose an increased risk for medication errors.

7. Calculate and titrate medications specifically to cardiovascular, hematologic, gastrointestinal, genitourinary, endocrine, gastrointestinal, genitourinary, and musculoskeletal pharmacology.

NUR 205 Mental Health

This course focuses on the nursing care of patients of various ages who exhibit psychiatric and chemical dependence disorders and incorporate theories and concepts of mental health, psychopathology, and treatment regime. The nursing process is presented as a multidisciplinary team approach. Emphasizes is on developing and implementing therapeutic care with individuals, families, and groups in a psychiatric care environment. A student will demonstrate communication skills, completion of a mental health assessment, and identification of therapeutic interventions in the clinical settings. This course provides classroom and clinical experiences (5 CREDITS). Prerequisite: PSY 105; NUR 120 (Nursing Care I); NUR 125 (Pharmacology II); Co-requisite: NUR 210 (Medical/Surgical II); NUR 215 (Maternal Child Care)

Objectives:

1. Integrate critical reasoning and critical thinking in making judgments related to nursing care for patients with psychiatric and chemical dependency disorders of all ages.

2. Prioritize the steps of the nursing process to assess, develop, implement, and evaluate nursing care for psychiatric and chemical dependency disorders.

3. Evaluate the role and responsibilities of the professional nurse in caring for patients with psychiatric and chemical dependency disorders of all ages.

4. Construct therapeutic communication measures related to psychiatric and chemical dependency patients of all ages.

5. Choose safety measures related to all aspects of patient's care related to psychiatric and chemical dependency disorders.

6. Formulate evidence-based practices concerning the nursing care of patients of all ages relating to psychiatric and chemical dependency disorders.

Objectives:

7. Interpret a variety of therapeutic models used as primary and adjunctive therapy for patients of all ages with psychiatric and chemical dependency disorders.

NUR 210 Nursing Care II

This course builds on previous nursing contents which focus on acute and rehabilitative phases of nursing care for patients with gastrointestinal, urinary, endocrine, sensory, integumentary, neurological, reproductive and immunological systems disorders. Review of interventions provided includes holistic patient care, nutrition, pharmacology, psychosocial, and spiritual needs. Emphasizes is on evidence-based practice relevant to gastrointestinal, urinary, endocrine, sensory, integumentary, neurological, reproductive and immunological systems disorders and efficacy in patient care. The course accentuates application of scientific principles and critical thinking in acute care settings on the beginning application of clinical judgment. This course provides classroom and clinical experiences (6 CREDITS). Prerequisites: NUR 120 (Nursing Care I); NUR 125 (Pharmacology II); BIO 220; BIO 235; Co-requisite: NUR 215 (Maternal Child Care); NUR 205 (Mental Health Nursing Care)

Objectives:

1. Integrate critical reasoning and critical thinking in making clinical judgments related to nursing care for patients with gastrointestinal, genitourinary, endocrine, sensory, integumentary, neurological, reproductive and immunological systems disorders.

2. Discuss the steps of the nursing process to assess, develop, implement, and evaluate patient's care for patients with gastrointestinal, genitourinary, endocrine, sensory, integumentary, neurological, reproductive and immunological systems disorders.

3. Explain nursing interventions that relate to gastrointestinal, genitourinary, endocrine, sensory, integumentary, neurological, reproductive and immunological systems disorders.

4. Compare signs and symptoms for patients with gastrointestinal, genitourinary, endocrine, sensory, integumentary, neurological, reproductive and immunological systems disorders.

5. Apply safety measures related to all aspects of patient's care.

6. Differentiate measures to develop therapeutic communication.

7. Interpret evidence-based practices for gastrointestinal, genitourinary, endocrine, sensory, integumentary, neurological, reproductive and immunological systems disorders.

NUR 215 Maternal Child Care

This course provides groundwork of nursing knowledge for the nursing needs of all women during the various phases of the perinatal period and children in various developmental stages. The perinatal content covers low-risk to high-risk child bearing patients. The course includes the application of perinatal concepts, theories, and principles in a variety of perinatal milieu. An introduction of women's health topics are provided in this course. Child health nursing utilizes the nursing process in caring for neonates, infants, toddlers, pre-school, school-age, and adolescent children who are well, acutely ill, chronically ill, and those with special needs in a variety of healthcare settings. Reinforcement of growth and development theories emphasized and expanded. Discussion and application of evidence-based research in the care of child-bearing mothers and various age groups of children are provided. This course provides classroom and clinical experiences (6 CREDITS). Prerequisite: NUR 120 (Nursing Care I); NUR 125 (Pharmacology II); PSY 205; Co-requisite: NUR 210 (Nursing Care II); NUR 205 (Mental Health Nursing Care)

Objectives:

1. Integrate critical reasoning and thinking in making clinical judgments relate it planning care for childbearing patients and children of various age groups.

2. Articulate the steps of the nursing process to assess, develop, implement, and evaluate nursing care for childbearing women and various age groups of children.

3. Prioritize nursing interventions that relate to childbearing women who are considered low-risk and high-risk with perinatal care.

Objectives:

4. Prioritize nursing interventions that relate to children of various age groups based on their growth and developmental needs.

5. Distinguish safety measures related to all aspects of patient's care for childbearing women and children of various age groups.

6. Differentiate measures to develop therapeutic communication related to children of various age groups and childbearing women.

7. Formulate on evidence-based practices concerning the nursing care of children of all ages and childbearing women.

NUR 220 Nursing Care III

This course applies the nursing process to care for patients that have multi-system complex health issues in an acute healthcare environment. The student will expand their clinical experiences by caring for patients who are critically ill and the utilization of advanced technology in the critical care environment. Emphasizes is on the promotion of independent clinical decisions, delegation, and collaborative team development. During the internship rotation, the student will assimilate all knowledge learned from the previous nursing and general education courses by transitioning into the role of a graduate professional nurse. This course provides classroom, clinical, and internship experiences (9 CREDITS). Prerequisite: NUR 210 (Nursing Care II); NUR 215 (Maternal Child Care); NUR 205 (Mental Health Nursing Care); Co-requisite: NUR 225 (Pharmacology III); NUR 230 (Professional Transition)

Objectives:

1. Combine critical reasoning and critical thinking in making clinical judgments related to nursing care for patients with multi-system complex problems.

2. Design the steps of the nursing process to assess, develop, implement, and evaluate nursing care for multi-system complex problems.

3. Discuss the utilization of advanced technology in the nursing care of patients with multi-system complex-problems.

4. Construct therapeutic communication measures related to patients with multi-system complex problems.

5. Choose safety measures related to all aspects of patient's care related to patients with multi-system complex problems.

6. Elaborate evidence-based practices concerning the nursing care of patients with multi-system complex problems.

7. Discuss the significance for promoting independent clinical decisions, delegation, and collaborative team development.

NUR 225 Pharmacology III

This course emphasizes assessment, evaluation, and effective interventions relating to pharmaceutical management for integumentary, sensory, reproduction, neurologic, and critically ill disorders. Introduction to drug classification, actions, dosage, adverse effects, interactions, and medication teaching management for the following: integumentary, sensory, reproduction, neurologic, and critically ill disorders. A review is provided on genetics and patient characteristics effect on certain medications. Medication calculations and titrating introduced for neurologic and critical care pharmacology. Prerequisite: NUR 125 (Pharmacology II); NUR 210 (Nursing Care II); NUR 215 (Maternal Child Care); NUR 205 (Mental Health Nursing Care); Co-requisite: NUR 220 (Nursing Care III); NUR 230 (Professional Transition)

Objectives:

1. Develop assessment, evaluation and interventions relating to pharmaceutical management for critically ill, neurologic, and oncologic patients.

2. Discuss medications relating to pharmaceutical management for critically ill, neurologic, and oncologic patients.

Objectives:

3. DInterpret actions, adverse effects, interactions, and medication teaching relating to medications utilized for critically ill, neurologic, and oncologic patients.

4. Discuss how the response of medications can be affected by patient characteristics and genetics.

5. Develop a plan for ongoing enhancement of medication knowledge and safety practices.

6. Identify high risk populations that pose an increased risk for medication errors.

7. Calculate and titrate medications specifically to critically ill, neurologic, and oncologic patients.

NUR 230 Professional Transition

This course integrates previous nursing knowledge and skills into professional nurse development focusing on the promotion of independent clinical decisions, delegation, and teamwork. Current political, economic, professional, and social topics that affect the professional practice of nursing and the health care environment are emphasized. Exploration on walkway to licensure, job employment, and succeeding in professional nursing practice environments is discussed. Prerequisite: NUR 210 (Nursing Care II); NUR 215 (Maternal Child Care); NUR 205 (Mental Health Nursing Care); Co-requisite: NUR 220 (Nursing Care III); NUR 225 Pharmacology III)

Objectives:

1. Compare and contrast promotion of independent clinical decisions, delegation, and teamwork into the development of the professional nurse.

2. Elaborate on evidenced-based practice that supports current topics of political, economic, professional, and social issues.

3. Interpret steps related to licensure and job employment.

4. Evaluate ways for succeeding in professional nursing practice environments.

NUR 305 Issues/Transitions Nsg

This course introduces the learner to the role of the baccalaureate prepared RN and focuses on the various roles of the professional nurse. Beginning with the historic beginnings of the profession, nursing's evolution to a force for societal change is considered. Emphasis is placed on trends and issues in contemporary nursing and includes the evolving realms of professional nursing knowledge. Advanced theoretical concepts will be explored.(3 credits)

Objectives:

1. Describe their motivation for returning to school for their Bachelor of Science degree in nursing.

2. Examine the professional bases for nursing practice.

3. Articulate critical abilities required for baccalaureate-level nursing practice.

4. Explore elements included in quality of care for individuals, families, and groups.

5. Develop a professional development plan that includes completion of the Bachelor of Science in nursing.

NUR 310 Ethics in Professional Nursing

This course considers the place of the nurse at the crossroads of ethics, evolving medical technology, expanding knowledge of genetics and genomics, and shifts in societal beliefs and values. Informed by the American nurses Association code of ethics, the learner will identify and analyze a wide range of legal and ethical concepts applicable to professional nursing practice. The course considers concepts, theories, and values germane to ethical dilemmas, and examines ways in which ethical decision-making models could be applied to a variety of dilemmas. (3 credits)

Objectives:

1. Examine the American Nurses Association Code of Ethics with interpretive guidelines.

Objectives:

2. Identify moral or ethical dilemmas in nursing practice.
3. Apply ethical theories or principles of nursing care to an individual and family.
4. Discuss the multiple conflicting loyalties of the nurse to the patient, profession, employer, physician, insurer, and government.
5. Formulate a rationale for a position on an ethical issue using a contrasting framework.
6. Determine ethical implications of technological development in healthcare.
7. Ethical considerations related to our expanding knowledge of genetics/genomics.

NUR 315 Research & Evid-Based Practice

This course introduces the learner to concepts of evidence-based practice as well as the research process in the development of nursing knowledge and practice. Emphasis is placed on reading, interpreting, and evaluating research findings and appraising their applicability to problems faced by the learner in direct clinical practice. Ethical considerations and the protection of human subjects in research are explored. (3 credits) PREREQUISITE: MAT 135

Objectives:

1. Define evidence-based nursing practice.
2. Explore the research process and the development of nursing knowledge.
3. Examine the link between theory and evidence-based practice.
4. Discuss the link between research, ethics/protection of human subjects, and evidence-based practice.
5. Demonstrate application of the evidence-based practice process to his/her respective nursing specialty.
6. Postulate future directions in research and evidence-based practices in his/her respective nursing specialty.

NUR 320 Nursing Data & Infomatics

This course focuses on the use of computer and other electronic technologies to manage information used to facilitate nursing practice, and to enhance knowledge in the discipline. The course emphasizes the use of electronic technologies in nursing practice, administration, education, and research consistent with legal, ethical, and regulatory standards. Emphasis is placed on the use of technology as a tool to achieve patient safety. (3 credits)

Objectives:

1. Discuss the evolution of the field of healthcare informatics.
2. Describe the evolving role of technology in contemporary nursing practice.
3. Explore the role of technology in patient safety.
4. Examine legal, ethical, and regulatory standards which impact the use of health-related data.
5. Consider factors that influence patients use of and experience with health data and informatics.
6. Develop strategies to enhance competence with nursing data & informatics in nursing.

NUR 325 Cultural Competence & Diversity

This course focuses on the interplay between culture and choices in healthcare practices of individuals, groups and communities. The student explores and reflects on his or her own cultural beliefs related to health and health care delivery and explores potential barriers to effective nursing care resulting from client beliefs, behaviors, cultural perspectives, and barriers to transcultural communication. An exploration of genomics will further illuminate discussions of the unique needs of individuals, groups, and communities. (3 credits)

Objectives:

1. Discuss the importance of cultural competence in contemporary health care.
2. Consider genetic and genomic variations in health care.
3. Explore a framework for assessing culture and selecting interventions.
4. Articulate barriers to provision of culturally competent health care as it relates to sociopolitical forces in his/her geographic area.
5. Demonstrate successful application of assessment and intervention techniques to at least two cultural groups with whom the learner interfaces.

NUR 330 Health Assessment

This course builds on the professional nurses existing knowledge, skills, and abilities and health assessment, and challenges the learner to enhance the skills. Topics are tailored to learner interests and may include comprehensive assessment of pediatric, adult, and older adult clients with an emphasis on deviations from normal findings, communication skills, history taking, physical assessment skills, and comprehensive psychosocial assessment. Concepts of genomics and their role in health assessment will be addressed. Students will use assessment data to identify common risk factors and social determinants of health and identify strategies to help clients enhance health and prevent disease. (3 credits)

Objectives:

1. Review the history and interview process.
2. Integrate concepts of cultural competence into health assessment.
3. Integrate concepts of genomics into health assessment.
4. Demonstrate clinical decision making based on health assessment findings.
5. Use health assessment data for risk stratification purposes to enhance health and prevent disease.
6. Integrate critical thinking skills in the health assessment process.
7. Develop individualized plan for enhancing assessment skills in the learners current or preferred field of nursing.

NUR 335 Pharmacology

This course builds on prior knowledge of pharmacology and examines principles of responsibility/accountability in medication administration, patient safety and processes/ practices to reduce medication and transfusion errors. Emphasis is placed on assessment, evaluation and effective intervention in high-risk situations and with groups at high risk for both error and consequences of error. Pharmaceutical systems and procedures are also reviewed. The student adds to their professional development plan (begun in NUR-301) by addition of a plan for developing ongoing competence in medication safety practices. (3 credits)

Objectives:

1. Review concepts of pharmacokinetics, pharmacodynamics, and pharmacogenetics/genomics in wellness promotion and illness prevention and treatment of disease.
2. Examine the role of the professional nurse as it relates to responsibility and accountability for safe medication administration.
3. Explore existing laws governing medication administration and supervision in special situations.

Objectives:

4. Postulate high risk situations that pose increased risk for medication errors.
5. Consider high risk populations that pose an increased risk for medication errors.
6. Examine both nurse-driven and interdisciplinary systems to reduce medication errors.
7. Develop a plan for ongoing enhancement of medication knowledge and safety practices.

NUR 401 Capstone Experience Nursing

This final course in the RN-to-BSN program represents an experiential learning experience which invites the student to demonstrate integration of clinical knowledge with concepts/theories into professional nursing practice. Course participants design and implement a project reflecting program competencies designed to address a real-world problem in their current places of practice or to improve client/community outcomes in collaboration with a faculty member. (4 credits)

Objectives:

1. Integrate concepts and content into a comprehensive project aimed at addressing an actual or theoretical workplace problem.
2. Develop a plan for continued professional development which builds on the professional development plan devised in NUR-305.

NUR 410 Nsg Mgmt of an Aging Population

This course examines aging as part of the normal developmental process. Emphasis is placed on the assessment of the older adult in terms of physical, psychological, sociocultural, and spiritual dimensions within the context of family and society. Theories of aging, including the role of genetics will be explored. The student will apply the nursing process to course concepts. (3 credits)

Objectives:

1. Explore the development of gerontology as specialty within the discipline of nursing.
2. Consider socio-political-economic forces that impact successful aging.
3. Review contemporary theories of aging.
4. Contrast normal from pathological aging.
5. Explore the impact of genetics/genomics on aging.
6. Examine psycho-social and spiritual concepts of aging.
7. Discuss special issues in aging.

NUR 415 Public Health Nursing

This course explores the promotion of health and prevention of illness across the lifespan. Informed by theories from public health, nursing, and the social sciences, the student uses his/her foundational nursing knowledge and expanding genomic knowledge to critically analyze the health and health risks of selected populations in a community and apply health promotion, risk reduction, and disease prevention interventions. (3 credits)

Objectives:

1. Examine the relationship between public health and nursing practice.
2. Explore epidemiology and its relationship to nursing practice.
3. Discuss principles of community assessment.
4. Consider the impact of our expanding knowledge of genetics/genomics on public health.

Objectives:

5. Critically evaluate the intersection between emerging public health issues and nursing practice.
6. Focus on a specific area of public health planning for in-depth study.
7. Describe the role of nursing in addressing special problems in public health.

NUR 420 Health Policy & Politics

This course examines the trends in healthcare, socio-political forces and societal issues which shape policies which affect both consumers of health care and professional nursing practice. The student is introduced to the policy making process and explores how nursing can be a force in health care policy decisions. (3 credits)

Objectives:

1. Describe concepts of social justice as they apply to health care and nursing.
2. Explore the evolution of the U.S. healthcare system from a historic perspective.
3. Consider contemporary forces which impact health care policies.
4. Examine how health care is paid for in the United States.
5. Discuss socio-political forces associated with disparities in health care.

NUR 425 Leadership and Management in Nsg

This course introduces the students to concepts of professional nursing leadership as it relates to administrative practice in a variety of organizational structures. Emphasis is placed on the acquisition of leadership and management skills and the comprehension of how managerial decisions impact patient care as well as those responsible for delivering that care. Effective communication, concepts of working with diverse stakeholders, interprofessional communication and collaboration as well as ethical/legal responsibilities of leadership and management will be considered. (3 credits)

Objectives:

1. Examine core management and leadership competencies associated with quality, safe nursing care.
2. Consider ethical and legal foundations of nursing leadership and management.
3. Explore core skills required for effective nursing management.
4. Compare and contrast leadership styles of successful nurse leaders.
5. Enhance communication skills for intra- and interdisciplinary collaboration.

Occupational Therapist Assist

OTA 105 Intro to Occupational Therapy

In this course occupational therapy assistant students will be introduced to the meaning and scope of occupational therapy practice. A history overview of the occupational therapy profession, occupational therapy education, populations of people served by occupational therapy in traditional and non-traditional settings will be explored. Students will be introduced to the concept of responsible professionalism as occupational therapy assistants. They will become familiar with the AOTA's Official Documents including but not limited to Occupational Therapy Standards of Practice, the Occupational Therapy Code of Ethics and The OT Practice Framework: Domain and Process (3rd ed.) Additionally, the roles of occupational therapy assistants, relationships between occupational therapy assistants and occupational therapists, and the value of establishing good communication with multidisciplinary teams, clients, clients significant others and the public will be presented. Students will become student members of the American Occupational Therapy Association and learn to take advantage of the resources of this organization especially for members. Finally, students will be introduced to health and information literacy and will be instructed in using reliable resources both in the library from print sources and on-line. (3 credits)

Objectives:

1. Describe basic features of theories, models of practice, and frames of reference that influence the practice of occupational therapy.

1. Explain how occupational therapy history , the philosophical base, theory (including defining the process of theory development and its importance to occupational therapy) and the sociopolitical climate are important in meeting society's current and future occupational needs as well as how these factors influence and are influenced by practice.

2. Demonstrate an understanding of health literacy and the ability to educate and train the client, caregiver, family, significant others, health care, education, community and social systems to facilitate skills in areas of occupation as well as prevention, health maintenance, health promotion, safety and the sociopolitical climate of practice.

2. Explain the distinct nature of occupation and explain evidence that occupation supports performance, participation, health, and well-being in order to promote occupational therapy to consumers, potential employers, colleagues, and the general public

3. Articulate the importance of how using statistics, tests, and measurements influence scholarly activities and literature contribute to the evaluation of professional practice, service delivery, and/or professional issues.

3. Identify and explain the contextual factors; current policy issues; and socioeconomic, political, geographic, and demographic factors on the delivery of occupational therapy services for persons, groups, and populations and social systems as they relate to the practice of occupational therapy.

4. Demonstrate the ability to participate in the development, marketing, and management of occupational therapy services impacted by contextual factors including the ongoing process of quality improvement and implementation program changes.

4. Describe the role and responsibility of the practitioner to advocate for changes in service delivery policies, effect changes in the system, recognize opportunities in emerging practice areas, and advocate for opportunities to expand the occupational therapy assistant's role.

5. Demonstrate knowledge of the profession through applicable national requirements for credentialing, licensure, certification, or registration under state laws: participation in international, national, state, and local occupational therapy associations and related professional associations systems; and structures that create federal and state legislation and regulations and their implications and effects on practice.

5. List the business aspects of practice including but not limited to: financial management, billing, coding, identifying the need and demonstrating the ability to participate in the development marketing and management of service delivery options, participating in the documentation of ongoing processes for quality management and improvement {e.g., outcome studies analysis and client engagement surveys), and implement program changes as needed to demonstrate quality of services.

6. Identify both personal and professional competencies and responsibilities related to liability issues under current models of service provision and appreciate the varied roles of the occupational therapy assistant as a practitioner, educator and research assistant.

Objectives:

6. Understand the principles of teaching and learning in preparation for work in an academic setting.

7. Demonstrate knowledge and understanding of the American Occupational Therapy Association (AOTA) Occupational Therapy Code of Ethics and Ethics Standards, AOTA Standards of Practice, informal and formal systems and use them as a guide for ethical decision making in professional interactions to resolve personal, client interventions, employment settings, and organization ethical conflicts.

7. Describe how technology is used in practice, including electronic documentation systems, virtual environments and telehealth technology.

8. Identify the role and responsibility of the practitioner to advocate for changes in service delivery policies, to effect changes in the system, and to recognize opportunities in emerging practice areas through participating in organizations, educating other professionals, service providers, consumers, thirdparty payers, regulatory bodies, the public and the ongoing professional responsibility for providing fieldwork education and the criteria for becoming a fieldwork educator.

8. List and communicate to the occupational therapist the need to design community and primary care programs to support occupational performance for persons, groups and populations.

9. Use the AOTA Code of Ethics and AOTA Standards of Practice and use them as a guide for ethical decision making in professional interactions including defining strategies for effective, competency-based legal and ethical supervision of occupational therapy assistants and non-occupational therapy personnel, client interventions, employment settings and when confronted with personal and organizational ethical conflicts.

OTA 110 Occupational Conditions & Challenge

In this course, students will explore the most common occupational conditions and challenges facing today's occupational therapy clients. They will recognize and describe the impact these conditions and challenges have on clients' occupational/functional performance using the terminology found in the Occupational Therapy Practice Framework: Domain and Process, (3rd ed.) Students will also be introduced to methods used in treatment settings conducive to occupational therapy practice as they relate to clients experiencing the identified occupational conditions and challenges. (3 credits)

Objectives:

1. Describe the structure and function of the human body to include the biological and physical sciences, neurosciences, kinesiology, and biomechanics in order to describe the effects of disease processes including heritable diseases, genetic conditions, mental illness, disability, trauma, and injury on occupational performance.

2. Explain the role of sociocultural, socioeconomic, and diversity factors, as well as lifestyle choices in contemporary society to meet the needs of persons, groups, and populations.

3. List the social determinants of health for persons, groups, and populations with or at risk for disabilities and chronic health conditions and explain how epidemiological factors impact the public health and welfare of populations.

4. Utilize scientific evidence to show the importance of balancing areas of occupation; the role of occupation in the promotion of health; and the prevention of disease, illness, and dysfunction for persons, groups, and populations.

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OTA 120 Occupational Therapy Fndn & Theory

In this course, students will discover the rich historical roots from which the dynamic, life-changing profession of occupational therapy grew. They will understand the importance of the profession's philosophy and basic tenets. They will also learn about the influences multidisciplinary theories had on the professions' development. Occupation-Based Models of Practice, the theoretical lenses through which occupational therapy practitioners view their clients, as occupational beings will be explored. Finally, practical frames of references, the theoretical approaches whose methods guide occupational therapy practitioners' and other practitioners of various fields, in practice when considering the types of conditions and challenges their clients face will be presented and applied to various case studies. (3 credits)
Pre-requisites: OTA105 and OTA110

Objectives:

1. Demonstrate knowledge of the structure and function of the human body to include the biological and physical sciences, neurosciences, kinesiology, and biomechanics, human development throughout the lifespan (infants, children, adolescents , adults , and older adults) including concepts of developmental psychology and concepts of human behavior including the behavioral sciences, social sciences, and science of occupation.

2. Describe the role of sociocultural, socioeconomic, and diversity factors, as well as lifestyle choices in contemporary society to meet the needs of persons, groups, and populations (e.g., principles of psychology, sociology, and abnormal psychology).

3. Discuss how the social determinants of health for persons, groups, and populations with or at risk for disabilities and chronic health conditions including the epidemiological factors impact the public health and welfare of populations.

4. Apply scientific evidence, theories, models of practice, and frames of reference that underlie the practice of occupational therapy to guide and inform interventions for persons, groups, and populations in a variety of practice contexts and environments.

5. Explain to the occupational therapist the need to design community and primary care programs to support occupational performance for persons, groups and populations.

6. Define the process of theory development and its importance to occupational therapy.

7. Indicate how occupational therapy history, the philosophical base, theory, and sociopolitical climate are important in meeting society's current and future occupational needs as well as how these factors influence and are influenced by practice.

OTA 125 Occupations Across the Lifespan I

Occupations Across the Lifespan I is the first in a series focusing on 2 primary elements; the human as an occupational being and on the analysis of the activities and occupations in which humans engage. In this course, the OT Practice Framework: Domain and Process will be presented, in particular, the concepts of Areas of Occupation, Performance Patterns, Contexts and Environments and Activity Demands, with regard to space, objects and social demands. Human developmental stages from fetal development through childhood and the occupations typical for these individuals will be presented. Finally students will be guided through the process of analyzing occupations, grading activities to achieve therapeutic benefit, selecting appropriate occupations and activities based on individual's virtual occupational profiles, conducting/presenting/teaching occupations/activities to others as well as adapting and modifying environments and occupations to ensure future clients' opportunity for engagement and participation in life despite a variety of limitations.

Experiential learning, problem-based learning and service-learning will be utilized as primary pedagogical methods in this course series, in order to best prepare students for the Evaluation/Intervention/Documentation courses as well as for Level I and Level II fieldwork experiences. (3 credits)
Pre-requisites: OTA105, OTA110, BIO205 and BIO235.

Objectives:

1. Describe the structure and function of the human body, human development, and concepts of human behavior from birth through childhood including concepts from developmental psychology, behavior sciences, social sciences and science of occupation.

Objectives:

2. Explain and demonstrate the interaction of occupation and activity, including the areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors for ages birth through childhood.

3. Apply scientific evidence to show the importance of balancing areas of occupation with the promotion of health and wellness benefits for clients ages birth through childhood

4. Assess, grade, and modify the way persons, groups and populations (ages birth through childhood) perform occupations and activities by adapting processes, modifying environments, and applying ergonomic principles to reflect the changing needs of the client, sociocultural context, and technological advances.

5. Select and utilize clinical reasoning to address occupation-based intervention, client factors, performance patterns, and performance skills in order to facilitate occupation-based interventions that address client factors related to promotion, compensation, adaption, and prevention for ages birth through childhood.

6. Describe the need and rationale for occupational therapy services through effective communication in documentation for clients age birth through childhood.

7. Explain to consumers, potential employers, colleagues, third-party payers, regulatory boards, policymakers, other audiences, and the general public the distinct nature of occupational and the evidence that occupation supports performance, participation, health, and well-being.

8. Demonstrate activity analysis in the areas of occupation, performance skills, performance patterns, context(s), and environments, and client factors to implement the intervention plan for clients birth through childhood.

OTA 130 Eval, Interv & Commun I-Ped OT

In this course, consisting of three hours of lecture and three hours of experiential laboratory instruction per week, students will develop entry-level occupational therapy assistant skills in evaluation, intervention and communication as they relate to providing occupational therapy services to children and adolescents whose physical, developmental or behavioral conditions interfere with their occupational performance. When focusing on the evaluation of these clients, students will gain competence in the role they play in collaborating with their occupational therapist supervisors in collecting initial assessment data. They will understand the goal setting and intervention planning process. Students will learn to conduct occupational therapy interventions with clients based on the plan established by the occupational therapist. Student occupational therapy assistants will learn to develop and execute preparatory, purposeful an occupation-based interventions. Their treatment methods and strategies will be supported by evidence in professional literature and by the expertise of those providing occupational therapy services to children and adolescents in a variety of treatment settings. Finally, students will develop oral, written and non-verbal communication skills necessary for interacting in the occupational therapist-occupational therapy assistant relationship, sharing information with colleagues from different disciplines, educating and training clients and their caregivers and documenting clients' progress. (4 credits)
Pre-requisites: OTA105, OTA110, BIO205 and BIO235.

Objectives:

1. Practice the evaluation process of occupational therapy in relation to pediatric practice, describe the effects of disease processes in pediatrics including heritable diseases, genetic conditions, mental illness, disability, trauma, and injury on occupational performance, contribute to the evaluation process of pediatric client(s)' occupational performance, including an occupational profile, by administering standardized and nonstandardized screenings and assessment tools, collaborating in the development of occupation-based intervention plans and strategies, demonstrate clinical reasoning to address occupation base interventions, explaining the importance of using psychometrically sound assessment tools when considering client needs, cultural and contextual factors to deliver evidence-based intervention plans and strategies that are client centered, culturally relevant, reflective of current occupational therapy practice and based on available evidence.

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Objectives:

2. Practice the intervention process of occupational therapy in relation to pediatric practice, apply scientific evidence, theories, models of practice, and frames of reference that underlie the practice of occupational therapy to guide and inform interventions in pediatric practice contexts and environments, provide direct pediatric interventions and procedures to persons, groups, and populations to enhance safety, health and wellness, performance in occupations, including the ability to select and deliver occupations and activities, preparatory methods and tasks (including therapeutic exercise), education and training, and advocacy, utilize clinical reasoning to address pediatric client factors, performance patterns, and performance skills, to and based on available evidence.

3. Explain the various reimbursement systems and funding mechanisms (e.g., federal, state, third party, private payer), treatment / diagnosis codes (e.g., CPT® , ICD, DSM® codes), and coding and documentation requirements in pediatric practice that affect consumers and the practice of occupational therapy; documentation must effectively communicate the need and rationale for pediatric occupational therapy services.

4. Demonstrate sound judgment in regard to safety of self and others and adhere to safety regulations in pediatric practice.

5. Justify the need for and demonstrate strategies with assistive technologies and devices (e.g., electronic aids to daily living, seating and positioning systems) used to enhance occupational performance and foster participation and well-being in pediatric practice.

6. Create and implement interventions that address pediatric disorders of feeding and eating, and train others in precautions and techniques while considering client and contextual factors.

7. Assess, grade, and modify the way persons, groups, and populations perform occupations and activities by adapting processes, modifying environments, and applying ergonomic principles to reflect the changing needs of the client, sociocultural context, and technological advances as it relates to pediatric practice.

8. Engage in the consultative process with persons, groups, programs, organizations, or communities in collaboration with inter- and intraprofessional colleagues in pediatric practice.

9. Understand and articulate care coordination, case management, and transition services in traditional and emerging practice environments in pediatric practice.

10. Organize and report on collected data for evaluation of pediatric client outcomes and identify and communicate to the occupational therapist the need to refer to pediatric specialists both internal and external to the profession, including community agencies, under the direction of an occupational therapist.

11. Demonstrate skills to understand a scholarly report including the ability to, locate and demonstrate understanding and knowledge of professional literature to make evidence-based practice decisions in pediatric practice in collaboration with the occupational therapist, explain how scholarly activities and literature contribute to the development of the profession in pediatric practice, analyze a scholarly report, and demonstrate an understanding of the difference between quantitative and qualitative research studies, including the quality of the source of information.

OTA 135 Level I Fieldwork 1

During the first intersession, students will begin the integration of didactic material with clinical practice. To help students integrate classroom information with clinical practice, students will complete a Level I Fieldwork in pediatrics after successful completion of the pediatric Evaluation/Intervention/Communication course (OT 130). This fieldwork allows the student to further understand and observe how certain conditions and psychosocial factors learned about in the classroom impact the occupational performance of children and adolescents. In a community based pediatric setting where occupational therapy services are not currently provided, under the supervision of the course instructor, a licensed and registered occupational therapist, students will be challenged through the experience itself and assignments to identify the role of occupational therapy. They will engage in the following:
1)gather data through interviews and occupational profiles,
2)conduct task analysis
3)understand, participate and lead the group process and group dynamics
4) design and lead an occupation based group activity
5) identify and address psychosocial factors affecting occupational performance during their fieldwork experience. (1 credits)

Pre-requisites: OTA105, OTA110, OTA120, OTA125, OTA130, BIO205, BIO235 and PHL110.

Objectives:

1. Contribute to the evaluation process of client(s)' occupational performance, including an occupational profile, by administering standardized and nonstandardized screenings and assessment tools and collaborating in the development of occupation-based intervention plans and strategies that are appropriate in pediatric fieldwork setting.

2. Explain and apply the interaction of occupation and activity, including areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors in a pediatric fieldwork setting.

3. Demonstrate knowledge and understanding of the structure and function of the human body, human development, and human behavior to include the biological and physical sciences, neurosciences, kinesiology and biomechanics, human development including concept of developmental psychology and concepts of human behavior including the behavioral sciences, social sciences and science of occupation in a pediatric fieldwork setting.

4. Explain the role of sociocultural, socioeconomic, and diversity factors and lifestyle choices in contemporary society to meet needs of persons, groups, and populations in a pediatric fieldwork setting.

5. Assess, grade, and modify the way persons & groups perform occupations and activities by adapting processes, modifying environments to reflect the changing needs of the client, sociocultural context, and technological advances in a pediatric fieldwork setting.

6. Perform documentation that effectively communicates the need and rationale for occupational therapy services in a pediatric fieldwork setting.

7. Participate in effective intraprofessional OT/OTA collaboration to explain the role of the occupational therapy assistant and occupational therapist in the screening and evaluation process in a pediatric fieldwork setting.

8. Identify occupational needs through effective communication with patients and members of the interprofessional team in a responsive and responsible manner that supports a team approach to the promotion of health and wellness in a pediatric fieldwork setting.

9. Demonstrate awareness of the interprofessional team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient- and population-centered care that are safe, timely, efficient, effective, and equitable in a pediatric fieldwork setting.

10. Demonstrate therapeutic use of self, including one's personality, insights, perceptions, and judgements, as part of the therapeutic process in both individual and group interaction in a pediatric fieldwork setting.

11. Provide care and programs that demonstrate knowledge of applicable national requirements for credentialing and requirements for licensure, certification, or registration consistent with federal and state laws in a pediatric fieldwork setting.

OTA 205 Leadership & Professional Devt

In this course, students will explore and take initial steps toward becoming responsible Level II fieldwork students and eventual credentialed occupational therapy assistants. The American Occupational Therapy Associations' (AOTAs') Code of Ethics and Standards of Practice and its' application to clinical work, professional development and collaboration in client care with supervising occupational therapists will be presented. Students will develop effective communication skills for the purposes of being responsible teammates with members of other disciplines, supervisors of subordinate personnel including occupational therapy aides, clerical staff, volunteers and students, and educators of and advocates for their clients and the profession. Administrative and management topics such as marketing/promoting programs and the profession, securing reimbursement for services, understanding state and national laws governing occupational practice in particular settings, participating in quality improvement programs, using professional literature and opportunities for participating in state and national occupational therapy and related organizations to ensure evidence-based, best clinical practices will be presented and explored. Finally, students will take active steps in their own professional development by developing individual, workable professional development plans, writing their own resumes, writing cover letters to potential employers and using e-mail, social media and cell phones responsibly and professionally. (2 credits)
Pre-requisites: OTA105, OTA110, OTA120, OTA125, OTA130, OTA135, BIO205, BIO235 and PHL110.

Objectives:

1. Demonstrate therapeutic use of self, including one's personality, insights, perceptions, and judgments, as part of the therapeutic process in both individual and group interaction.

2. Justify the role and responsibility of the practitioner in advocating for changes in service delivery policies, to effect changes in the system, recognize opportunities in emerging practice areas, and advocate for opportunities to expand the OTA's role.

3. Explain to third party payers, regulatory boards, policymakers, service providers the distinct nature of occupation and how occupation supports performance, participation, health, and well-being in order to promote occupational therapy.

4. Provide care and programs that validate comprehension of applicable national requirements for credentialing, licensure, certification, and registration consistent with federal and state laws; outline the system and structures that create federal and state legislation and regulations and their implications and effects on persons, groups, populations, and practice.

5. Compare and contrast the personal and professional responsibilities related to liability issues under current models of service provision and the explain the varied roles of the occupational therapy assistant providing service on a contractual basis.

6. Devise strategies for ongoing professional development to ensure that practice is consistent with current and accepted standards including an understanding of the principals of teaching and learning in preparation for work in an academic setting.

7. Compare and contrast how the role of the professional is enhanced by participating and engaging in local, national, and international leadership positions in organizations and agencies.

8. Differentiate the role of the OTA and OT in the screening and evaluation process through effective intraprofessional OT/OTA collaboration; identify and communicate to the occupational therapist the need to design community and primary care programs to support occupational performance for persons, groups, and populations; describe strategies for effective, competency-based legal and ethical supervision of OTAs and non-occupational therapy personnel.

9. Explain the various business aspects of practice, financial management, reimbursement systems and funding mechanisms, treatment/diagnosis codes, coding, billings and documentation that communicates the need and rationale for OT services that affects consumers and the practice of occupational therapy; participate in documentation of ongoing processes for quality management and improvement and implement changes as needed to demonstrate quality of services.

10. Demonstrate awareness of interprofessional team dynamics to perform effectively in different roles to plan, deliver, and evaluate patient and population-centered care as well as population health programs and policies that are safe, timely, efficient, effective, and equitable.

Objectives:

11. Illustrate the impact of contextual factors, current policy issues; and socioeconomic, political, geographic, and demographic factors in the delivery of OT services for persons, groups, populations, and social systems as they relate to the practice of occupational therapy.

12. Explain the use of technology in practice including electronic documentation systems, virtual environments and telehealth technology.

13. Identify the need and demonstrate the ability to participate in the development, marketing, and management of service delivery options.

OTA 225 Occupations Across the Lifespan II

Occupations Across the Lifespan II is the second in a series focusing on 2 primary elements; the human as an occupational being and on the analysis of the activities and occupations in which humans engage. In this course the OT Practice Framework: Domain and Process will be presented. The concepts of Areas of Occupation, Performance Patterns, Contexts and Environments and Activity Demands, with regard to space, objects and social demands will be mastered. Additionally, students will be presented the concepts of Activity Demands, with regard to Values, Beliefs and Spirituality, Client Factors (including structures and functions) and Performance Skills. Human developmental stages from adolescence through late adulthood and the occupations typical for these individuals will be presented. Students will be guided through the process of analyzing occupations and grading activities to achieve therapeutic benefit. They will learn to select appropriate occupations and activities based on individual's virtual occupational profiles. They will then conduct, present, and teach occupations/activities to others using the principles of group dynamics. Finally, they will adapt and modify environments and occupations to ensure future clients' opportunity for engagement and participation in life despite a variety of limitations.

Experiential learning, problem-based learning and service-learning will be utilized as primary pedagogical methods in this course series, in order to best prepare students for the Evaluation/Intervention/Documentation courses as well as for Level I and Level II fieldwork experiences. (3 credits)
Pre-requisites: OTA105, OTA110, OTA120, OTA125, OTA130, OTA135, BIO205, BIO235 and PHL110.

Objectives:

1. Describe the structure and function of the human body, human development, and concepts of human behavior from adolescence through late adulthood including concepts from developmental psychology, behavior sciences, social sciences and science of occupation.

2. Explain and demonstrate the interaction of occupation and activity, including the areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors for ages adolescence through late adulthood.

3. Apply scientific evidence to show the importance of balancing areas of occupation with the promotion of health and wellness benefits for clients ages adolescence through late adulthood.

4. Assess, grade and modify the way persons, groups and populations (ages adolescence through late adulthood) perform occupations and activities by adapting processes, modifying environments, and applying ergonomic principals to reflect the changing needs of the client, sociocultural context, and technological advances.

5. Select and utilize clinical reasoning to address occupation-based intervention, client factors, performance patterns, and performance skills in order to facilitate occupation-based interventions that address client factors related to promotion, compensation, adaption, and prevention for ages adolescence through late adulthood.

6. Describe the need and rationale for occupational therapy services through effective communication in documentation for clients age adolescence through late adulthood.

7. Explain to consumers, potential employers, colleagues, third-party payers, regulatory boards, policymakers, other audiences, and the general public the distinct nature of occupational and the evidence that occupation supports performance, participation, health, and well-being.

8. Demonstrate activity analysis in the areas of occupation, performance skills, performance patterns, context(s), and environments, and client factors to implement the intervention plan for clients ages adolescence through late adulthood.

Objectives:

9. Provide direct interventions and procedure to groups and populations to enhance safety, health, wellness, and performance in occupations including the ability to select and deliver occupations and activities, provide education and training in techniques to enhance community mobility, address transportation transitions, including community access and demonstrate advocacy.

OTA 230 Eval, Interv & Communic II-Phys Dis

In this course, consisting of three hours of lecture and three hours of experiential laboratory instruction per week, students will develop entry-level occupational therapy assistant skills in evaluation, intervention and communication as they relate to providing occupational therapy services to individuals and populations who have experienced physical illness, injury or physical limitations due to the aging process. When focusing on the evaluation of these clients, students will gain competence in the role they play in collaborating with their occupational therapist supervisors in collecting initial assessment data. They will understand the goal setting and intervention planning process. Students will learn to conduct occupational therapy interventions with physically disabled clients based on the plan established by the occupational therapist. Student occupational therapy assistants will learn to develop and execute preparatory, purposeful an occupation-based interventions. Their treatment methods and strategies will be supported by evidence in professional literature and by the expertise of those providing occupational therapy services to people physical conditions in a variety of treatment settings. Finally, students will develop oral, written and non-verbal communication skills necessary for interacting in the occupational therapist-occupational therapy assistant relationship, sharing information with colleagues from different disciplines, educating and training clients and their caregivers and documenting clients' progress. (4 credits)
Pre-requisites: OTA105, OTA110, OTA120, OTA125, OTA130, OTA135, BIO205, BIO235 and PHL110.

Objectives:

1. Practice the evaluation process of the occupational therapy process in relation to physical rehabilitation practice, describe the effects of disease processes including heritable diseases, genetic conditions, mental illness, disability, trauma, and injury on occupational performance in physical rehabilitation practice, contribute to the evaluation process of client(s)' occupational performance, including an occupational profile, by administering standardized and nonstandardized screenings and assessment tools, collaborating in the development of occupation-based intervention plans and strategies, demonstrate clinical reasoning to address occupation base interventions, explaining the importance of using psychometrically sound assessment tools when considering client needs, cultural and contextual factors to deliver evidence-based intervention plans and strategies that are client centered, culturally relevant, reflective of current occupational therapy practice and based on available evidence in physical rehabilitation practice.

2. Practice the intervention process of the occupational therapy process in relation to physical rehabilitation practice, apply scientific evidence, theories, models of practice, and frames of reference that underlie the practice of occupational therapy to guide and inform interventions in physical rehabilitation practice contexts and environments, utilize clinical reasoning to address client factors, performance patterns, and performance skills in physical rehabilitation practice, provide direct physical rehabilitation interventions and procedures to persons, groups, and populations to enhance safety, health and wellness, performance in occupations, including the ability to select and deliver occupations and activities, preparatory methods and tasks (including therapeutic exercise), education and training, and advocacy.

3. Practice the discharge process of the occupational therapy process in relation to physical rehabilitation practice, implement a discharge plan from occupational therapy services that was developed by the occupational therapist in collaboration with the client and members of the interprofessional team by reviewing the needs of the client, caregiver, family, and significant others; available resources; and discharge environment, and under the direction of an occupational therapist collect, organize, and report on data for evaluation of client outcomes, demonstrate knowledge of various reimbursement systems and funding mechanisms (e.g., federal, state, third party, private payer), treatment / diagnosis codes (e.g., CPT® , ICD, DSM® codes), and coding and documentation requirements in physical rehabilitation practice that affect consumers and the practice of occupational therapy; documentation must effectively communicate the need and rationale for physical rehabilitation occupational therapy services.

Objectives:

4. Demonstrate sound judgment in regard to safety of self and others, adhere to safety regulations throughout the occupational therapy process as appropriate to physical rehabilitation practice, including the ability to assess and monitor vital signs (e.g., blood pressure, heart rate, respiratory status and temperature) to ensure that the client is stable for intervention, and define the safe and effective application of superficial thermal agents, deep thermal agents, electrotherapeutic agents, and mechanical devices as a preparatory measure to improve occupational performance including indications, contraindications, and precautions.

5. Explain the need for and demonstrate strategies with assistive technologies and devices (e.g., electronic aids to daily living, seating and positioning systems) used to enhance occupational performance and foster participation and well-being in physical rehabilitation practice.

6. Demonstrate interventions that address dysphagia and disorders of feeding and eating in physical rehabilitation practice, and train others in precautions and techniques while considering client and contextual factors.

7. Identify intervention strategies that remediate and/or compensate for functional cognitive deficits and visual deficits that affect occupational performance.

8. Explain the need for orthotics, and design, fabricate, apply, fit, and train in orthoses and devices used to enhance occupational performance and participation. Train in the safe and effective use of prosthetic devices.

9. Select and provide training in techniques to enhance functional mobility, including physical transfers, wheelchair management, and mobility devices, enhance community mobility, and address transportation transitions, including driver rehabilitation and community access.

10. Demonstrate the principles of the teaching- learning process using educational methods and health literacy education approaches in physical rehabilitation practice: to design activities and clinical training for persons, groups, and populations and to instruct and train the client, caregiver, family, significant others, and communities at the level of the audience.

11. Assess, grade, and modify the way persons, groups, and populations perform occupations and activities by adapting processes, modifying environments, and applying ergonomic principles to reflect the changing needs of the client, sociocultural context, and technological advances as it relates to physical rehabilitation practice.

12. Demonstrate effective intraprofessional OT/ OTA collaboration in physical rehabilitation practice to explain the role of the occupational therapy assistant and occupational therapist in the screening and evaluation process and to identify and communicate to the occupational therapist the need to refer to specialists both internal and external to the profession, including community agencies in physical rehabilitation practice.

13. Engage in the consultative process with persons, groups, programs, organizations, or communities in collaboration with inter- and intraprofessional colleagues in physical rehabilitation practice.

14. Compare and contrast the role of the occupational therapy assistant in care coordination, case management, and transition services in traditional and emerging practice environments in physical rehabilitation practice.

15. Demonstrate skills to understand a scholarly report including the ability to, locate and demonstrate understanding and knowledge of professional literature to make evidence-based practice decisions in physical rehabilitation practice in collaboration with the occupational therapist, explain how scholarly activities and literature contribute to the development of the profession in physical rehabilitation practice, analyze a scholarly report, demonstrate an understanding of the difference between quantitative and qualitative research studies, including the quality of the source of information.

OTA 235 Level I Fieldwork 2

During Summer Session I students will complete Level I-Fieldwork 2 experience. Students will integrate didactic material with clinical practice. To help students integrate classroom information with clinical practice, students will complete a Level I Fieldwork in physical disabilities after successful completion of the physical disabilities Evaluation/Intervention/Communication course (OT 230). This fieldwork allows the student to further understand and observe how certain conditions and psychosocial factors learned about in the classroom impact the occupational performance of individuals experiencing or at risk for experiencing physical disabilities. In a community based setting where occupational therapy services are not currently provided, under the supervision of the course instructor, a licensed and registered occupational therapist, students will be challenged through the experience itself and assignments to identify the role of occupational therapy. They will engage in the following:
1)gather data through interviews and occupational profiles,
2)conduct task analysis
3)understand, participate and lead the group process and group dynamics
4) design and lead an occupation based group activity
5) identify and address psychosocial factors affecting occupational performance during their fieldwork experience. (1 credit)
Pre-requisite: OTA105, OTA110, OTA120, OTA125, OTA130, OTA135, OTA205, OTA225, OTA230, BIO205, BIO235 and PHL110.

Objectives:

1. Contribute to the evaluation process of client(s) occupational performance, including an occupational profile, by administering standardized and nonstandardized screenings and assessment tools and collaborating in the development of occupation-based intervention plans and strategies that are appropriate in physical rehabilitation fieldwork setting.

2. Demonstrate knowledge of and apply the interaction of occupation and activity, including areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors in a physical rehabilitation setting.

3. Demonstrate knowledge and understanding of the structure and function of the human body, human development, and human behavior to include the biological and physical sciences, neurosciences, kinesiology and biomechanics, human development including concept of developmental psychology and concepts of human behavior including the behavioral sciences, social sciences and science of occupation in a physical rehabilitation fieldwork setting.

4. Explain the role of sociocultural, socioeconomic, and diversity factors and lifestyle choices in contemporary society in a physical rehabilitation fieldwork setting.

5. Assess, grade, and modify the way persons & groups perform occupations and activities by adapting processes, modifying environments to reflect the changing needs of the client, sociocultural context, and technological advances in a physical rehabilitation fieldwork setting.

6. Perform documentation that effectively communicates the need and rationale for occupational therapy services in a physical rehabilitation fieldwork setting.

7. Participate in effective intraprofessional OT/OTA collaboration to explain the role of the occupational therapy assistant and occupational therapist in the screening and evaluation process in a physical rehabilitation setting.

8. Identify occupational needs through effective communication with patients and members of the interprofessional team in a responsive and responsible manner that supports a team approach to the promotion of health and wellness in a physical rehabilitation fieldwork setting.

9. Monitor and reassess in collaboration with the client, caregiver, family and significant others, the effect of occupational therapy intervention and the need for continued or modified intervention, and communicate the identified needs to the occupational therapist in a physical rehabilitation fieldwork setting.

10. Demonstrate therapeutic use of self, including one's personality, insights, perceptions, and judgements, as part of the therapeutic process in both individual and group interaction in a physical rehabilitation fieldwork setting.

Objectives:

11. Provide care and programs that demonstrate comprehension of applicable national requirements for credentialing and requirements for licensure, certification, or registration consistent with federal and state laws in a physical rehabilitation fieldwork setting.

OTA 240 Eval, Interv and Commun III-Psy Dis

In this course, consisting of three hours of lecture and three hours of experiential laboratory instruction per week, students will develop entry-level occupational therapy assistant skills in evaluation, intervention and communication as they relate to providing occupational therapy services to individuals and populations who experience mental illness or whose circumstances incite psychosocial challenges interfering with optimum occupational performance. When focusing on the evaluation of these clients, students will gain competence in the role they play in collaborating with their occupational therapist supervisors in collecting initial assessment data. They will understand the goal setting and intervention planning process. Students will learn to conduct occupational therapy interventions with clients based on the plan established by the occupational therapist. Student occupational therapy assistants will learn to develop and execute preparatory, purposeful an occupation-based interventions Their methods and strategies will be supported by evidence in professional literature and by the expertise of those providing occupational therapy services to people with mental health conditions and psychosocial challenges in a variety of treatment settings. Finally, students will develop oral, written and non-verbal communication skills necessary for interacting in the occupational therapist-occupational therapy assistant relationship, sharing information with colleagues from different disciplines, educating and training clients and their caregivers and documenting clients' progress. (4 credits)
Pre-requisites: OTA105, OTA110, OTA120, OTA125, OTA130, OTA135, PSY212, BIO205, BIO235 and PHL110.

Objectives:

1. Practice the evaluation process of the occupational therapy process in relation to mental health practice, describe the effects of disease processes including heritable diseases, genetic conditions, mental illness, disability, trauma, and injury on occupational performance in mental health practice, contribute to the evaluation process of client(s)' occupational performance, including an occupational profile, by administering standardized and nonstandardized screenings and assessment tools, collaborating in the development of occupation-based intervention plans and strategies, demonstrate clinical reasoning to address occupation base interventions, explaining the importance of using psychometrically sound assessment tools when considering client needs, cultural and contextual factors to deliver evidence-based intervention plans and strategies that are client centered, culturally relevant, reflective of current occupational therapy practice and based on available evidence in mental health practice

2. Practice the intervention process of the occupational therapy process in relation to mental health practice, apply scientific evidence, theories, models of practice, and frames of reference that underlie the practice of occupational therapy to guide and inform interventions in mental health practice contexts and environments, utilize clinical reasoning to address client factors, performance patterns, and performance skills in mental health practice, provide direct mental health interventions and procedures to persons, groups, and populations to enhance safety, health and wellness, performance in occupations, including the ability to select and deliver occupations and activities, preparatory methods and tasks (including therapeutic exercise), education and training, and advocacy.

3. Participate in the discharge process of the occupational therapy process in relation to mental health practice, implement a discharge plan from occupational therapy services that was developed by the occupational therapist in collaboration with the client and members of the interprofessional team by reviewing the needs of the client, caregiver, family, and significant others; available resources; and discharge environment, and under the direction of an occupational therapist collect, organize, and report on data for evaluation of, demonstrate knowledge of various reimbursement systems and funding mechanisms (e.g., federal, state, third party, private payer), treatment / diagnosis codes (e.g., CPT® , ICD, DSM® codes), and coding and documentation requirements in mental health practice that affect consumers and the practice of occupational therapy; documentation must effectively communicate the need and rationale for mental health occupational therapy services.

4. Demonstrate sound judgment in regard to safety of self and others, adhere to safety regulations throughout the occupational therapy process as appropriate to mental health practice.

5. Identify intervention strategies that remediate and/or compensate for psychosocial and behavioral health deficits that affect occupational performance.

Objectives:

6. Select and provide training in techniques to enhance community mobility and address transportation transitions, including driver rehabilitation and community access.

7. Demonstrate the principles of the teaching- learning process using educational methods and health literacy education approaches in mental health practice: to design activities and clinical training for persons, groups, and populations and to instruct and train the client, caregiver, family, significant others, and communities at the level of the audience.

8. Communicate to the occupational therapist the need to refer to specialists both internal and external to the profession, including community agencies in mental health practice.

9. Compare and contrast the role of the occupational therapy assistant in care coordination, case management, and transition services in traditional and emerging practice environments in mental health practice.

10. Explain the role and responsibility to advocate for changes in service delivery policies, effect changes in the system, recognize opportunities in emerging practice areas and advocate for opportunities to expand the occupational therapy assistant's role in mental health practice.

11. Demonstrate skills to understand a scholarly report including the ability to, locate and demonstrate understanding and knowledge of professional literature to make evidence-based practice decisions in mental health practice in collaboration with the occupational therapist,explain how scholarly activities and literature contribute to the development of the profession in mental health practice, analyze a scholarly report, demonstrate an understanding of the difference between quantitative and qualitative research studies, including the quality of the source of information.

OTA 245 Level I Fieldwork 3

During Summer Session I students will complete Level I-Fieldwork 3 experience. Students will integrate didactic material with clinical practice. To help students integrate classroom information with clinical practice, students will complete a Level I Fieldwork in psychosocial disabilities after successful completion of the psychosocial disabilities Evaluation/Intervention/Communication course (OT 240). This fieldwork allows the student to further understand and observe how certain conditions and psychosocial factors learned about in the classroom impact the occupational performance of individuals experiencing or at risk for experiencing psychosocial disabilities. In a community based setting where occupational therapy services are not currently provided, under the supervision of the course instructor, a licensed and registered occupational therapist, students will be challenged through the experience itself and assignments to identify the role of occupational therapy. They will engage in the following:
1)gather data through interviews and occupational profiles,
2)conduct task analysis
3)understand, participate and lead the group process and group dynamics
4) design and lead an occupation based group activity
5) identify and address psychosocial factors affecting occupational performance during their fieldwork experience. (1 credit)
Pre-requisite: OTA105, OTA110, OTA120, OTA125, OTA130, OTA 135, OTA205, OTA225, OTA240, PSY212, BIO205, BIO235 and PHL110.

Objectives:

1. Contribute to the evaluation process of client(s) occupational performance, including an occupational profile, by administering standardized and nonstandardized screenings and assessment tools and collaborating in the development of occupation-based intervention plans and strategies that are appropriate in a mental health fieldwork setting.

1. Student will complete Level I fieldwork in a community based setting to meet societal needs for health and well-being, help people understand who we are and what we can do in nontraditional setting.

2. Demonstrate knowledge of and apply the interaction of occupation and activity, including areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors in a mental health fieldwork setting.

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Objectives:

2. Student will gather and share data through observation and interaction with a variety of populations.

3. Describe of the structure and function of the human body, human development, and human behavior to include the biological and physical sciences, neurosciences, kinesiology and biomechanics, human development including concept of developmental psychology and concepts of human behavior including the behavioral sciences, social sciences and science of occupation in a mental health fieldwork setting.

3. Student will demonstrate task analysis in the areas of occupations and environment.

4. Explain the role of sociocultural, socioeconomic, and diversity factors and lifestyle choices in contemporary society to meet the needs of persons, groups and populations in a mental health fieldwork setting.

4. Student will recognize and identify the impact of physical and psychosocial dysfunction on individuals' lives, including ADLS, work, play, socialization, etc.

5. Assess, grade, and modify the way persons & groups perform occupations and activities by adapting processes, modifying environments to reflect the changing needs of the client, sociocultural context, and technological advances in a mental health fieldwork setting.

5. Student will apply academic knowledge, theories of practice and practice skills learned in the classroom on fieldwork under the supervision of a trained professional.

6. Explain various reimbursement systems and funding mechanisms, treatment/diagnosis codes, and coding and documentation requirements that affect consumers and the practice of occupational therapy; documentation must effectively communicate the need and rationale for occupational therapy services in a mental health fieldwork setting.

6. Student will learn about aging issues, social policies and public health concerns.

7. Participate in effective intraprofessional OT/OTA collaboration to explain the role of the occupational therapy assistant and occupational therapist in the screening and evaluation process in a mental health fieldwork setting.

7. Student will develop an increased cultural competency.

8. Demonstrate therapeutic use of self, including one's personality, insights, perceptions, and judgements, as part of the therapeutic process in both individual and group interaction in a mental health fieldwork setting.

8. Student will increase efficacy with therapeutic use of self.

9. Provide care and programs that demonstrate comprehension of applicable national requirements for credentialing and requirements for licensure, certification, or registration consistent with federal and state laws in a mental health fieldwork setting.

9. Student will become more self-aware and cognizant of the psychosocial issues surrounding their clients.

10. Student will demonstrate interpersonal skills necessary for effective communication and therapeutic use of self.

11. Student will provide client centered, occupation based care.

12. Student will identify the role and responsibilities in the occupational therapy process of an occupational therapy assistant in nontraditional, community based settings.

OTA 255 Level II Fieldwork 1

After the successful completion of all coursework and Level I fieldwork experiences (3 total), students complete two eight-week, full time clinical experiences (total 16 weeks) in any of the following settings, which are consistent with the curriculum, in order to prepare to become an entry level, generalist occupational therapy assistant: pediatrics, psychosocial, inpatient rehabilitation, geriatrics, outpatient and acute care. Each student will have the opportunity to experience practical learning in two different type settings with differing populations. The Level II fieldwork experience is the culmination of academic and Level I fieldwork experiences in a supervised, service delivery experience within the health field. Utilizing knowledge and skills acquired during academic preparation and Level I fieldwork experiences students will focus on applying evidence -based purposeful and meaningful occupations, enhancing clinical reasoning skills, and understanding administration and management of occupational therapy services. Students will also carry out professional responsibilities under the supervision of an occupational therapy practitioner. This in-depth, sixteen-week period, provides the student the final opportunity and time to fully integrate didactic theoretical knowledge with clinical practice as an occupational therapy assistant student in order to acquire entry-level, generalist competency as an occupational therapy assistant. Prerequisites: Successful completion of all occupational therapy assistant coursework and successful completion of three Level I experiences. OTA105 AND OTA110 AND OTA120 AND OTA125 AND OTA130 AND OTA135 AND OTA205 AND OTA225 AND OTA230 AND OTA235 AND OTA240 AND OTA245 AND PSY212 AND BIO205 AND BIO235 AND PHL110 (6 credits)

Objectives:

1. Student will develop entry-level, generalist competencies by the end of the Level II Fieldwork experience (entry-level competence is defined as achieving a minimal passing overall final score of 70 or above on the AOTA Fieldwork Performance Evaluation for the Occupational Therapy Assistant Student).

2. Student will consistently adhere to the American Occupational Therapy Association Code of Ethics, to all policies and procedures as directed by the fieldwork site and all policies and procedures of the Lackawanna College Occupational Therapy Assistant Program as explained in the OTA Student Handbook and the OTA Fieldwork Handbook.

3. Student will assume full client caseload, as defined by fieldwork site, by week 4 of experience in order demonstrate clinical reasoning, understand values and beliefs that enable ethical practice, to develop professionalism and develop competence in career responsibilities.

4. Student will consistently adhere to safety regulations and use sound judgment in regards to safety of self and others during fieldwork related activities.

5. Student will communicate the value of occupational therapy services and differentiate the roles of an OTR & OTA to clients, families, significant others and service providers.

6. Student will actively participate in the supervisory process (both as fieldwork educator to student and OTR to OTA) to receive feedback and guidance. The student will use the supervisor's input to evaluate his or her own skills in providing direct service and performing clinical reasoning.

7. Student will utilize available resources (including but not limited to other personnel at the fieldwork site, reference material and experts outside of those at the fieldwork site) when planning and performing assigned responsibilities.

8. Student will be aware of the value of research as a means to improve and validate the occupational therapy treatment process; including review and critique of current research literature and identification of relevant research issues.

9. Student will assess individuals in collaboration with the supervising OTR and/or OTA; including but not limited to gathering data, administering assessments, assist with interpreting assessments, accurately reporting results and assist in developing goals.

10. Student will attend all meetings as directed by their supervisor in order to effectively communicate and work interprofessionally with those who provide services to individuals.

11. Student will be familiar with and utilize intervention approaches that demonstrate in depth knowledge of the various theoretical models of practice and frames of references utilized in occupational therapy practice.

Objectives:

12. Student will devise, implement and modify as necessary intervention plans that address concerns with the person, occupation and environment as presented by the client according to the goals established by the OTR.

13. Student will use self therapeutically to improve an individual's performance and facilitate achieving established goals.

OTA 265 Level II Fieldwork 2

After the successful completion of all coursework and Level I fieldwork experiences (3 total), students complete two eight-week, full time clinical experiences (total 16 weeks) in any of the following settings, which are consistent with the curriculum, in order to prepare to become an entry level, generalist occupational therapy assistant: pediatrics, psychosocial, inpatient rehabilitation, geriatrics, outpatient and acute care. Each student will have the opportunity to experience practical learning in two different type settings with differing populations. The Level II fieldwork experience is the culmination of academic and Level I fieldwork experiences in a supervised, service delivery experience within the health field. Utilizing knowledge and skills acquired during academic preparation and Level I fieldwork experiences students will focus on applying evidence -based purposeful and meaningful occupations, enhancing clinical reasoning skills, and understanding administration and management of occupational therapy services. Students will also carry out professional responsibilities under the supervision of an occupational therapy practitioner. This in-depth, sixteen-week period, provides the student the final opportunity and time to fully integrate didactic theoretical knowledge with clinical practice as an occupational therapy assistant student in order to acquire entry-level, generalist competency as an occupational therapy assistant. (6 credits)
Prerequisites: Successful completion of all occupational therapy assistant coursework and successful completion of three Level I experiences.
OTA105 AND OTA110 AND OTA120 AND OTA125 AND OTA130 AND OTA135 AND OTA205 AND OTA225 AND OTA230 AND OTA235 AND OTA240 AND OTA245 AND PSY212 AND BIO205 AND BIO235 AND PHL110

Objectives:

1. Student will develop entry-level, generalist competencies by the end of the Level II Fieldwork experience (entry-level competence is defined as achieving a minimal passing overall final score of 70 or above on the AOTA Fieldwork Performance Evaluation for the Occupational Therapy Assistant Student).

2. Student will consistently adhere to the American Occupational Therapy Association Code of Ethics, to all policies and procedures as directed by the fieldwork site and all policies and procedures of the Lackawanna College Occupational Therapy Assistant Program as explained in the OTA Student Handbook and the OTA Fieldwork Handbook.

3. Student will assume full client caseload, as defined by fieldwork site, by week 4 of experience in order demonstrate clinical reasoning, understand values and beliefs that enable ethical practice, to develop professionalism and develop competence in career responsibilities.

4. Student will consistently adhere to safety regulations and use sound judgment in regards to safety of self and others during fieldwork related activities.

5. Student will communicate the value of occupational therapy services and differentiate the roles of an OTR & OTA to clients, families, significant others and service providers.

6. Student will actively participate in the supervisory process (both as fieldwork educator to student and OTR to OTA) to receive feedback and guidance. The student will use the supervisor's input to evaluate his or her own skills in providing direct service and performing clinical reasoning.

7. Student will utilize available resources (including but not limited to other personnel at the fieldwork site, reference material and experts outside of those at the fieldwork site) when planning and performing assigned responsibilities.

8. Student will be aware of the value of research as a means to improve and validate the occupational therapy treatment process; including review and critique of current research literature and identification of relevant research issues.

Objectives:

9. Student will assess individuals in collaboration with the supervising OTR and/or OTA; including but not limited to gathering data, administering assessments, assist with interpreting assessments, accurately reporting results and assist in developing goals.

10. Student will attend all meetings as directed by their supervisor in order to effectively communicate and work interprofessionally with those who provide services to individuals.

11. Student will be familiar with and utilize intervention approaches that demonstrate in depth knowledge of the various theoretical models of practice and frames of references utilized in occupational therapy practice.

12. Student will devise, implement and modify as necessary intervention plans that address concerns with the person, occupation and environment as presented by the client according to the goals established by the OTR.

13. Student will use self therapeutically to improve an individual's performance and facilitate achieving established goals.

Public Administration

PAD 105 Intro to Public Admin

PAD 105 (Formerly SS 110)- Introduction to Public Administration

This is an introduction to the emergence, nature and scope of the study of public administration encompassing the process of management and the structure of organizations in the public sector. The course offers a sound orientation to the "what's," "how's" and "why's" concerning functions and operations of the public administrator (3 Credits).

Objectives:

1. Explain what public administration is, who public administrators are, and what public administrators need to know.

2. Demonstrate a knowledge and understanding of the Political Management component of public administration.

3. Demonstrate a knowledge and understanding of the Program Management component of public administration, including: principles of planning, decision making, organization, leadership in organizations, program implementation, program evaluation,Demonstrate a knowledge and understanding of the Resource Management component of public administration, including principles and practices of personne, fiscal resources, information resources.

4. Demonstrate understanding and awareness of Administrative Responsibility and the ethical considerations involved in public administration.

Philosophy

PHL 105 Intro to Philosophy

PHL 105 (Formerly SS 121) - Introduction to Philosophy

PHL 105 introduces the student to the philosophic nature and science of the human person. Major theories concerning the relationship between mind and body, perception and knowledge, and cause and effect are discussed. Further, the course includes an account of the history of philosophy in its cultural context (3 Credits).

Objectives:

1. Demonstrate a basic understanding of philosophic vocabulary, the basic branches of philosophy, and the developmental thought process of philosophers.

2. Explain the historical, cultural, social, economic, and political environments in which given philosophies emerged.

3. Practice critical thinking skills and to demonstrate active and meaningful reasoning and argumentation process.

4. Evaluate and appreciate various opinions and perspectives through rational evaluation of the self and the idea.

Objectives:

5. Exhibit sensitivity and response to opposing viewpoints, moral issues, concepts, and theories.
6. Articulate how philosophical contributions enable us to evaluate the value and dignity of humanity.

PHL 110 Medical Ethics

The purpose of this course is to expose the student to the topic of medical ethics and its direct relationship to client care. It will spark and encourage consideration of medical law, while reflecting on ethical, moral, cultural and personal considerations of both the medical professional and the clients we care for. Students will come away from this course understanding that ethical practice and considerations exist concurrently with the medical care we administer. (3 Credits)

Objectives:

1. Differentiate between needs and values.
2. Differentiate between ethics and morals.
3. Identify the basic principles involved in medical ethics.
4. Define the basic principles found in health care ethics.
5. Describe the levels and stages of value development.
6. Develop personal mission and vision statements.
7. Identify their own values and principles.
8. Discuss the common theories and methods used in making value decisions.
9. Explain the principle of 'informed consent'
10. Explain the relevant aspects of the Health Insurance Portability and Accountability Act (HIPPA) and the Stark Laws as pertains to the allied health professions.

PHL 115 Media Ethics

This course is designed to familiarize students with moral decisions involving mass media. Students will discuss and analyze ethical decisions made in the media through case studies presented by the text (3 Credits).

Objectives:

1. Studying the various moral decisions influenced by today’s media.
2. Demonstrating their critical thinking skills when presented with media messages and ideas.
3. Furthering skills in critical thinking and ethical analysis by providing an assortment of theories and arguments and the opportunity to apply them to specific and concrete examples and observations.
4. Participating in their academic and local communities.
5. Able to demonstrate effective research and information management skills.
6. Able to demonstrate perseverance and learn from mistakes as students self-direct life-long learning.
7. Utilizing various forms of print and electronic references, evaluating each of these for logic, validity, and reliability.
8. Composing in an electronic environment and using the resources of word processing software to improve writing.

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PHL 125 Applied Ethics

PHL 125 (Formerly SS 123) – Applied Ethics

Applied Ethics discusses the insights of moral philosophers within the context of everyday living. In this course,students isolate and reflect upon questions of conscience, choice and acceptable action in relation to issues that typically confront students in family life, personal relationships, financial matters, employment and career pursuits (3 Credits). Prerequisite: PHL105

Honors students will complete a research paper in addition to other course material. The paper will focus on ethical teachings of a philosopher of each student's choice, and how those teachings apply to modern society.

Objectives:

1. To critique the basic ethical systems. Students should be able to articulate these systems in the classroom and identify them in life situations.

2. To enable students to develop largely by attempting to apply ethical precepts, principle and examples to a variety of contemporary ethical dilemmas.

3. To analyze the most critical ethical issues facing modern society, so they will be equipped to take and defend a position in the community. Students' proficiency in this will be demonstrated in class discussions, papers, and presentations, but the ultimate test will be outside of the classroom, in the students daily life.

4. To analyze these issues not in an abstract or impersonal sense, but to practically apply them in specific case studies.

5. To recognize the importance of a lifetime of communicating ethical values to their families, churches, communities and other spheres of influence.

PHL 135 Hospitality/Food Ethics

This course will examine the intersection of leadership, law and ethics in the hospitality industry. Students will examine the skills needed for effective leadership, the ethical dilemmas of leadership, the foundation and context of moral choice, the moral implication of decision making, and the impact upon staff morale, personal integrity, and society. Study will be given to food and hospitality law and will serve the purpose of helping students develop and fine tune their personal and business ethics as it applies to current law as well as societal impact of their decisions and choices in business and industry. (3 credits)

Objectives:

1. To create a set of business ethics that puts the right thing to do in the best interest of the company they operate or work with as well as the best interest of others before their personal advancement.

2. To equip students with the legal knowledge necessary to prepare and serve food and beverages responsibly and ethically.

PHL 145 Bioethics

PHL 145(Formerly BI0 130) - Bioethics
This course examines some of the moral issues affecting the daily realities of clinical and basic research practice. The class will search through case studies of ethical problems facing the clinical and industrial researcher (3 Credits).

Objectives:

1. Review the basic concepts, principles, and elements of ethics.

2. Critique the ethical principles relevant to medical practice, the physician-patient relationship.

3. Analyze the nature of certain medical practices, and to consider how these modify the application of moral principles.

4. Distinguish between theoretical ethics and applied ethics.

Objectives:

5. Analyze the general features (and limitations) of current bioethical discussion.
6. Evaluate common beliefs about ethics.
7. Discuss the moral questions that medical practice and the health issues raise.
8. Identify the key values of medical decision-making.
9. Compose written work about particular moral dilemmas.
10. Evaluate the medical/health decisions and practices of medical professionals.

PHL 150 Ethics, Leadership and Regulations

Student will explore the holistic environment in which the Petroleum and Natural Gas industry operates, including the effect of corporate leadership on the company's credibility and reputation; real world ethical issues facing the petroleum and natural gas industry; and the relationship of the industry to federal, state, and local governments, including regulatory agencies. (3 credits)

Objectives:

1. Apply critical thinking skills.
2. Apply a framework for ethical decision making.
3. Discuss real world ethical issues facing Petroleum and Natural Gas corporations and the industry's role as an alternative energy source.
4. Examine the qualities necessary for successful corporate leadership.

PHL 205 Business Ethics

This course, although primarily addressing the issues of business ethics, also deals with and fulfills the requirements of diversity awareness and service learning. It examines the theoretical and practical application of philosophical and management theories and research of the study of ethics, primarily in business organizations. It also examines the theories and concepts of ethics and applies these to the ethical problems and issues confronting business organizations. Case studies are used to provide the opportunity to identify, analyze, evaluate, and resolve a broad range of ethical issues.

In addition, this course will examine multiple cultural perspectives that are essential to the development of a general recognition, understanding, and appreciation of the global society and of the individuals comprising that cultural society, particularly as they pertain to business. (3 credits)

Objectives:

1. Evaluate the purpose of ethics in business environments, specifically when trying to foster an inclusive experience for all stakeholders.
2. Identify the ethical dilemmas that business activity specifically creates and apply methods of moral reasoning to analyze, propose, and defend solutions and alternatives.
3. Describe and analyze the ethical values that are especially relevant to business activity, including respect for human dignity, moral obligations to global businesses and environments, and the development and maintenance of honesty, fairness, trust, and social responsibility among employers, employees, and the community.
4. Investigate and formulate an argument about whether ethics defines boundaries on competition, marketing, sales, and advertising.
5. Critically examine and test personal ethics in collaboration with peers.

PHL 210 Philosophy and Film

This course will examine classic and modern cinema and television as it relates to major philosophical theories. Classes will consist of viewing a movie or episode(s) of a television series, then discussing how particular philosophical theories are addressed. Some examples include: Groundhog Day (Fate v. Free Will), Bruce Almighty (Philosophy of Religion), Tomorrow When the War Began (Natural Law/State of Nature), Star Trek II: The Wrath of Kahn (Greater Good), The Giver (Social Contract), The Butler (Human Rights/Political Ethics), The Arrival (Metaphysics), Magnolia (Moral Philosophy) Prerequisite: PHL-105

Objectives:

1. Relate complex and abstract philosophical theories to everyday, real-life scenarios.
2. Understand how filmmaking artists function as philosophers and social commentators.
3. See film beyond its entertainment values, and as a method of using fiction to test philosophical theories.

PHL 225 Ethics for Sport Mgmt Professionals

Ethics for Sport Management Professionals provides learners with the opportunity to explore and analyze ethical concerns facing sport management professionals. This course will provide students with the tools necessary to tackle ethical situations significant within sports ethics including race and discrimination, gender equity, privacy, violence, and drug use and drug testing. Ethics for Sport Management Professionals will offer hands-on case study projects that allow students to apply the ethical decision-making process to sports-related ethical disputes, as well as cases showing how ethical situations are addressed by the legal system in the United States. (3 credits)

Objectives:

1. Examine the ethical concepts in sports, sportsmanship, and gamesmanship.
2. Analyze the ethical concerns sport management professionals face while interacting with coaches, parents, and fans.
3. Describe how violence in sports, drug use, and drug testing have impacted both the athletic industry and society.
4. Identify the ethical considerations of race in sports and the ethical duties of Sports Agents.
5. Evaluate gender discrimination in the sport industry and identify Title IX considerations for sport management professionals.
6. 6.Discuss the ethical issues regarding Sports Media and the commercialization of college sports.

PHL 305 Human Services Ethics

A rigorous and systematic inquiry into man's moral behavior discovering rules that ought to govern human action and goals worth seeking in human life using ethics as a science of conduct. (3 credits) Prerequisite: PHL105 OR PHL115 OR PHL125 OR PHL135 OR PHL140 OR PHL145 OR PHL150
OR PHL205

Objectives:

1. Describe the ethical principles based on the organization's core values and the standards to which the professional is held.
2. To explain ethical theories and how they apply to the field of human service.ULL.
3. To explain the ethical practices inherent in human services.

PHL 310 Ethics and Morality in CJ

Study of the decision making process in criminal justice as it relates to discretion, due process, truthfulness, corruption and discrimination.
(3 Credits) Prerequisite: PHL105 OR PHL125 OR PHL115 OR PHL145 OR PHL135 OR PHL140 OR PHL150 OR PHL205

Objectives:

1. Describe the conflict and distinctions between legal requirements, personal morality and ethical principles and beliefs.
2. Articulate the ethical dilemmas faced by professionals in the criminal justice system.
3. Describe the ethical issues involved with conflicts between government and the individual.
4. Articulate the distinction between ethical and legal principles.
5. Explain prominent ethical theories and principles.

PHL 315 Philosophy of Religion

This course will evaluate, from a philosophical perspective, the existence of God, fate vs. free will, creation, and the problem of evil. Writings of CS Lewis, Thomas Aquinas, John Paul II (Karol Wojtyla), and others will supplement the texts. Students will gain a greater understanding of the logic and reason of faith and religious belief through readings, analyses, lecture, and dialogues.
Prerequisite: PHL105

Objectives:

1. Logically prove the existence of a Greatest Conceivable Being (GCB).
2. Understand the reason for the existence of evil and its relationship to God.
3. Defend the leading theories for the creation of the universe.
4. Connect philosophy and reason to faith, belief, and organized religions.

Physical Science

PHY 105 Physical Science

PHY 105 (Formerly PH 101) – Physical Science

This course provides a survey of the physical sciences and will cover aspects of physics, chemistry, astronomy and earth science. Topics include motion, gravitation, electricity and magnetism, radiation, chemical reactions and geologic processes (3 Credits).

Objectives:

1. To define science (and non-science) and review the scientific method from a physical perspective.
2. To explain how science and mathematics are used to understand and explore natural phenomena.
3. To review dimensional analysis and physical quantities as a prelude to an overview of major physical laws.
4. To review from a qualitative and quantitative perspective the characteristics and types of motion.
5. To review from a qualitative and quantitative perspective the characteristics and types of energy.
6. To review from a qualitative and quantitative perspective the properties of heat and temperature.
7. To compare the physical characteristics of light versus sound.
8. To present concepts of chemistry, specifically elements and periodic table, compounds and chemical change, chemical formulas and equations, and nuclear reactions.

Objectives:

9. To present concepts of astronomy, including the universe, stars, and planets.

PHY 120 General Physics 1

General Physics I is a course on the fundamental principles of physics concepts and how they fit together to provide a coherent description of the physical world. Students will learn measurement and models, motion, force and motion, uniform circular motion, work and energy, momentum, laws of conservation of mass and energy, rotational motion, kinetic theory, thermodynamics, periodic motion and waves and sound. (3 Credits)
Prerequisite: MAT120

Objectives:

1. Explain motion in one or multiple dimensions.
2. List Newton's Laws.
3. Define work, force and energy.
4. Use vectors to describe force analysis.
5. Explain the conservation laws.
6. Discuss rotational motion.
7. Define harmonic motion.
8. List the Laws of Thermodynamics.
9. Describe, mathematically, wave motion.
10. Define the acoustic variables.

PHY 121 General Physics 1 Lab

The purposes of the Physics Lab are to give you hands-on experience with some of the experimental basis of modern physics and, in the process, to deepen your understanding of the relations between experiment and theory in the areas of kinematics and dynamics. The students will do experiments on phenomena whose discoveries led to major advances in physics. The data you obtain will have the inevitable systematic and random errors that obscure the relations between the macroscopic observables of our sensory experience and the ideal laws that govern the physical world in which we live. The students will be challenged to learn how each of the experimental setups work, to master its manipulation so that to obtain the best possible data, and then to interpret the data in light of theory and a quantitative assessment of the errors. (1 Credit)

Objectives:

1. Set-up and run Lab experiments using the Pasco interface modules;2. Establish hypotheses and reach conclusions as to validity.
3. Identify sources of errors and determine statistical significance.
4. Follow proper scientific records keeping methodologies.

PHY 125 General Physics II

PHY 125 (Formerly PH 122) - General Physics II

This course is a continuation of General Physics I and addresses the fundamental properties of matter and energy. Topics include electricity, magnetism, optics and modern physics. Three hours of lecture and three hours of laboratory per week (3 Credits). Prerequisite: PHY 120 Corequisite: PHY 126.

Objectives:

1. List the Laws of Thermodynamics.
2. Define periodic motion.
3. Discuss waves and sound.
4. Define electric charge and electric field.
5. Explain electric potential and capacitance.
6. Discuss magnetism.
7. Define electric circuits.
8. Discuss optics and lenses.
9. Describe the theory of relativity.
10. Discuss quantum mechanics.

PHY 126 General Physics II Lab

PHY 126 (Formerly PH 126) - General Physics II Laboratory

Three hours per week (1 Credit). Corequisite: PHY 125.

Objectives:

1. Set-up and run Lab experiments using the Pasco interface modules.
2. Establish hypotheses and reach conclusions as to validity.
3. Identify sources of errors and determine statistical significance.
4. Follow proper scientific records keeping methodologies.

PHY 150 Physical Science for PNG

This course includes both chemistry and physics relating to petroleum and natural gas technology sector sciences, including gas properties, Boyle's Equation, Charles' Equation, Avogadro's Law; Dalton's Law of Partial Pressures, Stokes law and Amagat's Laws. Students will study the behavior of gases using the Ideal and Real Laws, compositions of natural gas, pressure concepts such as Gauge Pressure vs. Absolute Pressure, Vapor pressures, and partial pressures. Concepts such as STD conditions, Density, Gravity; Temperature types and Mass vs. Weight will be related to PNG chemistry. Additional chemistry concepts such as Molecular weight, Moles (pound mole and gram mole), Mole fraction and Energy, the properties of naturally occurring hydrocarbons; Phases of Gas-Liquid- Solid from PVT diagrams, and quantifying phase behavior will be studied. Physics topics will include measurement, motion, kinetic energy and work, potential energy and conservation of energy, momentum, torque, fluids, waves and heat and refrigeration. (3credits).

Objectives:

1. Describe Physics concepts including measurement, motion, and work/energy, fluid movement, heat and refrigeration.

Objectives:

2. Demonstrate understanding of chemical concepts such as gas laws, chemical composition and equation balancing STD conditions, Density, Gravity; Temperature types and Mass vs. Weight, Molecular weight, Moles (pound mole and gram mole), Mole fraction and Energy, the properties of naturally occurring hydrocarbons; Phases of Gas-Liquid- Solid from PVT diagrams, and quantifying phase behavior

3. Relate laws of chemistry and physics to petroleum and natural gas technology.

Petroleum and Natural Gas

PNG 105 Introduction to PNG Technology

An introduction to various aspects of the oil and gas industry technology, including development, economics, equipment, systems, instrumentation, operations, and the various associated scientific principles and processes. The course prepares students for upcoming curriculum in Petroleum and Natural Gas Technology program. The course addresses a variety of topics with emphasis on pre-drilling and drilling including: pre-drilling planning, drilling, circulation systems, construction basics, simple completions, overview of production processes and equipment. Also covered are downstream delivery, refining, transportation, marketing, and chemical processing industries. (3 credits)

Objectives:

1. Explain the basic principles of the technology of the oil and natural gas drilling and production industry.

2. Illustrate the key concepts of drilling, production, and transportation using industry specific terminology and definitions.

3. Explain the terms and phrases associated with the oil and natural gas industry's upstream and midstream technology.

4. Describe the techniques of modern onshore petroleum and natural gas drilling and production.

5. Identify the sciences used in the technology of petroleum and natural gas drilling, production and delivery.

6. Explain the process of drilling oil and gas wells.

PNG 125 Industrial Safety & OSHA Regulation

This course provides students with the knowledge, skills, and resources to be able to work safely in the oil and natural gas industry while having an understanding of the overall aspects of safety, health, and environment. Section 1 prepares the student for work on site preparation, drilling, and production and includes OSHA law, worker's rights, recordkeeping, inspections, and industry injury, Illness and fatality, data; the OSHA Focus Four Hazards; personal protective equipment, health and environmental controls with an emphasis on hazard communication; emergencies and fire protection (including pressure release); materials handling; heavy equipment and motor vehicles, cranes, confined spaces, evacuation and welding. Section 2 gives the student an overall awareness of health, safety, and environment, including types of hazards and their effects, fire and explosion hazards, hazardous atmospheres and respiration hazards, working area and height hazards, hazard controls including engineering controls, administrative controls, permitting systems, personal protective equipment, and monitoring equipment. (3 credits)

Objectives:

1. Introduce students to the wide array of potential hazards workers may be exposed to in the natural gas industry.

2. Ensure students are aware of their responsibility for their own safety on the job as well as that of their co-workers.

3. Ensure that students are aware of proper responses to hazardous and emergency situations.

4. Ensure that the student has the knowledge to be able to access information to allow them to work safely. This includes information concerning company policies, local, state, and federal regulations.

5. Provide the student with the knowledge, skills and resources to be able to work safely.

PNG 135 PNG Production

This technology course provides knowledge of the petroleum and natural gas reservoir, inflow performance, well loading and well production systems. Students will learn the function, purpose, operation and basic design of well deliquification/artificial lift systems needed to produce oil, formation water and natural gas to the surface. The course will cover the basic production phases from a simple reservoir perspective from reservoir inflow and through the well bore to the surface (or the subsurface) choke point and introduce Darcy's Equation related to oil and gas well inflow performance, permeability and simple systems nodal analysis. Additional topics include critical velocity, liquid loading, detection and symptoms, sizing tubulars, basic compression as lift support, the use of foam, soap and surfactants in gas wells, beam pump systems, plunger lift, hydraulic jet and plunger pumping, gas lift, electric submersible pumps, progressing cavity pumps and a basic overview of production automation components and systems. Knowledge of MS Excel required. (3 credits) Prerequisites: PNG 105, PHY 150, MAT 150.

Objectives:

1. Describe oil and gas reservoirs' basic characteristics and pressure dynamics moving through the rock matrix to wellhead discharge.

2. Describe the basic forces and overall processes in the deliquification and artificial lift of fluids in oil and gas wells.

3. Identify the components and mechanics of the machinery of well deliquification and artificial lift.

4. Identify and diagnose some basic problems during operation of deliquification and artificial lift systems, including separating mechanical failures from wellbore inflow issues.

5. Relate a systems view of oil and gas reservoir inflow to the various outflow pressure impacts using knowledge from the basic introduction to systems nodal analysis.

6. Describe various oil and gas field technology and measurement tools needed to understand selected problems.

7. Recall simple knowledge of diagramming, nomenclature, select process variables, and basic acronyms used in the production of oil and gas wells.

8. Calculate oilfield well bore tubular spaces including annuluses, pipes and pumps.

9. Use oil and gas industry data books, such as Halliburton's RedBook to provide data for PNG production calculations and equipment and material sizing.

10. Resolve and complete drawing of basic well components of a wellbore diagram.

PNG 140 Natural Gas Comp Tech I w/lab

In this first of two courses, students learn theory and practical operating skills needed by a natural gas compression technician including: system design & components, physical properties of natural gas & gas laws; internals of reciprocating compressors and drivers, compression cycle and process; PV diagrams, compression ratio and types of pistons; rod loads, volumetric efficiency, clearance volume, lubrication, rod reversal, compressor maintenance, operation objectives, horsepower and efficient use of same; performance program, force feed lubrication system, packing, rider rings, and piston rings; logging, Instrument reading, double checking the instruments and production control. Includes LAB (4 credits)

Objectives:

1.Explain the physical properties of natural gas and understand their application in natural gas compression.

2.Describe the function and uses of a reciprocating gas compressor.

3.Apply the safety practices of this industry.

4.List the major parts of a reciprocating gas compressor.

5.Identify and understand the different types of compressors and the hardware that make up a compressor system. Explain situations that may cause an emergency shutdown of a compressor.

Objectives:

6.Demonstrate the compression process including compression cycle, PV diagrams, estimating compressor capacity, piston displacement, and estimating compressor horsepower requirements. Explain different kinds of auxiliary equipment and describe the function of each.

7.Describe the equipment commonly used to suppress pulsations.

8.Demonstrate the impact of factors such as temperature and lubrication on valves. Describe the function of a compressor valve and the force that operates compressor valves.

9.Apply operating procedures, maintenance, and trouble shooting.

10. Calculate the horsepower required to compress a given volume of gas under stated conditions.

11. Calculate compressor rod loads.

12. Calculate compressor efficiency.

13. Explain how the permanent clearance and the temporary clearance of a cylinder may be changed and how it affects performance.

PNG 145 Field handling, Processing and Pipe

PNG145 - This course provides a detailed look at the equipment and methods for handling and processing natural gas as it flows from the wellhead through the midstream system. Topics include: pipeline system design, maintenance, and construction; pipeline components; basic pipeline protection, integrity monitoring, and leak detection; pipeline pigging; behavior of natural gas; liquid separation; valves; glycol dehydration processes; hydrate properties; gas measurement methods; compression facility operations. (3 Credits) Prerequisites: PNG105 AND PHY150 AND MAT150

Objectives:

1. Demonstrate knowledge of midstream and transmission pipeline systems.
2. Explain the operation of natural gas processing and dehydration systems.
3. Demonstrate knowledge of natural gas processing and compression facilities.
4. Apply knowledge of natural gas surface handling and processing equipment.
5. Demonstrate knowledge of pipeline pigging, liquids handling, and hydrate formation.
6. Explain natural gas measurement and instrumentation systems.

PNG 150 Natural Gas Engine Mechanics

This course is designed to introduce students to basic engine fundamentals and provide a solid foundation in the theory, operation and maintenance of gas engines used to power reciprocating compressors. Differences in Hi-speed, Slow speed, two and four stroke cycle engines, as well as naturally aspirated vs turbocharged engines are explained. An explanation of the natural gas laws and how they apply to gas engine operation is provided. Identification of major external and internal components, their assembly and disassembly, and their function is explained. Discussions also cover operating systems, i.e. lubrication, cooling, ignition and fuel systems and their individual components, including general instruction in disassembly and assembly. Various preventative maintenance schedules are provided explaining the reasoning behind the time increments and criticality of certain systems or components. The instructor will describe suggested maintenance and safety requirements for operating high-speed separable and slow-speed integral gas engines. Hands-on work on typical gas engines will be a major part of the Lab activity. The student will be taught how to use precision measuring instruments and to determine whether certain components are reusable or need replacing.

Objectives:

1. Identify the differences in two and four stroke cycle engines.
2. Accurately draw and label an engine P-V and/or P-T diagram
3. Identify major internal and external component, their location and function.

Objectives:

4. Describe basic disassembly and assembly procedures of components
5. Be able to describe the parts of a cam lobe and basic cam timing procedure.
6. Measure various components to determine wear and remaining life span.
7. Discuss the components and operation of engine operating systems.
8. Describe contaminants and condemning limits in an oil sample.
9. The student will learn a method for trouble shooting problems.
10. The student will learn a method for trouble shooting problems.

PNG 160 Introduction to Compressors

In this course, students will learn the practical operating skills needed by a natural gas compression technician to safely operate and perform maintenance on a compressor. This encompasses basic external components of the compressor system. Students will be introduced to the properties of natural gas and the gas laws. Throughout the course, internal components of Reciprocating Compressors and related mechanical topics will cover the types of valves, their operation and overhaul, the various designs of pistons, compressor cylinders, the frame and running gear. Students will learn the use and effects of variable pockets on natural gas compressors as well as compressor maintenance topics including; rod packing, rider bands, and piston rings. This course will encourage discussions on troubleshooting, oil analysis, and lubrication systems. This also includes divider blocks, pump to point styles, characteristics of lube oil and filters, compressor bearings, bolting and torqueing of fasteners, precision measurement, and non-destructive testing. (3 Credits)

Objectives:

1. Explain the Physical Properties of Natural Gas Laws and understand their application in Natural gas compression.
2. Apply the safety practices of this industry.
3. Describe the function and uses of a reciprocating gas compressor.
4. List the major parts of a reciprocating gas compressor.
5. Demonstrate the Compression Process including: Compression Cycle, PV Diagrams, Estimating Compressor Capacity, Piston Displacement, and Estimating Compressor Horsepower requirements; Explain different kinds of auxiliary equipment and describe the function of each.
6. Demonstrate the impact of factors such as Temperature and Lubrication on Valve operation and describe the function of a compressor valve and the forces that operates compressor valves.
7. Describe Operating Procedures, Maintenance and Trouble Shooting.

PNG 170 Introduction to Engines

This course is designed to introduce students to the basic engine fundamentals and provide a solid foundation in the theory, operation and maintenance of gas engines used to power reciprocating compressors. Differences in hi-speed, low-speed, two and four stroke engines, as well as naturally aspirated vs. turbocharged engines are explained. An overview of the natural gas laws and how they apply to gas engine operation is provided. Students are instructed to identify major external and internal components, their assembly and disassembly, in addition to their function. Discussions also cover operating systems; i.e. lubrication, cooling, ignition and fuel systems and their individual components. This includes general instruction to exhibit mechanical competencies in the breakdown of these systems. The instructor will describe suggested maintenance and safety requirements for operating high-speed separable and slow-speed integral gas engines. (3 Credits)

Objectives:

1. Identify the differences in two and four stroke cycle engines.
2. Identify major internal and external components, their location and function.
3. Describe basic disassembly and assembly procedures of components.

Objectives:

4. Describe the parts of a cam lobe and basic cam timing procedure.
5. Identify various components to determine wear and remaining life span.
6. Describe the components and operation of engine operating systems.
7. Explain methods for troubleshooting problems.
8. Relate natural gas laws to petroleum and natural gas technology.

PNG 175 Compressor Mechanics I

The purpose of this course is to familiarize the student with the external and internal components of a reciprocating gas compressor. An emphasis on hands-on training will teach them how to maintain high and slow speed compressors. Each step of the disassembly of the compressor will be preceded by a brief lecture describing the process and any safety issues. For certification the course requires that the student physically perform each of the individual tasks in the log book. They must also collect and record all critical measurements and clearances required by the machine O.E.M. The Student will be taught how to determine if the component is reusable or whether it is outside of O.E.M. specifications. By the end of the course the student will be expected to exhibit the proper and safe use of hand tools and precision measurement instruments. The student will be taught how to apply the correct torque values during disassembly and reassembly. Graduates will have developed the competency to perform all basic maintenance tasks. Students will be taught safety considerations and describe the proper method for blowing down the compressor and rendering it safe for maintenance. This will include awareness of a basic "lock out-tag out" procedure.
There will be a written final exam at the end of the course which requires a minimum of 80 % for passing. (3 Credits)

Objectives:

1. Identify the components and describe their individual function and their role within the system.
2. Relate the basic gas laws to the Petroleum and Natural Gas Technology.
3. Demonstrate the ability to disassemble and reassemble the compressor, a cylinder, valves, and rod packing.
4. Explain in writing basic compressor theory and operation.
5. Collect and record all critical measurements and clearances required by the machine O.E.M.
6. Demonstrate a basic "lock out-tag out" procedure.
7. Describe the proper method for blowing down the compressor and rendering it safe for maintenance.

PNG 185 Engine Mechanics I

This course will provide students with a sound understanding, both technically and mechanically, of Gas Engines used to drive reciprocating compressors in the Oil and Gas Industry. The natural gas laws and how they apply to gas engine operation will be explained. Differences in high-speed, slow speed, two and four stroke cycle engines, as well as naturally aspirated vs turbocharged engines will be explained. Identification of major external, and internal components, their assembly and disassembly, and their function will be taught in a hands-on, lab setting. Lectures will describe operating systems; i.e. lubrication, cooling, ignition and fuel. The student will be taught how to use precision measuring instruments and safe hand-tool usage. Troubleshooting exercises will be included to aid the student in developing a logical process for finding and correcting problems. The instructor will outline suggested O.E.M best practices for the maintenance and the safe operation of high-speed separable, and slow-speed integral, gas engines. Before graduating from the course, each student will be required to demonstrate their newly acquired practical skills by disassembling and re-assembling certain engine components under the observation of the instructor. The primary focus of this course is to produce hands-on competency in each student. To that end, the instructor will verify, in a signed log book, that these tasks have been performed to the instructor's satisfaction.
In addition, the student must be able to explain in writing, to the instructor's satisfaction, a knowledge of basic compressor theory and operation. This will include an understanding of torque tables, proper use of hand tools, accuracy with micrometers, how to calculate HP, and understanding of unit alignment
There will be a written final exam at the end of the course which requires a minimum of 80 % for passing. (3 Credits)

Objectives:

1. Define the differences in two stroke, four stroke, and diesel cycle engines.
2. Identify major internal and external components, their location and function.
3. Perform disassembly and re-assembly of several major components.
4. Remove a piston and rod assembly, measure rod bearing clearances.
5. Measure the cylinder bore for wear.
6. Measure valve train components to determine wear.
7. Describe the components and operation of the engine fuel system..
8. Trace out the engine lube oil system and review a lube oil analysis.
9. Identify possible operating problems by reviewing a data entry log.
10. Calculate engine compression ratio, calculate BHP.

PNG 200 PNG Technology Internship

Students will spend 160 certified hours working in some aspect of the Petroleum & Natural Gas Upstream, Midstream or Downstream sectors with an approved company. Students are required to submit detailed reports of their experience describing actual analysis, situation, methods, materials, and systems worked that they learned from specific problems encountered, including an end of course summary of the work experience. (3 credits) Prerequisites: PNG140 and PNG145.

Objectives:

1. Report field experience in the drilling, service, production, reservoir, geology, compression, measurement, processing included in the upstream, midstream or downstream sector of the oil and natural gas industry.
2. Summarize experience in upstream, midstream, or downstream oil and gas industry operations.
3. Relate the expectations of production and process technicians in the operating upstream, mid-stream or downstream companies including service and support companies of the petroleum and natural gas industry.

PNG 201 PNG Technology Capstone Project

The student will demonstrate mastery of technology in some aspect of the Upstream, Midstream or Downstream sectors of the Petroleum and Natural Gas industry through a project to be determined by the student and instructor/advisor in an approved plan of study. The project will include a writing component, Power Point document and a presentation. (1 Credits)

Objectives:

1. Apply PNG program content knowledge and understanding in a project.

PNG 205 Instrumentation, Control/Data Anal

PNG 205 will cover the instruments, documentation and data used in typical Petroleum and Natural Gas (PNG) applications. Students will learn to read and create Piping and Instrumentation Diagrams (P&ID) which are used to document the equipment in PNG applications. They will learn the concepts of control algorithms (PID), valves, actuators, flow control instruments, pressure control instruments, temperature control instruments, specific gravity, viscosity, pH and level control instruments. Computer simulation will provide experience with process control systems and the use of various instruments from industrial applications. Students will study and interact Programmable Logic Controllers (PLCs) and the Supervisory Control and Data Acquisition (SCADA) and its' Human Machine Interface (HMI) Students will control and operate instruments and collect and analyze data from those instruments. (4 credits) Pre req: PNG 145

Objectives:

1. Recognize the concepts of flow control and measurement and explain the operation of flow control instruments including turbine flowmeters, ultrasonic Doppler flowmeter, and vortex flowmeters.

2. Interpret level measurement concepts and explain the operation of level measurement devices such as sight glass, guided wave, differential pressure gauge and vibration instruments.

3. Describe temperature measurement concepts and explain the operation of temperature measurement devices such as thermocouples.

4. Identify pressure measurement instruments and operate of pressure measurement devices such as bourdon tubes, inductance electrical transducers and resistance electrical transducers.

5. Identify the function and usage of pneumatic and electric actuators and valves, including diaphragm, gate, ball, plug, needle, check, butterfly and pressure relief valves.

6. Identify key instruments used in PNG applications from photographs and/or diagrams and perform simulated exercises involving real-world operation and troubleshooting of PNG instruments.

7. Interact with Supervisory Control and Data Acquisition (SCADA) and the associated Human Machine Interface (HMI) and use SCADA to monitor equipment, operate equipment and generate reports.

8. Read ladder logic programs for Programmable Logic Controllers (PLC) and experience PLC usage in monitoring, controlling and operating equipment..

9. Recognize key concepts of control systems, such as dead band, set point, PID, proportional control, and feedback and perform exercises involving implementation of these concepts.

PNG 210 Electronics

Students will: relate amps, ohms and volts through Ohms law; understand series, parallel and combination circuits; Analyze circuits theoretically and practically using multimeters and test wiring boards; examine alternating current relating frequency, amplitude and phase relationships; study capacitors and inductors relating electrical fields and magnetic fields; explore capacitive and inductive reactance and how impedance is calculated; be introduced to solid state physics and semiconductors; study applied solid state devices in diodes and transistors; explore basic electromagnetic waves, including radiation, modulation and transmission; study safe handling of electrical power; learn basic troubleshooting for electrical circuits; review conversion of analog signals to digital signals; review new signal patterns of Wi-Fi, Internet Protocol and SCADA; and study corrosion prevention through galvanic and impressed current systems to halt oxidation of buried pipes, vessels, and tanks. (3 credits))

Objectives:

1. Relate amps, ohms and volts through Ohms law.
2. Analyze series, parallel and combination circuits.
3. Analyze circuits theoretically and practically using multimeters and test wiring boards.
4. Examine alternating current relating frequency, amplitude and phase relationships.
5. Relate electrical fields and magnetic fields in capacitors and inductors.
6. Explore capacitive and inductive reactance and how impedance is calculated.
7. Recognize basic principles of solid state physics and semiconductors.
8. Compare applied solid state devices in diodes and transistors.
9. Apply how basic electromagnetic waves are transmitted and received.
10. Apply safe handling practices of electrical power.
11. Perform basic troubleshooting for electrical circuits.
12. Convert analog signals to digital signals and digital signals to analog signals.
13. Operate software and hardware associated with Wi-Fi, Internet Protocol and SCADA.
14. Describe corrosion protection through galvanic and impressed current systems to halt oxidation of buried pipes.

PNG 215 Elect/Pneumatic Process Control Sys

Students will study ideal gas laws and understand relationship of temperature, pressure and volume of gases within the context of thermodynamics; examine and apply Pascal's law of closed pneumatic and hydraulic systems; calculate effects of changes in pressure and temperature in closed gas systems; study and practice operation of pneumatic control and actualization valves; study pneumatic valve logic and how to read schematics; review actuators, remote controls, and pilot circuits; study flow and pressure control valves and their applications; study and observe relationships in force and speed in pneumatic and hydraulic circuits. (3 credits) Prerequisite: PNG210

Objectives:

1. Resolve pneumatic/ electronic interface details.
2. Relate ideal gas laws and the relationship of temperature, pressure and volume of gases.
3. Apply Pascal's law of closed pneumatic and hydraulic systems.
4. Calculate effects of changes in pressure and temperature in closed gas systems.
5. Resolve pneumatic valve logic and how to read schematics.
6. Demonstrate actuators, remote controls and pilot circuits.
7. Relate flow and pressure control valves and their applications.

Objectives:

8. Demonstrate understanding of electric and manual operation of electronic control and actuation of valves.

PNG 220 PNG Well Comp,Workovers, Service

This course will present simple formulation pressures and basic wellbore hydraulics for control, and serve as a precursor to blowout prevention training. Students will review the main wellbore stages of construction relating to the demands of surface water, geology, and focus on the possible effects of deliquification and production methods. During the course, students will examine the various well completion systems and methods including production variables, casing and tubing, downhole tools and packer mechanics and associated forces, coiled tubing units, wellheads, chokes, well cleanout, service and workover equipment, workover fluids, sand cleanout, squeeze cementing, casing repairs, as well as remedial well work including swabbing, simple well stimulation including acid stimulation and hydraulic fracturing and fishing tools and recovery of stuck tubing and other obstacles. (3 credits) Prerequisite: PNG 245.

Objectives:

1. Describe basic oil and gas well bore and downhole failures and troubleshooting for resolution of those failures.

2. Explain the basic impacts of formulation pressure through basic hydraulics for well control and blowout detection and prevention and as precursor to blowout control and prevention training.

3. Demonstrate knowledge of overall well workover equipment/procedures including sand cleanout, squeeze cementing, casing failures and repairs, corroded or leaking tubular, and remedial well work including swabbing, fishing and associated tools for recovery of stuck tubing and removal of other obstacles.

4. Demonstrate knowledge of selected different completion designs and associated processes/equipment including casing and tubing, perforating, fluid circulating systems and hydraulics, downhole tools and packer mechanics with associated forces, production/pulling unit rigs, coiled tubing units, well heads, chokes and subsurface safety valves.

5. Describe well stimulation including acid stimulation and hydraulic fracturing in simple terms.

6. Evaluate and resolve some issues of cost/benefit associated with workover/stimulation/repair.

7. Demonstrate use of industry data books such as Halliburton's RedBook.

PNG 230 Basic Compression & Pipelining

Reciprocating gas compression technology including operation, maintenance, basic understanding of system designs and components, design of performance and capacity, calculations for efficiencies and volumes. Natural gas pipeline design; maintenance and repair; pipeline or gather system design; pipeline materials and construction; general flow equations for steady-state flow of gas through pipes; incompressible fluid hydraulic flow, pipeline components; basic pipeline protection, integrity monitoring, leak detection methodologies; friction and pressure drop calculation, optimization process, and pigging. (3 credits) Prerequisite: PNG130

Objectives:

1. Demonstrate knowledge of midstream and transmission pipeline systems technology.

2. Apply reciprocating as compression operation.

3. Apply function and resource of minimum Federal Standard ANSI/GPTC Z380, Guide for Gas Transmission and Distribution Piping Systems.

4. Calculate fundamentals of single phase fluid flow in pipe and solve basic pressure loss equations for gas in pipes.

5. Demonstrate knowledge of pipeline transmission plant processes of natural gas.

6. Demonstrate knowledge of pipeline pigging, gas leaks and detection.

7. Evaluate pipeline materials, construction, and components.

8. Disassemble and assemble actual components of a reciprocating compressor.

PNG 235 Measurement and Testing I

This course follows PNG 145. Topics include troubleshooting; capacity controls, failure analysis; Gas Laws review, calculations; evaluating performance, calculations; performance software; coupling alignment; oil analysis, divider blocks, routing of pressurized oil;. filters, bolting & torque; compressor station equipment maintenance; compressor valves, bearings, signs of wear; importance of logs; work on compressor skid; overhaul & repair of recip. compressor; calibration of gas measurement equipment; and lubrication specifications; maintenance and repair; pipeline or gather system design; pipeline materials and construction; general flow equations for steady-state flow of gas through pipes; production control. (3 credits) Prerequisites: PNG105 AND PNG145

Objectives:

1. Explain measured gas quality variables including gas sampling, gas chromatography, Describe process of water vapor, dew point measurements and other test measurements methods for gas properties and make-up.

2. Explain the physical process, equipment types, critical variables and calculations of Orifice gas measurement including meter run sizing & design, maintenance, disassembly and assembly.

3. Describe the major components and equipment types for gas flow pressure reduction and regulation including up and down stream related equipment.

4. Identify the strengths and weaknesses of major gas measurement systems and their calibration procedures by manufacturer.

5. Describe Orifice, Ultrasonic, turbine, rotary, diaphragm, and coriolis meters diagnostics.

6. Recognize field site measurement problems and demonstrate solutions to same for inputs to flow computer volume calculations and operation.

7. Explain principles and operation of natural gas odorization.

8. Describe complete orifice meter calibration procedure for several major oil and gas companies.

PNG 245 Drilling & Completion Technology

Students will learn drill site technology including preparing the drilling site, drill site procedures, drilling systems, rotary rig types, rigging up, substructures and rig components; drilling hydraulics, drill string, air and gas drilling, selection of drilling practices, underbalanced drilling, casing design including open hole completion and closed hole completions, special completions; deviated completions including horizontal completions, casing weights and grades, casing design safety factors; casing string design including, linear design and cementing the casing including formation pressure, and complete or abandon; well control, Drill mud functions and properties; Pressure concepts including hydrostatic pressure, formation pressure, overburden pressure, and bottom-hole pressure; causes of kicks and kick detection; well control procedures, gas behavior, constant bottom hole pressure methods. Casing, tubing, line pipe standards; capacities and annular volumes; drilling bits and downhole motors; hoisting and derrick floor equipment; pumping and pressure losses; perforating, drilling mud; cementing; directional drilling; detecting kicks, kick control fishing, surface BOB stack, u-tube theory, gas migration; and well heads. Included are productivity indexes of an oil well producing under the bubble point, Vogel's method. (3 credits) Prerequisites: PNG105 AND PNG145

Objectives:

1. Describe the steps in drill site preparation and drill site procedures.

2. Explain use of different types of drilling systems and rotary rig types.

3. Discuss drilling mud, hydraulics and casing designs for open hole and closed hole completions.4. Calculate pressure concepts and the causes of and solutions for kick.

5. Identify and describe the uses of different types of equipment in the drilling process.

PNG 250 Natural Gas Engine Mechanics II

This second-year engine course is designed to expand upon the operation and maintenance of engines taught in PNG150. The student will explore a variety of engines used to power reciprocating compressors and other driven equipment. This course will continue to develop the students' knowledge of engine cycle theory including less common engine cycles, i.e. Lenoir, Miller, Carnot etc. Horsepower is developed in the engine head so the student will explore the technology behind the evolution of cylinder head design. Electronic fuel injection, Stratified-Charge, Lean-Burn combustion and related technologies will be investigated. The student will also learn how to calculate horsepower, fuel economy, mean effective pressure and other performance parameters. The course will include instruction on basic exhaust emissions and advanced combustion theory. Calculating compression ratio and understanding fuel requirements of different styles of engines will be taught. How to calculate the stoichiometric value of various fuels will be illustrated. Various gas engine PV diagrams, HP curves, and torque curves will be investigated in detail. As part of the induction process turbocharger types and their operation will be reviewed. Troubleshooting will be addressed along with problem solving scenarios. Suggested maintenance schedules and safety requirements for operating gas engines are provided. A hands-on lab is part of this course. (3 Credits) Prerequisite: PNG150

Objectives:

1.Discuss and identify the operating characteristics of spark ignition and combustion ignition engines and the differences between diesel, 2-stroke cycle, and 4-stroke cycle natural gas engines.

2.Discuss internal component design, materials choices, and describe basic disassembly and assembly procedures.

3.Explore the types of fuels used and the methods of inducting air and fuel into an engine.

4.Learn how to calculate stoichiometry for various fuels and investigate the complex combustion process and basic emissions.

5.Identify the major safety issues in starting, operating, and during maintenance of a gas engine or compressor.

6.Be taught the procedures for troubleshooting potential problems and initiating preventive maintenance.

7.Demonstrate an ability to safely and competently disassemble and reassemble a gas engine.

8.Discuss friction and lubrication in gas engines.

PNG 260 Production Communications Systems

This course introduces students to applied advance communication network technology and equipment used in typical field operations for oil and natural production. Students will study the processing of signals from base gathering to intermediate storage and transfer to ultimate users. Students will engage in the programing of programmable logic controls and its application to process control. Students will be introduced to supervisory control and data acquisition systems (SCADA) and advanced WIFI networks. Students will be introduced to the equipment that is used in typical field operations for oil and natural gas production. Prerquisites: PNG210 AND PNG105

Objectives:

1. Students will demonstrate an understanding of analog to digital signal processing.

2. Explain satellite communication parameters and methods that are used in typical field operations and regional centers in the oil and natural gas industry.

3. Demonstrate an understanding of SCADA and WIFI networks and the application to the typical systems used in field operations for oil and natural gas industry.

Program PLC's that are typical to field operations for oil and gas using ladder logic programing.

4. Troubleshoot field unit transmitter/receiver and local area networks (LAN).

5. Student will understand the communication, set-up and controls of the process controllers used in typical oil and gas field handling operations including controllers from Emerson, Kimray and others.

Objectives:

6. Student will understand the communication, set-up and controls of the natural gas measurement systems used in typical gas field handling operations and custody transferincluding flow computers controllers from major and common suppliers.

7. Students will experience interfacing with simulated data entry systems used in typical field operations and regional centers in the oil and natural gas industry.

PNG 275 Compressor Mechanics II

The purpose of this course is to further familiarize the student with the external and internal components of a reciprocating gas compressor. An emphasis on hands-on training will teach them how to maintain high and slow speed compressors. Each step of the disassembly of the compressor will be preceded by a brief lecture describing the process and any safety issues. For certification the course requires that the student physically perform each of the individual tasks listed in the log book. They must also collect and record all critical measurements and clearances required by the O.E.M. The Student will be taught proper assembly procedures using the manufacturer's specifications. By the end of the course the student will be expected to exhibit the proper and safe use of hand tools and precision measurement instruments. The student will be taught how to access all of the critical torque values and clearances of the specific machine. Graduates will have developed the competency to perform major maintenance and overhaul tasks. Students will be taught safety considerations and describe the proper method starting, stopping and loading a compressor. In addition, the student must be able to explain in writing, to the instructor's satisfaction, a knowledge of basic compressor theory and operation. This will include having an understanding of capacity control devices, load steps, and engine load. There will be a written final exam at the end of the course which requires a minimum of 80 % for passing. (3 Credits) Prerequisite: PNG 175

Objectives:

1. Demonstrate the ability to disassemble and reassemble the compressor, a cylinder, valves, and rod packing.
2. Demonstrate the ability to assemble oil scraper packing
3. Demonstrate checking for web deflection
4. Measure crankshaft thrust
5. Perform Bluing on valve seats to check for fit
6. Perform a lift check on rod bearings
7. Explain the shimming of crosshead shoes
8. Measure piston rod run-out
9. Perform troubleshooting scenario
10. Identify the components and describe their individual function and their role within the system.
11. Determine stages of compression needed for multi-staging
12. Calculate a discharge temperature at a given compression ratio
13. Perform basic troubleshooting using scenarios
14. Calculate gas loads on a piston rod
15. Log any anomalies or damage found during the disassembly

PNG 280 Field Operations

PNG Field Operations will provide students with experience operating, maintaining and troubleshooting equipment found in PNG operations. The simulated exercises will present students with real-life operations, and require them to be completed according to established processes for equipment operations. Students are evaluated based on the correct application of safety procedures, timing of their response and correct actions. The exercises can be repeated until the student shows sufficient mastery of all of the different aspects of the exercise. Students will study basic process control concepts, process control algorithms, and processes related to gas dehydration units. This course can be taken independently; successful completion will result in a certificate in gas dehydration and process control concepts. (3 credits) Pre req: PNG 145

Objectives:

1. Perform simulated exercises involving real-world operation and troubleshooting of PNG instruments such as pumps, control valves and safety valves.
2. Demonstrate mastery of PNG operations through simulated exercises. Mastery will include a timely, safe and well-documented performance.
3. Identify key instruments used in PNG applications from photographs and/or diagrams.
4. Interact with a simulated Supervisory Control and Data Acquisition (SCADA) and the associated Human Machine Interface (HMI) to monitor equipment, operate equipment and generate reports.
5. Recognize key concepts of control systems, such as dead band, set point, PID, proportional control, and feedback and perform exercises involving implementation of these concepts.
6. Perform maintenance and normal operations on gas dehydrators or similar equipment using simulators.

PNG 285 Engine Mechanics II

The purpose of this course is to further familiarize the student with the external and internal components of a reciprocating gas compressor. An emphasis on hands-on training will teach them how to maintain high and slow speed compressors. Each step of the disassembly of the compressor will be preceded by a brief lecture describing the process and any safety issues. For certification the course requires that the student physically perform each of the individual tasks listed in the log book. They must also collect and record all critical measurements and clearances required by the O.E.M. The Student will be taught proper assembly procedures using the manufacturer's specifications. By the end of the course the student will be expected to exhibit the proper and safe use of hand tools and precision measurement instruments. The student will be taught how to access all of the critical torque values and clearances of the specific machine. Graduates will have developed the competency to perform major maintenance and overhaul tasks. Students will be taught safety considerations and describe the proper method starting, stopping and loading a compressor. In addition, the student must be able to explain in writing, to the instructor's satisfaction, a knowledge of basic compressor theory and operation. This will include having an understanding of capacity control devices, load steps, and engine load. There will be a written final exam at the end of the course which requires a minimum of 80 % for passing. (3 Credits) Prerequisite: PNG 175

Objectives:

1. Explain the engine balancing procedure
2. Review a lube oil analysis for high levels of wear particulate
3. Perform bluing of valve seats
4. Measure valve guide wear
5. Inspect cylinder heads for cracks
6. Inspect the connecting rods for bend or twist
7. Describe the methods for checking crankshaft web deflection
8. Explore turbocharger blower maps
9. Identify and explain troubleshooting scenarios
10. Calculate engine compression ratio, HP, engine displacement

Objectives:

11. Relate the basic gas laws to the petroleum and natural gas technology

12. Explain the meaning of P-V and P-T diagrams

Psychology

PSY 105 Intro to Psychology

PSY 105 (Formerly SS 132) - Introduction to Psychology

This is a survey of the major areas of psychology, including human growth and development, social behavior, cognition, learning, personality theory, personal adjustment, abnormal behavior and psychological measurement (3 Credits).

Objectives:

1. To demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

2. To compare and contrast the major perspectives of psychology (e.g., behavioral, biological, cognitive, evolutionary, humanistic, psychodynamic, and sociocultural).

3. To develop an enhanced ability to use critical thinking skills to examine issues related to human behavior and mental processes.

4. To articulate how psychological principles can be used to explain social issues and differences.

5. To examine the sociocultural differences that influence individual differences in behavior.

PSY 140 Stats for Behavioral Sciences

This course is an introduction to the principles of statistics for students who plan to major in psychology or other social sciences. It includes information on levels of measurement, central tendency, dispersion, correlation, significance tests, confidence intervals, analysis of variance, the use of inferential statistics as well as other related statistical topics. Excel and SPSS will be used to analyze data. Emphasis will be place on helping students become knowledgeable consumers of behavioral science research. (3 Credits) Prerequisite: MAT120 OR MAT115

Objectives:

1. Describe the process of statistical inference.

2. Identify sampling methods that are appropriate for inference.

3. Interpret and graph the results of an experiment.

4. Interpret results of statistical computations and draw appropriate conclusions.

5. Use Excel and SPSS to conduct statistical analyses.

PSY 205 Developmental Psychology

PSY 205 (Formerly SS 231) - Developmental Psychology
This course studies the developmental changes in intellectual, emotional, motor and social behavior from infancy to adulthood. Special emphasis is given to the influence of heredity and to physiological, educational and social variances in the emotional and intellectual growth of the individual (3 Credits). Prerequisite: PSY 105

Objectives:

1. Recognize the early stages of life with emphasis on nature/nurture issues with emphasis on racial and ethnic differences.

2. Describe the early origins of intelligence, habit formation, physical, and motor development.

3. Review the relationships that exist between children and their parents, siblings, and peers.

Objectives:

4. Explain theories associated with several (psychodynamic, cognitive, behavioral, social and moral) perspectives to understand growth and development.

5. Describe adolescence as a physical and cultural phenomenon.

6. Describe the biologically maturing person and the roles that parents, peers, and society play in the individual's quest for maturity.

7. Explain the aging process in relation to sociological, cognitive, physical and cultural influences.

8. Describe the later years of life with emphasis on quality of life issues.

PSY 210 Psychology of Adjustment

PSY 210 (Formerly SS 232) - Psychology of Adjustment

This course offers a functional approach to well-being. It examines the dynamics of personality as well as the capacity that human beings have to face, adapt and effectively cope with a rapidly changing environment. Within the framework of a socio-cultural approach, the course emphasizes self-understanding as a key aspect of adjustment (3 Credits). Prerequisite: PSY 105

Objectives:

1. Demonstrate familiarity with major concepts, theoretical perspectives, empirical findings, and historical trends.

2. Understand basic research methods in psychology.

3. Use critical thinking and skeptical inquiry to solve problems related to behavior and mental processes.

4. Understand and apply psychological principles to personal, social, and organizational issues.

5. Weigh evidence in an ethical manner.

6. Demonstrate information competence and the ability to use computers to locate information.

7. Communicate effectively in a variety of formats.

8. Recognize, understand, and respect the complexity of socio-cultural and international diversity.

9. Develop insight into one's own and others' behavior and mental processes and apply effective strategies for self-management and self-improvement.

PSY 212 Psychopathology

PSY 212 (Formerly SS 233– Abnormal Psychology)

This course is designed to produce an understanding of the etiologies, characteristics, diagnoses, treatments and prognoses of a variety of exceptionalities that have limiting effects on human potential (3 Credits). Prerequisite: PSY 105

Objectives:

1. Understand the social, racial, ethnic , psychological, educational, and intervention issues associated with each exceptionality.

2. Assess each exceptionality from the viewpoints of the theoretical paradigms which includes sociocultural presented in this course.

3. Describe exceptionalities using the diagnostic system of the American Psychiatric Association (DSM-IV).

4. Develop a case study that includes an ssessment, theoretical review, and treatment plan for one or more selected exceptionalities.

PSY 215 Adulthood and Aging

PSY 215 (Formerly SS 242) - Adulthood and Aging

This course provides an inter-disciplinary approach to its topic and considers the stigma of old age, the psychological problems of aging, the significance of individual differences in facing these problems, financial and legal strategies for surviving in old age, and the care and institutionalization of the elderly (3 Credits). Prerequisite: PSY 105

Objectives:

1. To study the life-span development, and review the research methods used to investigate development.
2. To study the basic biological, intellectual, learning and memory, personality, and social changes that occur in adulthood.
3. To examine the unique transitions and events particular to young adulthood, middle age, and old age for those of all races and ethnicities.
4. To study the final event in life - death and dying.

PSY 220 Cross Cultural Psychology

This course will explore ways in which human behavior and mental process are shaped and influenced by such characteristics as race, ethnicity, gender, class, disability, and sexual orientation. Some specific issues to be examined include cognition, sensation and perception, intelligence, motivation, emotion, socialization, and psychological disorders. (3 Credits) Prerequisite: PSY105

Objectives:

1. Compare and contrast contemporary theories in cross cultural psychology.
2. Use critical thinking skills to examine, analyze, and evaluate cross cultural issues in psychology.
3. Describe the quantitative and qualitative methods that are used to examine cross cultural issues in psychology.
4. To develop and increased awareness and sensitivity to the problems of intercultural conflicts.

PSY 230 Learning & Cognition

This course will explore learning, memory, attention, problem solving, concept formation, classical conditioning, operant conditioning, observational learning, and language development. Scientific investigations will be reviewed concerning the history, methods, results, and conclusions of learning and cognitive theories. (3 Credits) Prerequisite: PSY105

Objectives:

1. Describe general principles of learning as they related to human adaptation.
2. Describe the models and theories of memory.
3. Differentiate between psycholinguistic, behavioral, and cognitive developmental approaches to language development.
4. Describe how biological and cultural factors impact learning and cognitive processes.

PSY 235 Psysiological Psychology

This course focuses on the physiological bases of behavior. Emphasis is placed on the structure and activity of nerve cells, the nervous system, processes related to perception, learning, memory, emotions, motives, language, and psychopathology. (3 Credits) Prerequisites: PSY105 and
BIO115

Objectives:

1. Describe the methods used to study the biological basis of behavior.

Objectives:

2. Describe the functions of neurons and how neural impulses are generated.

3. Identify some important divisions of the central and peripheral system and describe their functions.

4. Describe the nature and function of the endocrine system and its effects on behavior.

5. Describe the effects of physiological systems on perception, learning, memory, emotions, motives, language, and psychopathology.

PSY 240 Research for the Behavioral Science

This course is an introduction to the fundamental principles of behavioral science research with a focus on the principles that guide the research process, the elements of research design, how to read and critique research articles, and how to conduct a literature review for a research project. Students will learn to identify and select testable research problems, develop hypotheses and research designs, analyze data, and write a research paper using APA style. (3 Credits)
Prerequisites: PSY140 and PSY105 OR MAT115

Objectives:

1. Generate hypothesis, draft research plans, define and measure variables, select research designs, create research procedures, select outcome measures, and present results using APA style.

2. Develop an enhanced ability to critically evaluate research that has been conducted in the behavioral sciences.

3. Use descriptive and inferential statistics to evaluate data.

PSY 245 Drugs and Behavior

PSY245 (formerly SSS215) - Drugs and Behavior

This course will provide an in-depth examination of the major drugs both legal and illegal used in American society. Concentration will be on the effects of recreational and prescription drugs on human health and behavior. (3 Credits)

Objectives:

1. Distinguish among illicit drug use, deviant drug use, drug misuse, drug abuse, and drug addiction.

2. Describe the methods for gathering information about drug use and recognize the advantages and disadvantages of each method.

3. Become aware of recent trends in illicit drug use among high school students and adults of all races and ethnic groups.

4. Recognize psychosocial variables related to drug use.

5. Describe three basic processes relating to addiction.

6. Discuss some current methods of treating addiction.

7. Identify the major subdivisions of the nervous system and describe their function.

8. Complete a drug analysis paper describing a specific drug, the scope of the use of the drug in the U.S., how the drug affects the brain, the acute and chronic effects of the drug, the dependence potential of the drug, the effects of the drug on an unborn fetus, and the treatments available for people who abuse the drug.

PSY 250 Social Psychology

PSY250 (formerly SSC250) - Social Psychology

Study of individual thoughts, emotions, and behavior as affected by cultural and social stimuli. Emphasis on the analysis of human conduct in social settings. This course will introduce major approaches, debates, and theories of Social Psychology. Emphasis will be placed on relating course content to students' life experiences. (3 Credits) Prerequisite: PSY105

Objectives:

1. To understand the impact of social interaction, group membership, and social structure on the social behavior of ndividuals.
2. To understand the intrapsychic processes of cognition, attribution, and learning that underlie social behavior.
3. To understand intergroup conflict and social movements among various racial and ethnic groups in society today.
4. To understand the theoretical perspectives in social psychology.
5. To understand contemporary social psychology and some of the work that social psychologists have researched.
6. To understand how course content impacts student's social engagements.

PSY 305 Judgement & Decision Making

This course explores the fundamental principles of human judgement and decision-making. Students will learn about theoretical models of optimal decision-making and evaluate how closely these models align with how people make decisions in real-life situations. Discussions and activities will center on identifying ways of improving human judgement and decision-making through the application of research-based principles. Core topics will include (among others): rationality and emotion, the gambler's fallacy, mental accounting, value and utility, Multi-Attribute Utility Analysis (MAUT), biases in moral thinking, utilitarianism, assessments of risk, and mental self-control. (3 credits) Prerequisite: PHL105 OR PHL125 OR NUR310

Objectives:

1. Read and analyze contemporary research in the field of Psychology pertaining to human judgment and decision-making.
2. Understand the role of culture, context, and individual circumstance in the decision-making process.
3. Become familiar with and articulate the theories of various seminal researchers in the field of judgment and decision-making.
4. Debate and defend theories of decision-making via in-class oral discussions.
5. Articulate the importance of judgment and decision-making (and the various ways in which it manifests) in contemporary society.
6. Identify flaws in real-world examples of decision-making, and propose potential research-based solutions.
7. Develop and formally present a working personal decision-making philosophy based on the views of various theorist.

PSY 310 Theories of Personality

This course will familiarize students with a variety of personality theories, their history, and applications. We will consider theories that address personality development and implications for normal and abnormal development. We will also explore research questions such as stability of personality over time and situations, cultural differences in personality, and personality measurement. (3 credits) Prerequisite: PSY105

Objectives:

1. Define personality and identify each element of the definition of personality.

Objectives:

2. Demonstrate an understanding of the major theories in personality, including their basic concepts and principles, views of personality development, assessment techniques and treatment principles.

3. Examine major theories of personality according to standard criteria for evaluating the adequacy of scientific theories.

4. Compare and contrast major classical theories of personality (i.e., humanism, psychoanalytic/psychodynamic, behaviorism, cognitive, and social-cognitive theories of personality).

5. Identify the major issues involved in developing a theory of personality and use this awareness to formulate one's own view of personality.

6. Incorporate current research studies in order to understand theories of personality in modern psychology.

Physical Therapist Assistant

PTA 105 Introduction to PTA

Introduction to PTA is a groundwork course in this curriculum to introduce the student to the field of physical therapy. The course provides base building information and skills with which the student must demonstrate proficiency. A minimum final grade of 3.0 is required in order to continue through the PTA curriculum. The material will be expansive inclusive of topics such as state and federal practice laws and regulations, the PTA's role as a health care provider, the scope and practice of a PTA, documentation basics, safety considerations, vital sign monitoring and gait and transfer techniques. The course will integrate classroom material with a lab component to solidify knowledge requiring execution and technique. (3 Credits)

Objectives:

1. Define the scope of practice of the PTA as a vital member of the healthcare team.

2. Compare and contrast the relationship between the PT/PTA in terms of the clinical boundaries of the physical therapist and physical therapist assistant, and the responsibilities of the physical therapist and physical therapist assistant.

3. Identify State and Federal Practice Laws: Supervision requirements required of physical therapist assistants as per the PA state practice act for PTAs, HIPAA requirements and Patient's Bill of Rights, basic space and safety considerations for accessibility as they relate to the American's with Disabilities Act, and measurements of home environment to apply principles of American's with Disabilities Act standards.

4. List the components of the models of disablement and patient/client management model.

5. Demonstrate basic, introductory level skill sets with an emphasis on safety, patient needs/characteristics and body mechanics, including: Vital signs, Assessment of patient mentation, Bed mobility, Positioning and draping, Transfer techniques, Equipment management, Gait patterns, Stair training, Weight bearing status explanation, Assistive device fitting and patient instruction, and Controlled falling.

6. Classify various types of healthcare settings and levels of care.

7. Identify various types of healthcare relationships.

8. Utilize basic communication skills appropriate for use in various clinical settings: Interview patients/clients, caregivers, family, etc. to obtain current information related to prior and current level of function and general health status, report changes in patient/client status or progress to the supervising physical therapist, and instruct patients/clients appropriately during functional mobility.

9. Define basic components of pain assessment.

10. Identify activities, positioning and postures that may aggravate or relieve pain or altered sensations.

11. Demonstrate the ability to properly fit/position patient in a wheelchair and describe basic components of wheelchairs.

12. Demonstrate baseline knowledge of systems-based conditions observed within the physical therapy profession, including: Musculoskeletal, Neuromuscular, Cardiovascular, Pulmonary, Integumentary, Pediatric, and Geriatric.

Objectives:

13. Select an appropriate progression of safe transfer and gait techniques within the established PT POC to reach desired outcomes for the following patients: an introductory level patient care scenario and a more complex patient care scenario.

14. Demonstrate effective response to patient and environmental emergencies that occur in the clinical setting.

15. Utilize universal precautions (or appropriate isolation precautions) when performing patient care.

PTA 110 Functional Kinesiology

A course involving a study of human movement, principles of mechanics, musculoskeletal anatomy, and neuromuscular physiology as it relates to the development of physical therapy exercise and those forces creating human activity. Laboratory activities include goniometry, principles of exercise and conditioning as it relates to patient care, principles of exercise testing, and postural analysis. Other topics that will be addressed in this course will be joint structure and function, the body's adaptation to different conditions including: environmental, disease, immobilization, and exercise. (3 credits). Prerequisites: PTA105, BIO205, HTH100 and PHL110

Objectives:

1. To compare and contrast arthrokinematic and osteokinematic movements at joints throughout the body including: open packed positions, closed packed positions, degrees of freedom and lever systems.

2. To examine range of motion and end feel at joints throughout the body including: Vertebral column, Temporomandibular joint, Glenohumeral joint, Elbow, wrist, and hand, Hip, Knee, and Ankle and Foot.

3. To list normal and limited range of motion at joints throughout the body: Vertebral column, Temporomandibular joint, Glenohumeral joint, Elbow, wrist, and hand, Hip, Knee, and Ankle and foot.

4. To inspect muscle tone and mass and explore assessment methods, normal tone and mass, abnormal tone and mass, including: spasticity, hypertonia, rigidity, hypotonia, and dystonia.

5. To examine muscle length and identify normal and abnormal length including active and passive length tension relationship of muscles.

6. To identify muscle atrophy and hypertrophy.

7. To explain the gait cycle and identify its components including: individual phases for stance and swing during normal gaitand common gait deviations and impairments that may cause such deviations.

8. To identify the body's energy systems and their impact on exercise intensity and duration including: anaerobic, aerobic, and potential versus kinetic energy.

9. To describe physiologic changes of the body with changes in internal and external factors.

10. To discuss the impact exercise has on the cardiovascular system including safe vital sign measurements for active participation in exercise.

11. To discuss the impact exercise has on the respiratory system including: basic components of inspiration and expiration, relating to thoracic movement, use of accessory breathing muscles for individuals with disease or impairments, and valsalva maneuver.

12. To select appropriate clinical tools to assess the impact exercise has on an individual.

13. To examine normal/abnormal posture.

14. To discuss the effects of immobilization on the connective tissue of a joint.

15. To recall the basic principles of therapeutic exercise including: stretching, strengthening, as well as concentric, eccentric, and isometric muscle activation.

PTA 125 Therapeutic Modalities

Introduction to the physical basis of therapeutic modalities including but not limited to: cryo and thermotherapy, hydrotherapy, ultrasound, western massage techniques, and electrotherapy. Other topics to include pain management and theories of pain perception and transmission, indications, contraindications and precautions to treatments, tools used for pain assessment, basic post treatment assessment techniques necessary to evaluate the efficacy of the applied modality. Evidence based practices are stressed in this course. (3 Credits) Prerequisites: PTA105, BIO205, HTH100, and PHL110

Objectives:

1. To identify the appropriate indications, contraindications, parameters and physiological response for the use of ultrasound including: thermal ultrasound, non-thermal ultrasound, combination electrical stimulation/ultrasound, and phonophoresis.

2. To identify the appropriate indications, contraindications, parameters and physiological response for the use of therapeutic massage including: effleurage, petrissage, accupressure to trigger points, and transverse friction.

3. To identify the appropriate indications, contraindications, parameters and physiological response for the use of superficial thermal agents including: moist heat pads, paraffin bath, cold packs, and ice massage.

4. To identify the appropriate indications, contraindications, parameters and physiological response for the use of hydrotherapy including: disinfecting whirlpool, electrical safety, and warm and cold immersion bath.

5. To identify the appropriate indications, contraindications, parameters and physiological response for the use of electrotherapeutic modalities including: NMES, TENS, FES, Hi-Volt, E-stim for tissue repair and IFC.

6. To identify the appropriate indications, contraindications, parameters and physiological response for the use of compression therapies. Intermittent compression and continuous compression, including wrapping.

7. To identify the appropriate indications, contraindications, parameters and physiological response for the use of mechanical traction including: Lumbar Spine, Cervical Spine, and Home cervical traction unit.

8. To identify the appropriate indications, contraindications, parameters and physiological response for the use of light therapies.

9. To identify the appropriate indications, contraindications, parameters and physiological response for the use of biofeedback.

10. To demonstrate proficiency and clinical reasoning when choosing and administering therapeutic modalities.

11. To communicate effectively with the PT and patient regarding patient response to therapeutic modalities.

12. To perform the appropriate patient preparation and positioning for therapeutic modality application based on the POC established by the PT.

13. To develop a safe environment for the patient and clinician when using therapeutic modalities based on the POC established by the PT.

14. To define the role and function of common prescription and non-prescription pharmacological agents in conjunction with therapeutic modalities including: Topical ointments, Iontophoresis, and Phonophoresis.

15. To utilize volumetric and anthropometric measurements to determine the effectiveness of treatment outcomes.

16. To assess skin integrity and sensation prior to the application of modalities.

17. To examine pain as related to use of various modalities including: completion of pain rating scale, pain-control theories, referred pain, and radiculopathy.

18. To demonstrate appropriate, competent, and safe use of the above listed modalities.

PTA 130 Organization and Admin of PTA

This course will provide an in depth presentation of structural and professional considerations influencing the field of physical therapy. These considerations will be directly related back to the role of the physical therapist assistant. The scope of the Physical Therapy Practice Act and the role of the PTA within it will continue to be emphasized. Students will gain a greater understanding, expanding upon information presented within the Introduction to PTA class, in terms of PTA licensure, abilities and restrictions of the PTA and further elaboration comparing and contrasting to the role of the PT to the PTA.

The realm and climate of healthcare will be addressed with considerations spanning patient accessibility, insaurance fundamentals, documentation, public policy, various organizational structures and Medicare and Medicaid. The domain of physical therapy within the various realms of healthcare will be discussed. Reimbursement structure, documentation formats and specifically physical therapy documentation with reimbursement considerations will be formally introduced. The will initiate the formal acquisition of documentation skills within this curriculum. (2 Credits) Prerequisites: PTA105, BIO205, HTH100 and PHL110

Objectives:

1. To explain an introductory knowledge of insurance fundamentals including: components of the insurance contract, types of insurance, medicare, medicaid, and managed care.

2. To identify the differences between the PTA and other healthcare providers as related to licensure and scope of practice: to describe appropriate interventions for PTs, to describe appropriate interventions for PTAs, and to identify within hypothetical scenarios when the directed interventions are beyond the scope of practice for PTAs.

3. To interpret public policy and the health care system pertaining to physical therapy: access to health care, advocating for patients, and advocating in professional organizations.

4. To explain an introductory knowledge of insurance fundamentals: components of the insurance contract, types of insurance including Medicare, Medicaid and Managed Care.

5. To explain an introductory knowledge of documentation formats and medical records: documentation responsibilities for PT versus PTA, and locating pertinent information for making clinical decisions on behalf of patient.

6. To discuss documentation and its relationship to insurance and reimbursement: first, second and third-party payers and reimbursement for patients with Medicare, Medicaid, Managed Care insurance in a variety of settings. Explore basic billing and coding principles.

7. To discuss the relationship of documentation and patient care and skilled versus maintenance therapy.

8. To compare various medical care systems, including the Acute and Post-Acute Health Care Systems.

9. To determine legal and ethical roles and issues within the PTA scope of practice and supporting documentation including: informed consent, HIPAA, and incident reporting.

10. To create an educational in-service to instruct peers (seen as members of the healthcare team) in the role of PT and structure of Medicare documentation and reimbursement across a variety of settings.

11. To demonstrate accurate documentation practices following specific guidelines and formats (including, but not limited to SOAP) for a variety of clinical scenarios.

12. To distinguish between Physical Therapy disablement models: Nagi Model, International Classification of Functioning, and Disability and Health.

13. To identify fraudulent billing and documentation practices for a variety of clinical scenarios.

14. To develop performance improvement activities (quality assurance).

PTA 135 Orthopedic Rehab/Basic Skills

This course will focus on the rehabilitation of common orthopedic disorders. Basic information regarding orthopedic considerations will be introduced and built upon from the simple to more involved concepts. Each body region will be addressed separately with anatomical considerations, various diagnoses, and common treatment techniques and programs presented for each area. Students will be expected to integrate basic skills learned in the Introduction to PTA class and understand and demonstrate their application within an orthopedic focused patient population. Furthermore, new critical skills will be identified within each section and integrated into the laboratory component of the coursework. Students will be expected to practice and incorporate documentation skills introduced in the Organization and Administration course. The performance of literature reviews will be introduced to support the critical thinking process as applicable to orthopedic considerations. The information and skill set presented in this course will also complement those of Functional Kinesiology . (3 credits) Prerequisites: PTA105, BIO205, HTH100 and PHL110

Objectives:

1. To compare and contrast common orthopedic diagnoses throughout the body and the pathology underlying them including: vertebral column, sacroiliac joint, temporomandibular joint, glenohumeral joint, elbow, wrist, hand, hip, knee, patellofemoral joint, ankle and foot.

2. To compare and contrast the rehabilitation considerations for various orthopedic diagnoses throughout the body including: vertebral column, sacroiliac joint, temporomandibular joint, glenohumeral joint, elbow, wrist, hand, hip, knee, patellofemoral joint, ankle and foot.

3. To utilize clinical tools to take objective measurements for various orthopedic diagnoses.

4. To utilize appropriate ROM interventions for various orthopedic diagnoses throughout the body including: vertebral column, sacroiliac joint, temporomandibular joint, glenohumeral joint, elbow, wrist, hand, hip, knee, patellofemoral joint, ankle and foot.

5. To select appropriate strengthening interventions for various orthopedic diagnoses throughout the body including: vertebral column, sacroiliac joint, temporomandibular joint, glenohumeral joint, elbow, wrist, hand, hip, knee, patellofemoral joint, ankle and foot.

6. To select appropriate plyometric interventions for various orthopedic diagnoses. Explore priniciples of plyometrics and exercises specific to body region.

7. To select appropriate balance interventions for various orthopedic diagnoses. Exlpore components of balanceand exercises to improve balance.

8. To select appropriate gait interventions for various orthopedic diagnoses.

9. To educate patients, families, and other medical professionals regarding various orthopedic diagnoses.

10. To define the healing process and internal/external factors contributing to it including: causes of edema, the role of physical stress, and immobilization.

11. To identify indications and contraindications for the application of different interventions on various orthopedic diagnoses.

12. To demonstrate proper technique to obtain anthropometric measurements as directed in a POC.

13. To recognize activities, positioning or postures that may aggravate or relieve pain or altered sensation in the orthopedic population.

14. To demonstrate accurate and safe orthopedic procedures as directed in the POC including: basic Manual Muscle Testing (MMT) and Special Tests.

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PTA 200 Clinical I

PTA 200: Clinical Education I

This course is the first of three clinical experiences within this curriculum. It will provide students the opportunity to work in an approved healthcare facility under the supervision of a licensed physical therapist or physical therapist assistant who serve as the clinical instructor (CI) at the facility. This initial experience targets basic expectations and application of individual skills. The experience will expose the student to the structure of the rehab setting in which they are placed. Students will be provided opportunities to observe, discuss and apply various skills while under the direct supervision of their clinical instructor. Students are expected to demonstrate active learning behaviors to facilitate this. Students will participate in a full-time experience for two weeks, and will also participate in online assignments to supplement this experience. These will include patient case studies, a presentation on the Role of the PTA, simulated patient case scenarios with intervention planning, and reflective assignments to complement the clinical portion of the experience. (3 Credits) Prerequisites: PTA105, BIO205, HTH100, PHL110, PTA110, PTA125, PTA130, PTA135 and PTA245

Objectives:

1. The student identifies and performs skills in a safe manner that minimizes the risk to patients, self and others at a level of at least advanced beginner as per the PTA CPI definition.

2. The student demonstrates expected clinical behaviors in a professional manner in all situations at a level of at least intermediate as per the PTA CPI definition.

3. The student performs in a manner consistent with established legal standards, standards of the profession, and ethical guidelines at a level of at least intermediate as per the PTA CPI definition.

4. The student communicates in ways that are congruent with situational needs at a level of at least intermediate as per the PTA CPI definition.

5. The student demonstrates clinical problem solving at a level of at least advanced beginner as per the PTA CPI definition.

6. The student demonstrates an understanding of the role of the PTA and the PT/PTA relationship.

7. The student applies knowledge and skills of basic interventions within the physical therapist's plan of care safely and effectively.

PTA 210 Therapeutic Exercise

The Guide to Physical Therapist Practice identifies therapeutic exercise as the most important procedural intervention provided within the field of physical therapy. This course is dedicated to principles of therapeutic exercise and the application of this intervention as it pertains to patient care. The course will expand on basic information introduced within the first-year curriculum. Students will be provided groundwork knowledge of therapeutic exercise principles and progress toward advanced principles. The lab setting will be utilized to allow practice and execution of didactic material. Emphasis will be placed on appropriate application of therapeutic exercise technique, critical thinking and progression in order to facilitate advanced patient function.
(4 Credits) Prerequisites: PTA105, BIO205, HTH100, PHL110, PTA110, PTA125, PTA130, PTA135, PTA245 and PTA200

Objectives:

1. To examine and explain the characteristics of therapeutic exercise and identify and discuss different types of exercise techniques and principles.

2. To interpret the role of the physical therapist assistant in the provision of therapeutic exercise: describe the roles of the PT and PTA in the provision of physical therapy, including appropriate PT-PTA supervision, and identify specific patient responses and conditions which would require the PTA to contact the PT before proceeding with therapeutic exercise.

Objectives:

3. To assess the response of various body systems to different types of therapeutic exercise: physiologic principles and considerations as applicable to range of motion, physiologic principles and considerations as applicable to stretching activities to increase flexibility, physiologic principles and considerations as applicable to resistance training, physiologic principles and considerations as applicable to open-chain resistance training, physiologic principles and considerations as applicable to closed-kinetic-chain exercise, neurophysiologic principles and considerations as applicable to plyometrics, physiologic principles and considerations as applicable to balance training, physiologic principles and considerations as applicable to reactive neuromuscular training, physiologic principles and considerations as applicable to aerobic conditioning incuding measurement of standard vital signs, and physiologic principles and considerations as applicable to pulmonary function including breathing techniques for airway clearance, coughing techniques for airway clearance and secretion mobilization for airway clearance.

4. To utilize various types of exercise equipment within a therapeutic exercise program.

5. To apply various manual therapeutic exercise techniques: describe and apply common static stretching activities and PROM for the muscles of the UE/LE and cervical and lumbar spine within an established POC and describe and apply PNF techniques for the upper and lower extremities.

6. To identify specific parameters of exercise which are required to produce desired outcomes within the PT POC.

7. To choose and apply appropriate exercise techniques for various diagnoses/patient types based on the POC established by the PT.

8. To explain guidelines for progression/regression of various types of therapeutic exercise based on patient response utilizing current evidence-based practice principles: identify criteria within the plan of care to allow/limit progression, and review health records prior to carrying out the POC.

9. To distinguish between normal/abnormal characteristics of muscle mass, length, and tone.

10. To assess factors that may indicate patient progression for locomotion.

11. To demonstrate accurate and safe manual muscle testing (MMT) procedures using a complex patient case scenario within the POC established by the PT. Review health records prior to carrying out the POC.

12. To utilize the physical therapist's Plan of Care to provide information and education to patients, families, consumers, payers, policymakers, and other health care professionals.

PTA 215 Healthcare issues

This course provides general overviews of common pathologies, including anatomical and physiological considerations, etiologies and physical therapy management. The course is also designed to introduce the student to the foundations of assessment and management for the pediatric and geriatric population with interventions, wellness prevention and factors affecting lifespan such as disease, genetics and nutrition. Students will gain an understanding of adjunctive and alternative health care practices in which patients maybe participating and/or be appropriate for referral. Other topics within this course to include but not be limited to wounds and burns care, aquatic therapy, amputees, and prosthetics and orthotics. (3 Credits) Prerequisites: PTA105, BIO205, HTH100, PHL110, PTA110, PTA125, PTA130, PTA135, PTA200, and PTA245

Objectives:

1. Examine common pathologies and/or conditions commonly seen in or affecting the following patient populations: Patients of the pediatric population, Patients of the geriatric population, Patients with amputations, Patients with cardiac pathologies, Patients with pulmonary pathologies, Patients with wounds/burns, Patients with lymphedema, Patients appropriate for aquatic therapy, and Patients requiring specialty adaptive equipment/mobility devices.

2. Identify normal stages/milestones of neuromotor development from birth through adolescence.

3. Identify normal righting and equilibrium reactions in pediatric patients.

4. Explain the role of the PTA during aquatic therapy.

5. Measure and document a simulated wound for depth, length, width, and any tunneling or undermining as appropriation.

Objectives:

6. Distinguish between various wound care techniques and wound dressing options that are appropriate for patients within the established PT POC. Discuss technique for dressing application and removaland identify precautions for dressing removal.

7. Explain and demonstrate the process of setting up a sterile field for wound care.

8. Recall the importance of pressure relief in appropriate patient populations.

9. Demonstrate knowledge and hands on approach of safe lymphedema management technique.

10. Identify commonly seen lines, tubes and equipment in the Acute Care and ICU setting.

11. Examine a patient's functional status, equipment needs and potential for independent home reintegration based on a provided patient case scenario: physical environment and measure physical spaces, safety and barriers, and level of functional status.

12. Interpret common causes of gait deviations in patients with below knee or above knee amputations.

13. Compare and contrast common prostheses and orthoses utilized for upper extremity, lower extremity and spine. Proper fitting of various orthoses on a patient.

14. Discuss various categories of pharmaceuticals and the common side effects as related to PT interventions.

15. Develop effective communication skills to educate other healthcare providers regarding the role of the physical therapist and PTAs.

16. Demonstrate safe and effective technique for airway clearance: Secretion Mobilization.

PTA 220 Methodology and Evidence

This course will present the principles and processes involved in the writing and review of research used within medical professions including Physical Therapy. Quantitative and qualitative approaches will be reviewed and analyzed relative to their strengths, limitations and practical uses. Basic review of data collection and statistical analysis will be covered, along with accepted sources of peer reviewed literature, journal search engines, "The Guide to PT Practice", and the interpretation of the supportive evidence and how it can then be used within clinical practice. (2 Credits) Prerquisites: PTA105, BIO205, HTH100, PHL110, PTA110, PTA125, PTA130, PTA135, PTA200, PTA245

Objectives:

1. Define the need for and the role of research in physical therapy.

2. Outline different types of research and the steps of the research process.

3. Formulate a clinical question/hypothesis and differentiate among types of variables for different researchable problems.

4. Evaluate selected research designs.

5. Identify what is needed to obtain reliable and valid measurements and interpret basic statistical analyses.

6. Identify the processes that are involved in evidence-based practice (EBP) and the role of EBP in the effective practice of physical therapy.

7. Select relevant research literature from databases on selected topics.

8. Summarize the importance of the use of the "Guide to PT Practice" in coordination with the PT plan of care and documentation.

9. Identify and investigate topics of clinical relevance worthy of investigation in order to support best practice and patient care.

10. Interview and educate professional peers regarding clinical information pertaining to physical therapy and using evidence based practice to support same.

Objectives:

11. Explain clinical information pertaining to physical therapy and using evidence based practice to the public.

PTA 225 Neurological Rehab/ Advanced Skills

Neurological Rehabilitation is an expansive topic area within the field of physical therapy. To administer treatment to a neurologically impaired client safely and effectively it requires the clinician to have a thorough understanding of several components: Anatomy and physiology of the central and peripheral nervous systems and neuromuscular system; an understanding of development across the lifespan; an understanding of neurological pathologies and diseases; and an understanding of and ability to apply accepted theories and treatment practices. This course is dedicated to teaching the principles of neurologic rehabilitation and the application of related interventions as they pertain to patient care. The course will expand on basic information introduced within the first-year curriculum. Students will be provided groundwork knowledge of neurorehabilitation principles and progress toward advanced principles. The laboratory setting will be utilized to allow practice and execution of didactic material. Emphasis will be placed on appropriate application of neurologic treatment techniques, critical thinking and progression in order to facilitate advanced neurological recovery with the goal of improving functional outcomes. (4 credits) Prerequisites: PTA105, BIO205, HTH100, PHL110, PTA110, PTA125, PTA130, PTA135, PTA200 and PTA245

Objectives:

1. To interpret the role of the physical therapist assistant in providing physical therapy to patients with neurological impairments: when intervention should not be performed due to changes in patient status, report changes in patient status to the supervising PT, and interpret when the direction to perform an intervention is beyond the PTA's scope of practice.

2. To identify basic neuroanatomy.

3. To examine normal movement and development across the lifespan: gross motor milestones, fine motor milestones, and righting and equilibrium reactions.

4. To interpret various theories of neurological rehabilitation.

5. To compare and contrast common neurological diagnoses and their underlying pathologies.

6. To select appropriate, safe interventions and progressions within a PT POC for patients with various neurological conditions utilizing clinical judgment and current evidence based practice: PNF, Posture, Vestibular Rehab, Sensation and Coordination, Balance, and Functional mobility.

7. To choose various tests and measures in patients with various neurological conditions: Sensory testing, Balance testing and Motor testing.

8. To identify pharmacological considerations in patients with various neurological conditions.

9. To compare and contrast muscular tone and mass and describe factors which influence tone and mass in patients with various neurological conditions.

10. To classify pain levels and utilize pain management strategies in patients with various neurological conditions.

11. To educate and communicate with patients, families, caregivers, and other healthcare providers regarding patients with various neurological conditions.

12. To select appropriate mobility assistance devices in patients with various neurological conditions.

13. To discuss activities, positioning, or postures which may influence the presence or absence of pain or altered sensation in patients with neurological impairments.

14. To assess considerations of patient abilities and limitations to support accurate assessment of functional status.

PTA 230 Clinical II

PTA 230: Clinical Education II
This course is the second of three full-time clinical experiences within this curriculum. It spans 6 weeks/240 hours of clinical practice at an approved health care facility. The facility is chosen through collaboration between the student and ACCE, with the final appointment made by the ACCE. The clinical experience is supervised by an appointed Clinical Instructor (CI) at the facility. Contact is made by the ACCE with the student and CI at both the midterm and final points of the rotation. Additionally, the ACCE is readily available to the student and/or the CI on an as needed basis. This experience supports the application of skills presented throughout the didactic and laboratory portions of the curriculum. The experience will expose the student to the structure of the rehabilitation setting in which they are placed. Students will be provided opportunities to observe, discuss, apply and integrate various skills while under the direct supervision of their clinical instructor. Students are expected to demonstrate active learning behaviors to facilitate this. Evidence of critical thinking behaviors should be developing. It is expected that at the end of this experience, the student will be capable of executing interventions outlined within a plan of care, demonstrating a proficiency level ranging from intermediate to entry-level. (5 credits) Prerequisites: PTA105, BIO205, HTH100, PHL110, PTA110, PTA125, PTA130, PTA135, PTA200, PTA210, PTA215, PTA220, PTA225 and PTA245

Objectives:

1. SAFETY: *** The student identifies and performs skills in a safe manner that minimizes the risk to patients, self and others. (Advanced Intermediate to Entry-Level).

2. CLINICAL BEHAVIORS: *** The student demonstrates expected clinical behaviors in a professional manner in all situations. (Advanced Intermediate to Entry-Level).

3. ACCOUNTABILITY: *** The student performs in a manner consistent with established legal standards, standards of the profession, and ethical guidelines. (Advanced Intermediate to Entry-Level).

4. CULTURAL COMPETENCE: The student adapts delivery of physical therapy services with consideration for patients' differences, values, preferences, and needs. (Intermediate to Advanced Intermediate).

5. COMMUNICATION: *** The student communicates in ways that are congruent with situational needs. (Advanced Intermediate to Entry-Level).

6. SELF-ASSESSMENT AND LIFELONG LEARNING: The student participates in self-assessment and develops plans to improve knowledge, skills and behaviors. (Intermediate to Advanced Intermediate).

7. CLINICAL PROBLEM SOLVING: *** The student demonstrates clinical problem solving. (Intermediate to Advanced Intermediate).

8. INTERVENTIONS: THERAPEUTIC EXERCISE: The student performs selected therapeutic exercises in a competent manner. (Intermediate to Advanced Intermediate).

9. INTERVENTIONS: THERAPEUTIC TECHNIQUES: The student applies selected manual therapy, airway clearance, and integumentary repair and protection techniques in a competent manner. (Intermediate to Advanced Intermediate).

10. INTERVENTIONS: PHYSICAL AGENTS AND MECHANICAL MODALITIES: The student applies selected physical agents and mechanical modalities in a competent manner. (Intermediate to Advanced Intermediate).

11. INTERVENTIONS: ELECTROTHERAPEUTIC MODALITIES: The student applies selected electrotherapeutic modalities in a competent manner. (Intermediate to Advanced Intermediate).

12. INTERVENTIONS: FUNCTIONAL TRAINING AND APPLICATION OF DEVICES AND EQUIPMENT: The student performs functional training in self-care and home management and application and adjustment of devices and equipment in a competent manner. (Intermediate to Advanced Intermediate).

13. DOCUMENTATION: The student produces quality documentation in a timely manner to support the delivery of physical therapy services. (Intermediate to Advanced Intermediate).

14. RESOURCE MANAGEMENT: The student participates in the efficient delivery of physical therapy services. (Intermediate to Advanced Intermediate).

PTA 240 Clinical III

This course is the third of three full-time clinical experiences within this curriculum. It spans 8 weeks/320 hours of clinical practice at an approved health care facility. The facility is chosen through collaboration between the student and ACCE, with the final appointment made by the ACCE. The clinical experience is supervised by an appointed clinical instructor (CI) at the facility. Contact is made by the ACCE with the student and CI at both the midterm and final points of the rotation. Additionally, the ACCE is readily available to the student and/or the CI on an as needed basis. This experience supports the application of skills presented throughout the didactic and laboratory portions of the curriculum. The experience will expose the student to the structure of the rehabilitation setting in which they are placed. Students will be provided opportunities to observe, discuss, apply and integrate various skills while under the direct supervision of their clinical instructor. Students are expected to demonstrate active learning behaviors to facilitate this. Evidence of critical thinking behaviors are expected to progress beyond those achieved in Clinical Education II. It is expected that at the end of this experience, the student will be capable of executing interventions outlined within a plan of care, demonstrating proficiency within skill areas that approaches entry-level. (6 Credits) Prerequisites: PTA105, BIO205, HTH100, PHL110, PTA110, PTA125, PTA130, PTA135, PTA200, PTA210, PTA215, PTA220, PTA225, PTA230 and PTA245

Objectives:

1. SAFETY: *** The student identifies and performs skills in a safe manner that minimizes the risk to patients, self and others. (Entry Level).

2. CLINICAL BEHAVIORS: *** The student demonstrates expected clinical behaviors in a professional manner in all situations. (Entry Level).

3. ACCOUNTABILITY: *** The student performs in a manner consistent with established legal standards, standards of the profession, and ethical guidelines. (Entry Level).

4. CULTURAL COMPETENCE: The student adapts delivery of physical therapy services with consideration for patients' differences, values, preferences, and needs. (Advanced Intermediate to Entry Level).

5. COMMUNICATION: *** The student communicates in ways that are congruent with situational needs. (Entry Level).

6. SELF-ASSESSMENT AND LIFELONG LEARNING: The student participates in self-assessment and develops plans to improve knowledge, skills and behaviors. (Advanced Intermediate to Entry Level).

7. CLINICAL PROBLEM SOLVING: *** The student demonstrates clinical problem solving. (Advanced Intermediate to Entry Level).

8. INTERVENTIONS: THERAPEUTIC EXERCISE: The student performs selected therapeutic exercises in a competent manner. (Advanced Intermediate to Entry Level).

9. INTERVENTIONS: THERAPEUTIC TECHNIQUES: The student applies selected manual therapy, airway clearance, and integumentary repair and protection techniques in a competent manner. (Advanced Intermediate to Entry Level).

10. INTERVENTIONS: PHYSICAL AGENTS AND MECHANICAL MODALITIES: The student applies selected physical agents and mechanical modalities in a competent manner. (Advanced Intermediate to Entry Level).

11. INTERVENTIONS: ELECTROTHERAPEUTIC MODALITIES: The student applies selected electrotherapeutic modalities in a competent manner. (Advanced Intermediate to Entry Level).

12. INTERVENTIONS: FUNCTIONAL TRAINING AND APPLICATION OF DEVICES AND EQUIPMENT: The student performs functional training in self-care and home management and application and adjustment of devices and equipment in a competent manner. (Advanced Intermediate to Entry Level).

13. DOCUMENTATION: The student produces quality documentation in a timely manner to support the delivery of physical therapy services. (Advanced Intermediate to Entry Level).

14. RESOURCE MANAGEMENT: The student participates in the efficient delivery of physical therapy services. (Advanced Intermediate to Entry Level).

PTA 245 Anatomy & Physiology II

PTA245 - This course covers the functional musculoskeletal anatomy of the upper and lower extremity, the spine and the interrelations of the neurological and cardio-respiratory systems. The course covers osteology, joint osteokinematics, and muscle function including action, origin, insertion and innervation. Students will understand muscle function of the extremities in open and closed chain positions. Clinical laboratories will include surface palpation of bony landmarks, muscles, and ligaments of the spine and upper and lower extremities on a laboratory partne
Prerequisites: PTA105, BIO205, HTH100 and PHL110

Objectives:

1. To identify anatomical position, directions, planes, body sections, and regions.

2. To examine pathophysiology and mechanisms of disease processes across the various body systemsincluding: Inflammation, Immunopathology, Infectious disease, and Cancer.

3. To discuss the mechanics and circulation of the cardiovascular system.

4. To analyze the mechanics of respiration.

5. To identify myotomes and the appropriate movement associated with them.

6. To identify dermatomes and the appropriate sensory area associated with them.

7. To palpate bony landmarks, muscles, ligaments and tendons throughout the body including: foot/ankle, knee, hip, midthoracic and lumbar spine, ribs, pelvic girdle, shoulder complex, wrist, elbow, hand, cervical spine and skull.

8. To summarize the origin, insertion, innervation and actions of various muscles throughout the body including: foot/ankle, knee, hip, midthoracic and lumbar spine, ribs, pelvic girdle, shoulder complex, wrist, elbow, hand, cervical spine and skull.

9. To examine the 12 cranial nerves and their associated functions.

10. To select and palpate pulses throughout the body including: dorsal pedal, posterior tibial, and femoral.

Restaurant & Foodservice Mgt

RFM 305 Hospitality Strategic Marketing

This course will outline the principles of marketing in the foodservice industry by focusing on market research and planning, target marketing, product placement and promotion. Students will study and apply concepts such as competitive market analysis, market segmentation and promotional mix. They will learn to manage advertising, public relations, sales promotion and personal selling and will develop marketing plans for various segments of the restaurant and professional foodservice industry. (3 credits)
Prerequisites: MKT 105

Objectives:

1. Define the role of marketing to the foodservice enterprise.

2. Define primary and secondary sources of information; give examples of methods used to collect primary data; give examples of sources for secondary data; compare and contrast the advantages and disadvantages of both types of data.

3. Describe segmenting consumer and business markets; define and be able to apply the three steps of target marketing to hospitality businesses.

4. List the stages in the buyer decision process and the components of the marketing mix.

5. Identify the particular methods of marketing each segment of the restaurant industry utilizes to capture market share and summarize the importance of measuring and managing return on marketing to align with the financial benchmarks unique to foodservice establishments.

6. Apply the roles of advertising, sales promotion, public relations, personal selling, and direct marketing in the promotion mix through promotion in course projects; compare and contrast integrated marketing communications with a non-integrated approach to the promotional mix.

Objectives:

7. List the major social criticisms of marketing and develop ethical marketing solutions in response.

RFM 310 Manag Service/Exp

This course will analyze the distinct characteristics that define and differentiate customer service and customer experience. Students will learn methods to understand the customer's expectations and will learn to put practices and service standards in place to exceed them. Study will focus on creation of an organizational framework that unites its people and processes with a goal that places the customer at its core. Study will focus on hiring, training and empowering entire teams including front line employees to perform acts of exceptional service and experience that will lead to improved culture, customer feedback and referral and business long-term viability. (3 credits) Prerequisites: ENG105.

Objectives:

1. Formulate practices to differentiate your customer service and experience to become a provider of choice.

2. Create quality service and experience standards to create a positive and enjoyable service experience.

3. Gather, assess and react to guest feedback in order to achieve service and experience goals.

4. Create and engage tools to gauge the needs, wants, and emotions of your customers at an individual level and to create a culture of incredible stakeholder experience with the brand.

5. Explore case studies of service and experience failures and practice ways to turn them into opportunities to strengthen stakeholder relationships.

RFM 315 Hospitality Revenue Management

This advanced course will add to the student's knowledge of the purchasing cycle in food and beverage operations. Study will be given to the impact of menu and pricing on revenue and net income. Students will develop and analyze income statements and will incorporate industry technology applications to analyze food and beverage operations and profitability. Prerequisite(s): CUL150, ACC105 and ACC220

Objectives:

1. Identify patterns of consumer behavior as they apply to menus and develop appropriate menus for the various segments of foodservice establishments.

2. Apply the BCG Matrix to the practice of delivering a healthy menu mix and develop solutions to deal with problematic menu items or suggest creation of new items.

3. Common size a restaurant income statement and list the appropriate benchmarks for each of the following: Food and Beverage Cost, Labor, Prime Cost, Gross Profit Margin, Rent/Lease/Mortgage, Overhead and Net Income.

4. Develop strategies to remedy financial problems on the income statement.

5. Analyze the balance sheet and statements of cashflow of foodservice establishments and list appropriate benchmarks for ratios commonly used in financial restaurant management.

6. Utilize modern POS systems and other formats of technology to assist today's foodservice leader in successful practices that lead to healthy restaurant finances.

RFM 320 Front of the House Management

This course focuses on the standards and practices of the professional dining room in all aspects of food service dining management. Students will learn to manage physical, human and technological resources and will practice hiring, training, managing customer feedback and process improvement specific to the professional dining room while applying financial front of the house processes that lead to fiscal responsibility.
Prerequisites: ACC105

Objectives:

1. Create interviewing processes to hire exceptional front of the house staff. Develop training manuals for each position accompanied by systems of monitoring, assessment and retraining or redirecting in order to achieve desired outcomes.

2. Demonstrate knowledge of the major and minor trends and practices in culinary and baking arts and beverage services.

3. List ways to respond to customer feedback and develop practices that cultivate a customer centric dining culture.

4. Analyze the modern technology applications for front of the house management. Demonstrate how technology assist's today's effective manager in forecasting, reservation management, inventory, scheduling, costing and revenue management.

RFM 325 Modern Applied Food Studies

This course will introduce students to historical and contemporary concerns in food studies and will look at the topic through an interdisciplinary and multidisciplinary scope. Course will explore the social, cultural, historical, and political aspects of food and eating and the modern implications of food systems and consumption on contemporary societies. Applied Food Studies theories and concepts will be put into practice through the readings, course exercises, and research practice. Classwork will empower students to think critically about food and its relationship to sustainable modern practices.
Prerequisite(s): HSP110.

Objectives:

1. Analyze food systems and consumption behaviors through the lenses of sociology, psychology, biology and physiology and explain the inseparability of each as applied to food studies.

2. Define and describe primary and secondary research and conduct research to assess the effects of modern patterns of food growing, transportation, commerce and consumption of public sustainability.

3. List modern food systems and consumption habits that contribute to economic, environmental and societal health.

4. Design food systems and consumption habits that will nurture the three pillars of sustainability.

RFM 401 Advanced Foodservice Management

This capstone courses concentrates on integrating critical competencies of management in a small food service setting. Emphasis is placed on menu development, marketing, staff scheduling, production planning and implementation, service, and fiscal accountability.
Prerequisite: ACC105, ACC220, ACC230, MAT120, MAT135, HSP110, HSP225, MKT105, RFM305, RFM310, RFM315, RFM320, RFM325, RFM415, RFM460, CIS210 AND ECO105
senior status.

Objectives:

1. Demonstrate proficiency in management and leadership in the foodservice industry through creation of a business proposal for a new foodservice establishment.

2. Create two positions to hire for and design job analysis and description, interviewing policies and rubric, training manual, procedures for monitoring and assessing performance and disciplinary and or correctional tools.

3. Select a business location and marketing campaign with budgetary boundaries that align with the appropriate foodservice industry margins.

Objectives:

4. Create a sample food and beverage menu and design multiple course recipes. Cost those recipes through application of culinary math principles to delivery health food and beverage cost to revenue relationships.

5. Construct a capital campaign to reveal sources of funding with concentration on debt and equity funding and assets and align each component to industry benchmark; demonstrate balance sheet literacy.

RFM 415 Global Hospitality Management

This course delivers an advanced study of the historical and emerging issues that impact the domestic and global restaurant and foodservice industries, as well as economics, societal, cultural and political issues and trends confronting the modern hospitality industry. Students will focus study on management and leadership tools common to conducting business effectively overseas. Course will feature case studies and group and individual research.
Prerequisite(s): CUL130

Objectives:

1. Explore the role of strategy in global hospitality leadership.

2. Define the levels of leadership and management in the international operation structure.

3. Examine the impact of culture, economics and politics on the international restaurant venture, its supply chain, human resources and financial performance.

4. Develop a SWOT analysis for a proposed international venture and contrast to the same venture executed domestically.

5. Learn to negotiate contracts and franchise agreements with international partners and identify the unique challenges to engaging in global business.

RFM 435 Managed Foodservice Operations

This course will focus on the managed services sector of foodservice operations to include: airlines, military, elementary and secondary schools, colleges and universities, healthcare facilities, and business and industry, leisure and recreation, conference centers, airports, and travel plazas. (3 credits) Prerequisites:ACC220 and RFM315,

Objectives:

1. To comprehend the needs of both the guest and the client in the managed foodservice relationship and create ways to please these dueling customers.

2. Create plans to manage service operations are housed in "host" organizations that do not have foodservice as their primary business.

3. Demonstrate an understanding of batch cooking and off-site catering and create menus, standardized recipes, employee schedules and financial forecasts in response to high volume production.

4. Successfully forecast volume of business and forecast for fixed and variable costs accordingly. Explain the roles that supply chain management, inventory and waste control and prime cost control has on the income statement.

5. Successfully complete group or individual projects with our managed services partners concentrating on hiring, training, leadership, financial control, purchasing, inventory, marketing, managing and nurturing stakeholder relationships.

RFM 460 Hospitality Entrepreneurship

This course will demonstrate and outline the ways entrepreneurs recognize business opportunities, develop ideas and identify markets. Students will learn how to create a business model and plan and will learn about different foodservice entrepreneurial business models. Students will apply learned concepts by the creating of a food service business proposal and will nurture it from idea conception through the planning and presentation phases.
Prerequisites: RFM315

Objectives:

1. Distinguish between the various sectors of foodservice and identify the barriers to entry for each.
2. Apply research and analysis to identify and create opportunities for a new foodservice business.
3. Explain the roles of ethics and philanthropy in a business venture. Identify the financial benchmarks for philanthropy of time, product, service and trade and develop polices to satisfy consumer support requests within healthy industry financial boundaries.
4. Demonstrate an understanding of legal concerns related to launching a business in Pennsylvania.
5. Collaborate with classmates to complete a comprehensive foodservice business plan for a new venture.
6. Create a financial plan for the business, to include anticipated funds to launch the business, projected profit and loss tables, sales forecasts, and cash flow analyses.
7. Participate in the College's restaurant business plan contest for evaluation and feedback and a chance to bring your concept to life in the public dining room located at 409 Adams Avenue, Scranton.

Religious Studies

RST 210 World Religions: Orig, Hst, & Tch

This course will begin with a look and ancient Greek and Roman polytheism, then focus on the monotheistic teachings of Socrates. The class then examines the history, theology, dogma, beliefs and practices of five major world religions:
•Judaism
•Christianity (Catholicism, the Protestant Reformation, and the "Non-Denominational" Trend)
•Islam
•Buddhism

Prerequisite: PHL105

Objectives:

1. Identify specific religions based on their teachings.
2. Trace the evolution and origins of organized religions.
3. Examine the relationship between religions.
4. Interpret the reasons behind each religion's teaching and practices.

Science

SCI 110 Food and Nutrition

A scientific exploration of food and human nutrition. Course will analyze the food system sources of nutrients and nutrient utilization in human metabolic functions. Course will apply nutrition to various critical periods of human development, growth and life. Includes introduction to food and menus as applied to the Recommended Dietary Allowances

Objectives:

1. List the daily nutritional requirements for a complete diet.
2. Discuss the need and use of proteins, fats and carbohydrates in our diet.
3. Describe energy metabolism.

Objectives:

4. Explain the role of minerals and vitamins in energy metabolism.
5. Analyze common foods and each's role in energy metabolism and body function utilization.
6. Recognize the relationship between vitamins and mineral functions and deficiency syndromes.
7. Outline the role of nutrients in the development of chronic diseases.
8. Apply, when relevant, the use of the scientific method of inquiry.
9. Synthesize professional foodservice recipes and menus by selecting and applying nutrient dense foods.

Surgical Technology

SGT 101 Clinical Practice 1

This course provides the student with clinical experiences related to surgical skills required of a surgical technologist. The student will participate in the application of surgical principles and practice in a variety of patient care delivery settings. This course develops clinical proficiencies that assist the student with meeting clinical rotation case requirements. (7 Credits) Prerequisites: SGT110, SGT120 and SGT210

Objectives:

1. Analyze the principles and theoretical concepts related to personal & patient safety.
2. Compare ethical and legal considerations related to the role of the surgical technologist.
3. Demonstrate the application of principles and practices of aseptic technique utilized in an operating room environment.
4. Apply and meet the criteria in the first and second scrub role with proficiency.
5. Apply skills to prepare for surgical cases by setting up a back table, preparing a mayo stand, properly arranging surgical instrumentation & equipment, perform surgical counts, preparing suture and needles utilizing effective sharp safety techniques, pass instrumentation in a safe efficient manner, prepare, handle, and label various medications on the sterile field, arrange other necessary surgical equipment, maintain a sterile field, handle specimens, and place sterile dressings all according to hospital policy.
6. Demonstrate principles and practices related to safe patient transfer, safe patient positioning devices, and safe patient positioning techniques.
7. Utilize the principles and practices of disinfection, decontamination, and sterilization standards and practices.
8. Compare and contrast the policies, procedures, and protocols of the clinical locations.
9. Demonstrate proficiency to complete 120 scrubbed cases from core and specialty categories. These cases must be in the first and second scrub roles as described in the 6th edition of the AST Core Curriculum.

SGT 110 Intro to Surgical Tech

This course focuses on Surgical Technology concepts. This course provides the student with an introduction the skills, behaviors, and knowledge related to surgical technology and aseptic technique. Students will gain knowledge regarding surgical technology theory, the surgical environment, and patient care concepts. (3 Credits)

Objectives:

1. Describe and demonstrate the principles of communication and teamwork in the operating room environment.
2. Describe and recognize the various roles of the surgical team members, the various roles of the surgical technologist, and the professional organizations affiliated with each team member.
3. Classify and summarize the different departments within the healthcare facility that supports surgical services.

Objectives:

4. Discuss, compare, and analyze the laws, legal responsibilities, civil and criminal liabilities associated with the field of surgical technology and the need for professional liability insurance.

5. Compare the elements of developing and implementing a strong surgical conscience while adhering to the surgical technologist's professional standards of conduct.

6. Explain and discuss ethical and moral issues that the surgical technologist faces throughout their career.

7. Distinguish and identify the biophysical and biopsychosocial needs of the surgical patient.

8. Evaluate and interpret the quality of life vs. quantity of life debate, the patient's response to the process of death, and outline the steps that are implemented when a patient death occurs in the operating room.

9. Describe the physical environment of the operating room and the controls in the place to minimize safety risks, while distinguishing the hazards to the surgical team and evaluating the role of the surgical technologist in the protection of the patient and team members.

10. Discuss different types of common features of a disaster while explaining the roles of various agencies, communities, incident command systems, healthcare facilities, and their personnel during a disaster to meet the differentiating surrounding dilemmas.

SGT 120 Prin, & Practices of Surgical Tech

This course provides the student with knowledge, demonstration and application of the principles and practice of a surgical technologist. This course develops the student's ability to understand the criteria needed to preform skills with accuracy and apply the necessary behaviors to the clinical and lab setting. The student will gain knowledge of the surgical sciences that support the operating room environment. This course provides the student with knowledge of what is necessary during all phases of surgery to include the preoperative, intraoperative and postoperative phase's duties. (4 credits)

Objectives:

1. Describe the basic components of a computer System utilizing the latest technology to provide for patient safety.

2. Explain the principle elements of electricity and how it is utilized within the operating room environment.

3. Compare and contrast the different types of surgical lasers and robotic principles while utilizing safe practices.

4. Discuss, identify and apply the principles and procedures of asepsis as it relates to preventing perioperative disease transmission.

5. Compare, contrast and demonstrate the different mechanical and chemical methods of hemostasis as it relates to blood loss intraoperatively.

6. Discuss the various roles of the surgical technologist and health care facility during the different types of emergency situations.

7. Compare, contrast, identify, and recognize the different types of basic surgical instrumentation and supplies used intraoperatively during different types of surgical procedures.

8. Analyze and relate the different types of surgical wounds and their relation to wound healing, suture and stapling device choice and application, and surgical wound dressings and drains.

9. Apply and demonstrate the basic principles and practice of patient positioning, prepping, draping, surgical case set-up, and management while identifying the principles of operative site management as related to safe patient care and the principles of asepsis.

10. Demonstrate the role of the surgical technologist during the preoperative, intraoperative and post-operative phase of surgical case management and identify the differences between non-sterile and sterile environments.

SGT 201 Clinical Practice II

This course provides the student with clinical experiences related to surgical skills required of a surgical technologist. The student will participate in the application of surgical principles and practice in a variety of patient care delivery settings. In this course the student continues to perform in the role of the surgical technologist with greater responsibility. This course develops clinical proficiencies that assist the student with meeting clinical rotation case requirements. (7 Credits) Prerequisites: SGT220 AND SGT101

Objectives:

1. Analyze the principles and theoretical concepts related to personal & patient safety.

2. Compare ethical and legal considerations related to the role of the surgical technologist.

3. Demonstrate the application of principles and practices of aseptic technique utilized in an operating room environment.

4. Apply and meet the criteria in the first and second scrub role with proficiency.

5. Apply skills to prepare for surgical cases by setting up a back table, preparing a mayo stand, properly arranging surgical instrumentation & equipment, perform surgical counts, preparing suture and needles utilizing effective sharp safety techniques, pass instrumentation in a safe efficient manner, prepare, handle, and label various medications on the sterile field, arrange other necessary surgical equipment, maintain a sterile field, handle specimens, and place sterile dressings all according to hospital policy.

6. Demonstrate principles and practices related to safe patient transfer, safe patient positioning devices, and safe patient positioning techniques.

7. Utilize the principles and practices of disinfection, decontamination, and sterilization standards and practices.

8. Compare and contrast the policies, procedures, and protocols of the clinical locations.

9. Demonstrate proficiency to complete 120 scrubbed cases from core and specialty categories. These cases must be in the first and second scrub roles as described in the 6th edition of the AST Core Curriculum.

SGT 210 Surgical Procedures 1

This course introduces surgical procedures in depth to cover anatomy, physiology, pathophysiology, diagnostic intervention, surgical interventions, postoperative patient considerations, prognosis, complications, wound classification and management, and care and handling of specimens. The following surgical specialties are covered in this course: Diagnostic and Assessment Procedures (non-invasive and invasive), Minimally Invasive, Endoscopic, and Robotic Procedures, General Surgery, Obstetrics and Gynecology, Genitourinary, ENT and Oral and Maxillofacial Surgery, and Plastic and Reconstructive Surgery. (4 Credits) Prerequisite: SGT110 AND SGT120

Objectives:

1. Identify and apply knowledge of anatomy, physiology, and pathophysiology of the following specialty surgical areas: Diagnostic and Assessment Procedures, Minimally Invasive, Endoscopic, and Robotic Procedures, General, Obstetrics and Gynecology, Genitourinary, Otorhinolaryngology, Oral and Maxillofacial, and Plastic and Reconstructive Surgery.

2. Apply the principles and practice of Surgical Technology related to clinical skills, surgical techniques, aseptic technique and behaviors required in an operating room environment.

3. Plan the intraoperative course for various surgical procedures to ensure delivery of quality patient care and discuss the postoperative considerations.

SGT 220 Surgical Procedures II

This course introduces surgical procedures in depth to cover anatomy, physiology, pathophysiology, diagnostic intervention, surgical interventions, postoperative patient considerations, prognosis, complications, wound classification and management, and care and handling of specimens. The following surgical specialties are covered in this course: Ophthalmic, Orthopedic, Cardiothoracic, Peripheral Vascular, Neurosurgery, Pediatrics, and Trauma Surgery. (4 Credits) Prerequisite: SGT210

Objectives:

1. Identify and apply knowledge of anatomy, physiology, and pathophysiology of the following specialty surgical areas: Ophthalmic, Orthopedic, Cardiothoracic, Peripheral Vascular, Neurosurgery, Pediatrics, and Trauma Surgery.

2. Apply the principles and practice of Surgical Technology related to clinical skills, surgical techniques, aseptic technique and behaviors required in an operating room environment.

3. Plan the intraoperative course for various surgical procedures to ensure delivery of quality patient care and discuss the postoperative considerations.

SGT 250 SGT Registry Review

SGT 250 - SGT Registry Review
This course provides the student with a review of knowledge, skills, and behaviors to sit for the national Certification Exam for Surgical Technologists. This review includes : Perioperative Care (Preoperative preparation, Intraoperative, and Postoperative Procedures), Ancillary Duties (Administrative and Personnel, Equipment, Sterilization, and Maintenance), and the Basic Sciences (Anatomy and Physiology, Microbiology, Surgical Pharmacology and Anesthesia, Medical Terminology). (0 Credits) SGT101

Objectives:

1. Identify the recommendations, policies, procedures, and protocols of perioperative care of the surgical patient.

2. Determine ancillary duties and responsibilities of various personnel that encompass and support the surgical environment.

3. Demonstrate working knowledge of the basic sciences to include Anatomy and Physiology, Microbiology, Surgical Pharmacology and Anesthesia, Medical Terminology through continuous evaluation.

4. Prepare as a candidate for the on campus based Certified Surgical Technologist exam administered by the NBSTSA as a graduating cohort.

Spanish

SPN 101 Elementary Spanish I

This course is primarily designed for students with little or no background in the Spanish language and covers basic grammar, conversation; suitable readings and written exercise. (Spanish 101 is prerequisite for Spanish 102) (3 Credits)

Objectives:

1. Recognize predictable questions and commands in familiar topic areas.

2. Recognize speech on familiar topics at a slower than normal speed.

3. Participate orally on familiar topics.

4. Translate language for personal communications needs, ask and answer questions and request clarification as needed.

5. Demonstrate understanding of written documents on familiar topics dealing with basic needs or interests.

6. Write short descriptive paragraphs.

7. Demonstrate familiarity with selected aspects of Hispanic culture(s).

Objectives:

8. Conduct research on the Internet.

Sport Management

SPT 120 Sport Marketing

SPT120 Sport Marketing - Students will learn about the 4P's of marketing (price, product, place and promotion) and an understanding of their interdependent relationship. Marketing practices, procedures, and operations as they pertain to sport professions, college athletics, and recreational sport organizations will be covered. The course will familiarize studetns with the challenges of sponsorship, merchandising, sport consumer demographics and behavior. 3 credits.

Objectives:

1. Describe the distinctions among the 4P's of sport marketing (product, price, promotion, and place).
2. Identify the environmental factors that impact the decision-making processes of companies with regard to sport marketing.
3. Investigate and explain what makes sport marketing and the sport consumer unique.
4. Define the role of public relations in the sport industry.
5. Explain the role of research in developing a sport marketing plan, including a focus on consumer demographics and behavior.
6. Identify the impact of product styles and trends on licensing and sponsorships.
7. Describe the influence of gender, racial, and ethnic diversity on sport marketing practice.

SPT 125 Intro to Sport Management

SPT125 (Formerly MGT125) This course will emphasize the importance of management in the sport industry. The goal will be to encourage students to think critically about how sports businesses impact society and the economy. Students will explore management processes in various sport organizations and the sport industry as a whole. (3 credits)

Objectives:

1. Explain how the four functions of management (planning, organizing, leading, and controlling) apply to various sport and recreation businesses.
2. Recognize social-responsibility initiatives throughout the sport industry.
3. Analyze global business and how diversity impacts sport/recreation operations.

SPT 210 Sports Reporting

SPT210
(Formerly: BUS210) A sports reporter needs to find the storyline of a given sport and share the story in a way that brings the reader to the event. This course will teach students to dig deeper for a more meaningful storyline and avoid simply repeating statistics and scores. Students will learn how to approach each assignment with a planning process before, during, and after the game that will help them assess and master the story on a deadline.
This course has a heavy focus on collaboration, scripting, research, and communication skills. Students will prepare, conduct, and edit sports-related interviews; compose scripts for internet-based sports broadcasts; analyze and review game reels; learn rules for various sports being studied; and interact with professionals in sports broadcasting.
Pre-requisites: ENG105 AND SPT125

Objectives:

1. Define sports broadcasting media and techniques.
2. Analyze media trends and their impact on sports broadcasting, including gender and minority representation.

Objectives:

3. Develop audio-visual scripts using research and data to support the information being presented.

4. Participate in pre-production of sporting events, including discussing goals, job assignments, places to film, topics to research, questions to ask, and deadlines for project completion.

5. Create digital media, radio, and web content to engage audiences of various sports.

SPT 215 Sport Leadership

Students will identify current issues in the sport industry and analyze various leadership models to determine appropriate solutions. After reviewing key management concepts and behavioral considerations for employees and organizations, students will explore ethical approaches to increasing performance in various settings. A unique combination of coaching techniques and leadership theories will help students recognize connections between business and sports in applicable and logical ways. (3 credits) Pre-requisites: SPT125 and PSY105

Objectives:

1. Analyze current issues in the sport industry from a managerial perspective, including topics related to diversity such as racial discrimination, transgender athletes, and gender bias in sports leadership roles.

2. Assess environmental factors in the sport industry and how they can impact various leadership models/approaches.

3. Demonstrate effective knowledge of leadership theories relating to effective communication, building healthy relationships, and improving performance across diverse groups.

4. Formulate and defend a coaching strategy that puts employees and athletes first, while also considering business implications.

5. Explain how psychology is integral to improving performance in the sport industry.

SPT 220 Sport Marketing

SPT220 (formerly MKT220)
Students in this course will receive an in-depth view of marketing practices, procedures and operations as they pertain to professions, college and recreational sport organizations and enterprises. The course will familiarize students with the challenges of sponsorship, merchandising, sport consumer demographics and behavior. Students will explore branding, sales and service, engagement and activation, community relations, social media, legal issues, integration, and the future of sport marketing. (3 credits) Prerequisite: MKT105

Objectives:

1. Identify and reflect on the distinctions among the 5 P's of sport marketing (product, price, promotion, place, and people).

2. Investigate and explain what makes sport marketing and the sport consumer unique; the role of public relations in the sport industry will be addressed.

3. Recognize the role of research in developing a marketing plan, including a focus on consumer demographic and behavior.

4. Identify the impact of product styles and trends on licensing and sponsorships.

5. Recognize factors that influence promotional strategies, including the use of social media.

SPT 225 Coaching Mgmt Principles

SPT225 (formerlly MKT225)
Coaching Principles is being offered through the American Sports Education program (ASEP) in union with Lackawanna College with the purpose of developing sound, safe, educational practices in coaching. It is the intention of this course to teach coaching ethics to those who aspire to become coaches. This course is also designed to create a positive model for improving and maintaining the quality and safety of all athletes through athletic experiences. The course also includes a comprehensive self-study in order to gain the necessary learning requirements to become a certified and registered coach with the ASEP and the National Registration Association. (3 credits)

Objectives:

1. Students will be able to describe the dynamic effect and influence coaching has on a persons' life.

2. Students will be able to identify the needs of athletes as they grow through different stages in physical, psychological and social development.

3. Students will be able to describe the need for good character and sportsmanship.

4. Students will be able to explain the harmful effects of substance abuse and the importance of abstention.

5. Students will be able to formulate and defend a coaching philosophy that places students first and winning second.

6. Students will be able to explain the need for playing sports to be fun, enjoyable and a rewarding lifetime experience.

SPT 230 Sport Facility and Event Management

SPT230 (Formerly MGT 227)
This course is designed to provide information on managing Sport Facilities and the events that they host. A major emphasis will be on identifying management strategies and tactics while focusing on communication, relationship and leadership theories. Business effectiveness and ethics principles essential within the sport facility & event management culture will be analyzed and discussed. Branding, marketing, selling, customer relations, public relations, media relations, business negotiations scheduling, staff management and the implementation of action plans will be stressed. (3 credits)

Objectives:

1. Demonstrate the concepts of strategic planning, resource allocation, and how to think critically about issues involving sport facility and event management.

2. Analyze challenges related to sport facility and event management and identify teamwork skills to promote collaborative communication for problem solving.

3. Demonstrate effective knowledge of leadership theory relating to the essentials of communication, relationships, and performance related to sport facility and event management.

4. Explain how sport facility and event management is connected with important spheres of social life such as education, politics, economics, media, technology, sports, family, and community.

5. Analyze ethical principles and environmental forces to identify how they affect sport facility and event management.

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Social Science

SSC 105 Intro to Sociology

SSC 105 (Formerly SS 141) - Introduction to Sociology This course is an introduction to the basic principles of the study of human behavior in society, including culture, social structure, analysis of social interaction, socialization and social change (3 Credits). SSC105 HONORS: This course is an introduction to the basic principles of the study of human behavior in society, including culture, social structure, analysis of social interaction, socialization and social change. Student listed as honors students will have increased requirements including being required to conduct a primary research project as well as learn about the benefits of sociological concepts in understanding behavior thorough a social service project.

Objectives:

1. Explain how sociologists seek to explain human behavior.
2. Discuss the origins of sociology as a discipline and the major theories that are influential today.
3. Describe how sociologists do research.
4. Identify the major elements of culture and the influence of culture on human behavior.
5. Describe how society is structured and organized.
6. Discuss the process of socialization and the major agents of socialization.
7. Define and explain the concept of deviance, including the major theories of deviant behavior.
8. Describe how society is stratified and the impact of stratification on life chances.
9. Discuss issues of race and ethnicity.
10. Describe how the family should function as an agent of socialization.
11. Describe how the institution of education functions as an agent of socialization.
12. Define and discuss the major theories of social change.

SSC 110 Sociology of the Family

This course is a comparative and contextual study of marriage and family institutions; including couples gender roles, marriage, divorce, sexuality, power, violence, parenting, working, and multi-cultural orientations

Objectives:

1. Identify the current sociological trends and issues in marriages and families.
2. Describe the viewpoints of the major theoretical approaches to marriages and families.
3. Discuss the cultural variations and influences on marriages and families.
4. Explain influences and issues in parenting and child socialization.
5. Analyze the concerns associated with developmental stages of families.
6. Discuss trends and issues in divorce and re-marriage.
7. Explore the trends and issues in family abuse.
8. Identify community, child and family services.

SSC 115 Leadership in Schools and Community

This course is designed as an introduction to the basic concepts of leadership. A review of such topics as the myths of leadership, the current theories regarding leadership, leadership styles and the characteristics and behaviors of successful leaders will be examined. An emphasis will be placed on leadership roles and opportunities in schools and community agencies. This course fulfills one third of the sequence of courses specified for the completion of the PA Director's Core Credential. Ten hours of field observation/work is required. (3 Credits)

Objectives:

1. To identify and discuss current theories of leadership.

2. To discuss the similarities and differences between management and leadership.

3. To examine leadership styles and attempt to place themselves in one of the approaches.

4. To observe leadership opportunities in schools and community agencies and weigh the techniques, styles, communication strategies and responsibilities of working professionals in leadership positions.

5. To review the characteristics and behaviors of a successful leader and problem-solve "real-life" leadership issues referencing what they have discovered.

SSC 130 Child, Family & Community

SSC130 - This course focuses on how to establish and maintain respectful, collaborative relationships among diverse families, schools and/or centers and communities. Students will review the ways in which these collaborrative relationships enhance the educational, emotional, social and physical experiences of all children, including those with special needs. This course also emphasizes how to use commumnity connections and mutual resources to enhance daily lessons and the learning environment. Consideration for using community connections to help facilitate appropriate referrals and enhance a supportive environment is also discussed. Ten hours of field work is required. (3 Credits)

Objectives:

1. To identify and analyze factors that influence the growth, development, and socialization of the child – including parenting styles, the media, peer groups, religion, schooling and culture.

2. To develop strategies for building family-teacher-community partnerships that include early childhood agencies benefitting all children and families, including those of diverse backgrounds and developmental abilities.

3. To recognize the possible environmental hindrances to optimal child development and to devise classroom strategies for intervention.

4. To identify, compile, and evaluate community resources and agencies that provide health, education and other services to families and early childhood programs.

5. To demonstrate the ability to create lesson plans that are enhanced by the use of community/parent resources.

SSC 205 Deviant Behavior

This course presents a theoretical and empirical overview of the nature and meaning of deviance, examining in detail a number of forms of behavior commonly regarded as deviance. It considers functions and dysfunctions of deviance in society and gives particular emphasis to the process whereby individuals learn deviant lifestyles. Topics that will be explored range from crimes of interpersonal violence, white-collar and corporate crime, drug use and addiction, to drunkenness and alcoholism, to mention a few. Special attention is given to noncriminal forms of deviance.
This course also examines crime and delinquency, family problems, race relations, health and medical needs, poverty and unemployment, urban and rural problems, religious differences, over-population, under-education, and social pathologies. The emphasis is on understanding the implications of social problems and their effect on society. This course also helps students see the effects of social problems and to examine their own attitudes, beliefs, and behaviors that apply to each topic. (3 Credits)

Objectives:

1. Identify and explain the leading theories and sociological orientations of deviant behavior.

Objectives:

2. Interpret the meaning of deviant behavior in the context of the acquisition of all behavior.

3. Recognize the issues of social control that are of great contemporary concerns, such as drugs and violence, both personal and family.

4. Recognize some of the "newer" forms of deviance, including eating disorders such as anorexia and bulimia.

5. To assess the impact of technology on both deviant behavior and its control.

SSC 210 Social Problems

SSC 210 (Formerly SS 241) - Social Problems

This course examines crime and delinquency, family problems, race relations, health and medical needs, poverty and unemployment, urban and rural problems, religious differences, over-population, under-education and social pathologies. Emphasis is on understanding the implications of social problems and their possible amelioration (3 Credits).

Objectives:

1. Explain what constitutes a social problem and examine existing attitudes toward social problems.

2. Examine the structural-functionalist, conflict, and symbolic interactionist theoretical perspectives, explain the fundamental concepts of each of these perspectives, and use these concepts to help explain and solve social problems.

3. Analyze the nature of special interest groups, causes of crime, and treatment of criminal offenders, criminal activities, and family problems.

4. Examine poverty and economic inequality, issues of unemployment, and problems in education.

5. Examine race, ethnicity, immigration and gender inequality and discuss sexual orientation and issues of discrimination.

6. Identify health and medical care problems and solutions.

7. Explain how social class and family background affect American educational performance and attainment.

8. Explain from the conflict perspective, how wealth, power, and the pursuit of profit underlie many environmental problems.

9. Describe the impact of the computer revolution and the Internet on U. S. society and the global community.

10. Examine war and the aftermath of world conflict; define terrorism and tactics used by terrorists.

SSC 225 Sport in American Society

SSC 225 (Formerly MG 214) – Sport in Society

This course is designed to provide basic understanding of the central historical developments and social processes that explain the widely popular yet disparate sporting experience of amateur and professional athletes in today's global community. While considerable emphasis is given to socialization and stratification issues, the course also considers the relationship of sport and recreation to media, ethics, economics, and politics (3 Credits).

Objectives:

1. Outline the history of sports.

2. Discuss sports and children, gender and sports, sports and money, and power in sports markets.

3. Explain the importance of sport and its impact on society, racially and ethnically as a whole.

4. Recognize why the media needs sport and sport needs the media in our social structure.

SSC 235 Cultural Anthropology

This course introduces how the human societies and their cultures of varying level of development in the world and evolved as those of today; reviews and analyzes different societies' social institutions and other elements of culture. Reviews how each society undergoes her adaptation process with its natural and intellectual environment, and how diffusion process that brings cultural and social change. (3 Credits)

Objectives:

1. Explore the impulse to find out who we are and where we came from.
2. Explain how and why the discipline emerged and developed.
3. Recognize the fallacies of racial and cultural superiority and to shed more light on human nature.
4. To identify the subfields of anthropology and understand their purpose and practice.
5. To appraise how anthropologists conduct their research and the limits on such research.
6. To recognize anthropology's relationship to the "hard sciences" and to humanities.
7. To explain some of the ethical issues that confronts anthropologists today.

SSC 260 Race and Ethnic Relations

This course focuses on historical and contemporary examples of racial and ethnic relations and ethnic conflict. We will examine the changing ethnic and racial makeup of the United States, in the context of theoretical debates in the course literature, with special attention towards comparative and historical analyses and social structure. We will also consider case studies of foreign countries to study ethnic relations and ethnic conflict abroad. (3 Credits)

Objectives:

1. Recognize how social dynamics, such as prejudice and discrimination, have affected the participation of ethnic minorities in American society.
2. Demonstrate an understanding of the nature, possible causes and effects of prejudice, the dangers of stereotyping and the different aspects of institutionalized discrimination.
3. Appraise current ethical and moral issues relevant to inter-racial/inter-ethnic interactions in the context of recent history.
4. Recognize the theories of ethnic relations in order to have a coherent framework within which to examine specific ethnic groups in America.
5. Examine how past and present discrimination can account for inequality in the distribution of resources among various ethnic groups.

SSC 300 Social Science Internship I

Social Science Internship 1
Integrates academic knowledge with applied professional experience through supervised field placement in an approved agency or organization. Student interns are expected to practice and expand upon their knowledge and skills learned in the classroom in a hands-on work environment. This experience should provide a better understanding of the Social Science field while facilitating the transition from the classroom to the career environment. Completes 120 hours. (pre-req Employment Skills Workshop). Prerequisite: ESW101

Objectives:

1. To provide students with a renewed and deeper perspective of classroom learning.
2. To provide students with an opportunity to apply classroom learning in a professional setting.
3. To encourage students development of a professional identity.

Objectives:

4. To assist students in developing and enhancing appropriate professional skills and values.
5. To allow students to identify and clarify career interests.

SSC 310 Human and Economic Geography

This course explores the different cultures of the world from an economic perspective. Language, religion, and the arts are related to the location, distribution, and spatial organization of economic activities to explain how and why people function as they do in the areas in which they live. Topics include the components of culture, agricultural and urban life, standards of living, the role of technology, spatial structure and interaction, and the global economy. (3 credits)

Objectives:

1. Relate the components of culture to the economic characteristics of a society.
2. Contrast agricultural and urban lifestyles.
3. Identify societal controls on spatial organization and movement.
4. Describe how technology affects economic status and standards of living.
5. Explain how the global economy affects, and is affected by local and regional cultures.

SSC 320 Mind, Self, and Society

This course will explore the relation of the individual to the sociocultural environment, with special reference to personality development, interpersonal role behavior, motivation, and social attitudes. (3 credits)

Objectives:

1. Understand the relationship between individuals and the society in which they live.
2. Explore the diversity of the human self to be aware of the impact one's surroundings can have.
3. Read, analyze, and understand how we change our attitudes and behavior; and social cognition involves our own understanding of our own behavior and motivations.
4. Recognize the validity of the relationship between mind and society using relevant theories and methods.
5. Demonstrate an understanding of the theories that sociologists use as conceptual tools for the study of social life.

SSC 325 Crisis Intervention

Survey of the current crisis intervention literature and introduction to the theories, principles, concepts, and techniques of crisis intervention. Upon completion, students should be able to predict who may need crisis intervention services and demonstrate the provision of first order crisis intervention.

Objectives:

1. To evaluate and apply theories, principles, concepts, and techniques of crisis intervention in social, therapeutic and business settings.
2. To engage in and evaluate first order crisis intervention skills.
3. To conduct and report in writing (APA format) research relevant to crisis intervention

SSC 330 Political Sociology

This course will explore the general sociological perspective on the social bases of politics in their historical context, theoretical tradition, and empirical focus. Students will explore four major topics including 1) issues in political thought; 2) social bases of politics, socialization and ideology; 3) power; and 4) political participation. The course will examine consequences of the social organization of power for other elements of society. (3 credits)

Objectives:

1. Analyze the politics of social structure such as class, race and ethnicity, and gender to highlight changing social values and attitudes.
2. Understand processes of political engagement and participation.
3. Identify the causes and consequences of the imbalance of power in social systems.
4. Examine how individuals influence the institutional structure through revolutions, democratization, and the establishment of welfare states.
5. Form debatable arguments to indicate an understanding of the social organization of power in society.

SSC 340 Cultural Diversity in CJ

Examination of current issues and social problems relating to the administration of justice in a culturally diverse society. Special focus of the course will be on the changing ethnicity of communities and related changes in social and institutional public policy. Also discussed is a cross-cultural communication, implementing cultural awareness training, multicultural representation in law enforcement, and criminal justice interaction with various racial and ethnic groups. (3 Credits) Prerequisite: SSC210 OR SSC260

Objectives:

1. Describe the cultural diversity issues facing police, courts, and corrections in the criminal justice system.
2. Explain the changing ethnicity of communities and related changes to social and institutional policy.
3. Articulate the roles and functions of police, courts, and corrections in a culturally diverse society.
4. Describe the legal, ethical and historical considerations associated with involvement in a diverse society.
5. Explain, evaluate and apply important theories and policies regarding cultural diversity issues.

SSC 400 Social Science Internship II

Social Science Internship 2
Integrates academic knowledge with applied professional experience through supervised field placement in an approved agency or organization. Student interns are expected to practice and expand upon their knowledge and skills learned in the classroom in a hands-on work environment. This experience should provide a better understanding of the Social Science field while facilitating the transition from the classroom to the career environment. Completes 120 hours. Prerequisite: ESW101 AND SSC300

Objectives:

1. To provide students with a renewed and deeper perspective of classroom learning.
2. To provide students with an opportunity to apply classroom learning in a professional setting.
3. To encourage students development of a professional identity.
4. To assist students in developing and enhancing appropriate professional skills and values.
5. To allow students to identify and clarify career interests.

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Sustainability

SUS 105 Principals of Sustainability

SUS105
Principles of Sustainability will introduce students to the concepts of sustainability including examining current issues within our environment, society, and the economy. A brief summary of the historical events of sustainability and the Brundtland definition of sustainability will be covered. This course encourages students to use systems thinking and problem-solving skills to gain a deeper understanding of the complexity of sustainability. Students will start their Sustainable Project Proposal, which will be due at the end of the Sustainable Project Proposal course. (3 Credits)

Objectives:

1. Articulate the fundamental knowledge of sustainability.
2. Apply Maslows hierarchy of needs in relation to sustainability.
3. Identify historical events leading to sustainability.
4. Analyze current environmental, social, and economic issues.
5. Examine the interconnectedness of human interactions and the natural world.
6. Relate sustainability to different businesses and industries; corporate business, travel, hospitality, food, transportation, healthcare, teaching, management, and science.
7. Relate sustainability to their personal and professional experiences.
8. Discover sustainability's role in a prosperous 21-century society.
9. Originate ideas and decide on a topic for each student's Sustainability Project Proposal due at the end of the Sustainable Project Proposal course.

Technology

TEC 105 Information Technology Management

TEC105 (Formerly CIS105) – Information Technology Management - This course is an introduction to personal computer software packages used in business-related applications. It acquaints students with the organization and operation of computer systems and the important role they plays in a student's professional preparation, and overall success. Focus will be placed on the development of skills using Windows and Google, word processing, spreadsheets, presentation applications, the World Wide Web, web browsers, search strategies, and the social and ethical aspects of the impact of computers on society. Extensive work on the student's own computer or in the college's computer labs is required. (3 credits)

Objectives:

1. Correctly use Canvas, Starfish, and Falcons email.
2. Develop search strategies, including multiple web browsers and databases, to find and evaluate scholarly articles and other course related research.
3. Prepare, format, and edit, in Microsoft Word and Google Docs, a research paper with citations and references.
4. Create and edit a presentation, in Microsoft PPT and Google Slides, with clip art, pictures, shapes, word art, media, transitions, and audio.
5. Create a worksheet, in Microsoft Excel and Google Sheets, with an embedded chart, using formulas, functions and what-if analysis.
6. Demonstrate the ability to share files and update files in real-time with classmates using Google Docs, Sheets, and Slides.

Objectives:

7. Define cyber threats and the actors responsible for possible attacks, focusing on the social and ethical impact on society.

Vascular Clinical

VCL 105 Vascular Clinical I

VCL 105 Vascular Clinical I - Students with some working knowledge of the equipment utilized in the Ultrasound Laboratory will gain basic entry-level knowledge of the overall operation and function of the Ultrasound Lab. This integrated clinical rotation along with in-house lab time will allow the students exposure to all areas of the ultrasound laboratory. This will include supervised experience to equipment and basic scanning techniques through observation, assistance with procedures and hands-on instruction. Through this experience, the student will learn how the Ultrasound Lab functions in the overall assessment and treatment of individuals with suspected or documented disorders. Prerequisite classes; HTH125, HTH105, MAT120, HTH100, CIS105, HTH135 AND ENG105 OR CIS115, MAT120, HTH105, HTH135, ENG105, HTH125 AND HTH100

Objectives:

1. Maintain proper dress code as stated in handbook.
2. Use professional judgment and discretion, protect patients privacy rights, maintain confidentiality, and perform within the scope of practice.
3. Obtain a pertinent patient history and physical examination.
4. Identify and complete the appropriate technical worksheets used in the patient evaluation.
5. Identify and explain the function of equipment utilized.
6. Use a stethoscope for auscultation.
7. Obtain blood pressure readings using a stethoscope.
8. Demonstrate proper placement of blood pressure cuffs in the clinical setting.

VCL 110 Vascular Clinical II

VCL 110 (Formerly CV 102) – Vascular Clinical II

Students will continue to build their clinical experiences by expanding their time observing and participating in more technical duties solely in the Vascular Laboratory (3 credits). Prerequisites: VCL105. VCL110 can be taken concurrently with VST110, VST205, HTH145 and VST125

Objectives:

1. Maintain proper dress code as stated in handbook.
2. Use professional judgment and discretion, protect patients privacy rights, maintain confidentiality, and perform within the scope of practice.
3. Calculate an ankle-brachial index (ABI).
4. Complete History and Physical to include proper limb measurements, blood pressures, and pulses, etc.
5. Perform all duties as assigned by office staff specific to the laboratory.
6. Perform proper billing and coding procedures as assigned specific to the laboratory.
7. Perform limited and/or complete non-invasive testing with supervision to include: Non-invasive extremity arterial testing protocol, Non-invasive extremity venous testing protocol, Non-invasive abdominal testing protocol, and Non-invasive cerebrovascular testing protocol.

Objectives:

8. Perform all required competencies for Clinical II as listed in the student handbook.

9. Become proficient in the cognitive, technical, and professional skills as a Clinical II Vascular Sonography Student as listed in the student handbook.

VCL 205 Vascular Clinical III

VCL 205 Vascular Clinicl III

Having completed prerequisite courses both in observational integrated clinical and vascular laboratory clinical rotations, and successful completion of all core vascular and general education courses the student will gain basic entry-level skills and knowledge in the Vascular Lab. In this final semester, the students will undertake intensive clinical training utilizing all prior skills obtained in didactic and practical application. The student will refine scanning skills and gain experience. Execution of sonographic examinations will be performed under direct and indirect supervision of the qualified clinical instructor. The student will be solely in the clinical environment preparing for their future career. By integrating didactic and laboratory skills learned in the classroom and lab, the student will improve their practical skills and overall knowledge necessary to obtain an entry-level position in the field of Vascular Sonography. Students must complete the following prerequisite classes VCL110, COM125, VST125, VST110, VST205, HTH145 AND ENG110

Objectives:

1. Maintain proper dress code as stated in handbook.

2. Use professional judgment and discretion, protect patient's privacy rights, maintain confidentiality, and perform within the scope of practice.

3. Successfully perform 4 graded practice exams to be graded by the preceptor on the following specialty examinations: Cerebrovascular testing protocol, Lower extremity arterial testing protocol, Lower extremity venous testing protocol, Upper Extremity Arterial Evaluation, Upper Extremity Venous Evaluation, Venous Mapping, Renal Artery Evaluation, Mesenteric Arterial Evaluation, Abdominal Venous Evaluation, Aorto-Iliac Evaluation, Dialysis Access Evaluation, Intracranial Arterial Evaluation (TCD), Bypass Grafts

4. Successfully perform a final graded challenge exam to be graded by the preceptor on the above-mentioned specialty examinations. * In the event the student is unable to fulfill the competency demonstrating a specific pathology listed above through no fault of the student, (i.e. study volume), the student will have the opportunity to answer questions and demonstrate scan protocol through a simulated examination in the presence of either the Clinical Coordinator or Site Clinical Preceptor.

5. Apply the appropriate diagnostic criteria to each of the above listed testing protocols.

6. Successfully complete the Professionalism challenge.

7. Provide a complete and accurate assessment of all testing findings in a preliminary impression.

8. Describe and/or demonstrate appropriate procedures for assuring the accurate and timely interpretation of studies according to the clinical sites policies.

9. Assist and perform daily duties as assigned by clinical site Preceptor/instructor.

10. Demonstrate proficiency in all required competencies as listed in the Clinical Binder.

11. Maintain clear and accurate records/forms as required in the Clinical Binder.

12. Submit accurate and concise paperwork in a timely manner as required by the Clinical instructor (i.e., log sheets, timesheets, evaluation sheets, competencies, final summary sheets including hours and study volumes).

Vascular Technology

VST 110 Cerebrovascular D&A

VST 110 (Formerly VS 110) – Cerebrovascular Disease and Assessment

Students will learn gross and microscopic anatomy and physiology of the cerebrovascular system. A review of common and uncommon pathology associated with cerebrovascular disease will be learned. Complete testing protocols will be reviewed and practiced in the classroom and lab, while preparing the student to assess patients. Various diagnostic evaluations and treatment options will be discussed. (3 credits). Prerequisite: VCL 105. This must be successfully completed before a student may enroll in VST 110, VST 125, VST 205, HTH 145 and VCL 110.

Objectives:

1. List and identify normal and abnormal cerebrovascular anatomy.
2. Describe the cerebrovascular physiology.
3. Explain the physics related to cerebrovascular testing.
4. Describe various types of cerebrovascular pathophysiology.
5. Perform a complete carotid artery and TCD protocol demonstrating gray scale, color Doppler and pulsed Doppler spectral analysis.
6. Define the diagnostic criteria and appropriate indicators for carotid artery interpretation.
7. List various diagnostic studies for cerebrovascular disease explaining the advantages and disadvantages of each.
8. Describe various treatment options of cerebrovascular disease.
9. Describe various treatment options, including pharmacological, lifestyle changes, interventional procedures and surgeries.

VST 112 Upper Ext Arterial D&A

VST 112 (Formerly VS 112) – Extremity Arterial Disease and Assessment

Students in this course will learn the gross and microscopic anatomy of the peripheral arterial system, as well as normal and abnormal function and pathology of the arteries. Complete testing protocols and diagnostic criteria will explained and demonstrated in the classroom and laboratory setting, while applying the physical principles related to the peripheral arterial system. Various diagnostic evaluations and treatment options will be discussed. (3 credits). Prerequisites: HTH125 and HTH105 and MAT120 and HTH100

Objectives:

1. List and identify the normal and abnormal upper peripheral arterial anatomy.
2. Describe the upper extremity arterial physiology, including pathophysiology, hemodynamics and exercise physiology.
3. Describe various types of arterial disease and dysfunction and their effects on hemodynamics.
4. Describe various treatment options, including pharmacological, lifestyle changes, interventional procedures and surgeries.
5. Demonstrate and explain arterial procedures and protocols using proper use of diagnostic techniques.
6. Define the diagnostic criteria and appropriate indicators for arterial examinations.
7. List various diagnostic studies for upper arterial disease explaining advantages and disadvantages of each.
8. List the importance of laboratory values and other modalities.
9. Demonstrate proficiency and understanding in the use of quantization principles as they apply to arterial testing.

VST 113 Ext Venous D&A

VST 113 (Formerly VS 113) – Extremity Venous Disease and Assessment

Students in this course will learn the gross and microscopic anatomy of the peripheral venous system, as well as normal and abnormal function and pathology of the veins. Complete testing protocols and diagnostic criteria will explained and demonstrated in the classroom and laboratory setting, while applying the physical principles related to the peripheral venous system. Various diagnostic evaluations and treatment options will be discussed.
(3 Credits) Prerequisites: HTH125 and HTH105 and MAT120 and HTH100.

Objectives:

1. Describe the upper and lower extremity venous physiology, including pathophysiology, hemodynamics and exercise physiology.

2. Describe various types of venous disease and dysfunction and their effects on hemodynamics.

3. Describe various treatment options, including pharmacological, lifestyle changes, interventional procedures and surgeries.

4. Demonstrate and explain venous procedures and protocols using proper use of diagnostic techniques.

5. Define the diagnostic criteria and appropriate indicators for venous examinations.

6. List various diagnostic studies for upper and lower venous disease explaining advantages and disadvantages of each.

7. List the importance of laboratory values and other modalities.

8. Demonstrate proficiency and understanding in the use of quantitation principles as they apply to venous testing.

VST 115 Lower Extremity Arterial Dis & Ass

Students in the course will learn the gross and cross sectional anatomy of the lower peripheral arterial system. Students will review the physiology associated with peripheral arterial anatomy and study the pathology commonly found in the peripheral arterial disease. Complete testing protocols will be explained in the classroom and practiced in the lab while reviewing the physical principles of physics related to peripheral arterial disease. Finally various diagnostic studies and treatment options will be discussed. (3 Credits)

Objectives:

1. List and identify the normal and abnormal lower peripheral anatomy

2. Describe the lower extremity arterial physiology, including pathophysiology, hemodynamics and exercise physiology.

3. Describe various types of arterial disease and dysfunction and their effects on hemodynamics.

4. Describe various treatment options, including pharmacological, lifestyle changes, interventional procedures and surgeries.

5. Define the diagnostic criteria and appropriate indicators for arterial examinations.

6. List various diagnostic studies for lower arterial disease explaining advantages and disadvantages of each.

7. List the importance of laboratory values and other modalities.

8. Demonstrate proficiency and understanding in the use of quantitation principles as they apply to arterial testing.

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VST 125 Ab Vas D&A

VST 125 (Formerly VS 125) – Abdominal Vascular Disease and Assessment

Students in this course will learn the gross and microscopic anatomy of the abdominal arterial and venous systems, as well as normal and abnormal function and pathology of blood flow to the organs of the abdomen. Complete testing protocols and diagnostic criteria will explained and demonstrated in the classroom and laboratory setting, while applying the physical principles related to abdominal vasculature. Various diagnostic evaluations and treatment options will be discussed. (3 credits). Prerequisite: VCL 105. This must be successfully completed before a student may enroll in VST 110, VST 125, VST 205, HTH 145 and VCL 110

Objectives:

1. The student must achieve an overall minimum average grade of 82.

2. Students will be required to complete an additional 20 hours of lab time outside of classroom instruction.

3. This course is a lecture course with a lab component. Students will learn by participating during group discussions, practical experiences and by assimilation of material presented in lecture.

4. Students may check out materials in the Learning Resource Center. There is access to professional journals, books, and the Internet.

5. Students will be required to perform a hands-on examination towards the completion of the semester. This grade will be averaged in with the 'lab time' accounting for 5%.

8. Describe various treatment options of abdominal vascular disease including pharmacology and interventional procedures.

VST 205 Lab Management

VST 205 (Formerly VS 205) – Vascular Lab Management

Students will learn the basics of vascular lab management, including quality assurance, statistics, and leadership. Students taking this course will learn the essential function of a vascular laboratory to prepare them for various situations that they might encounter once employed. Additional topics include reimbursement, education, leadership, and customer service. (2 credits). Prerequisite: VCL105

Objectives:

1. Demonstrate knowledge and appropriate patient safety procedures and techniques.

2. Demonstrate knowledge of scanning ergonomics and personal safety.

3. Explain the purpose and value of quality assurance.

4. Explain how to implement a quality assurance program.

5. Explain the AIUM's statement of the safety effects of ultrasound.

6. Explain the purpose of quality control, equipment safety and maintenance.

7. Explain the role of the test phantom.

8. Describe the nature of data and statistical methodology.

9. Define true positives and true negatives as well as false positives and false negatives.

10. Define positive predictive value and negative predictive value and overall accuracy.

11. Using data, set up a Chi-square and calculate true, positives, true negatives, false positives, false negatives, NPV, PPV and over all accuracy.

12. Discuss credentialing bodies and the importance of ultrasound/vascular societies and organizations.

Objectives:

13. Demonstrate proper writing skills for technologist findings and preliminary readings.

Writing

WRT 305 Writing Workshop

This workshop is an introduction to the writing process. Students will spend sixteen weeks writing, discussing and revising fiction and non-fiction works. We will work as a writing community, constantly critiquing and honing writing skills. Students will be required to create a digital portfolio of their finished works. (4 credits)
Pre-requisite: ENG105

Objectives:

1. Read and analyze various authors' works from creation to final product.
2. Apply revision techniques to their own writing pieces.
3. Recognize their writing strengths and weaknesses through participation in peer review and one on one conferences with their professor.
4. Create their digital writing portfolio.

WRT 315 Seminar in Writing and Revision

To become better writers, students will be asked to take an in-depth look at their works and writing process. Revision techniques will be discussed and practiced allowing students to find their own personal revision method. (3 credits)
Prerequisite: ENG105

Objectives:

1. Select their own writing pieces for revision.
2. Create their own portfolio displaying their revision process.
3. Assess peer writing for the revision process.

WRT 410 Nonfiction Workshop

Students with a focus on nonfictional writing will study and create a variety of contemporary nonfictional writing pieces, like the feature article, technical pieces, the op. ed. and other various genres of non-fictional writing. Students will be required to participate in a writing gallery showcasing their works. (3 credits) Prerequisites: ENG105 and ENG305

Objectives:

1. Demonstrate an expertise in the writing process: planning, drafting, revising, editing, and creating non-fictional works.
2. Explore non-fictional works from classic and contemporary authors.
3. Critique their own style of writing as well as the writing of their peers.
4. Produce works intended for their final seminar in writing.

WRT 440 Research Writing and Methodologies

This course will introduce students to scholarly research in the field of writing. Students will develop an original research proposal, using a variety of methods while introduced to the foundation knowledge of research methods used in writing. This course will prepare students for research writing at the graduate level. (3 credits)
Pre-requisite: ENG 105 and WRT305 *Students must be in their second to last or last semester of the BA program.

Objectives:

1. To engage in formulating researching-based questions and topics.
2. To understand the different debates and issues underlying the research process and how this relates to the specific methods and how to select appropriate methods to conduct a study.
3. To interrogate the validity and credibility of sources and which sources to use in a research-based project.
4. To demonstrate critical thinking, research, and writing skills.

WRT 441 Senior Seminar in Writing

This course is for professional studies- writing track majors. Students will prepare a written proposal prior to the start of class and submit it to the senior seminar writing advisory board. The proposal will explain the student's writing intent for the semester. Once approved, the students in this course will produce a final writing piece under the mentorship of the professor assigned to the course. Students will have a significant writing piece to leave Lackawanna College with.(4 credits) Prerequisites: ENG105, ENG305 and WRT305

Objectives:

1. Create a significant piece of writing to use as a springboard for their writing careers.
2. Review each other's work in a peer review process under the mentorship of their professor.
3. Revise each piece under the direction of peers and professor.