



## **Natural Gas Technology**

In the summer of 2009, Lackawanna College announced the development of a new degree program that began at the New Milford Center in the fall of that year. The degree program is in response to the recent emergence of potential employment through the exploration of resources in the Marcellus Shale Natural Gas Reserves located in Northeast Pennsylvania and the Southern Tier of New York State.

The Natural Gas Technology Associate's Degree program has been developed in cooperation with the natural gas industry to prepare students for a career in the operations segment of the natural gas industry. The program, which began in fall 2009, will prepare students to be operations technicians that will be responsible for the production and processing of natural gas once wells have been completed. Students will learn the full spectrum of natural gas discovery, drilling, production, processing equipment and principles, and marketing plus OSHA safety requirements and computer skills necessary for technician level positions. Instruction will include hands-on teaching with gas field equipment and a summer internship with 12 weeks of actual field experience with a gas producing company.

For more information about this degree program and other general information, please call Lackawanna College's New Milford Center at 570-465-2344 or check out the Lackawanna College website at [www.lackawanna.edu](http://www.lackawanna.edu)

You can also learn more information about the Marcellus Shale Natural Gas Reserve and the extraction process by accessing their website at [www.PaMarcellus.com](http://www.PaMarcellus.com).

## **Enrollment and Acceptance Criteria**

Lackawanna College will begin accepting applications for the New Natural Gas Technology program immediately. Candidates for this major will be selected on a *rolling admissions basis*. A total of between 20-25 candidates will be accepted into the program for the fall 2010 semester.

It is recommended that students considering this Associate's Degree program be highly motivated to succeed, committed to learning, be willing to work outdoors in both good and inclement weather, and have a mechanical aptitude upon entry.

Natural Gas Technology applicants must submit the following to be considered for acceptance into this program:

- Lackawanna College application and required \$30 application fee to the Lackawanna College New Milford Center by June 15, 2010
- Copy of Official High School transcript or copy of GED certificate and/or score report.
- An official SAT/ACT score report with math scores of 450/20 respectively. An optional placement exam may be required for students without aptitude test scores or transfer credits.
- Official Transcripts from previously attended college/university if you are a transfer applicant.

Upon receipt of all above required documents, a representative from the Lackawanna College New Milford Center will contact selective individuals for an admissions interview. Official acceptance will be determined for qualified applicants once the interview process is complete. For further regarding the degree program or the enrollment process, please contact the New Milford Center at (570) 465 2344.

## NATURAL GAS TECHNOLOGY PROGRAM

### CURRICULUM GUIDE

#### 1<sup>st</sup> Year

#### Credit Hours

##### 1<sup>st</sup> Semester

NGT 105 Introduction to the Oil and Gas Industry	3
ESC 120 Physical Geology with Lab	4
ENG 115 Business Communications	3
CIS 105 Intro to Computer Apps I	3
MAT 115 Mathematical Reasoning	<u>3</u>
	16

##### 2<sup>nd</sup> Semester

NGT 125 Industrial Safety/OSHA Regulations	4
NGT 130 Natural Gas Handling and Processing	3
NGT 135 Natural Gas Production	3
COM 125 Effective Speaking	3
CIS 210 Computerized Spreadsheets	<u>3</u>
	16

#### Summer

NGT 200 Twelve (12) week internship with industry	2
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#### 2<sup>nd</sup> Year

##### 1<sup>st</sup> Semester

NGT 210 Basic Electronics	3
NGT 220 Gas Well Service, Workover, and Completion	3
ECO 110 Micro-economics (gas industry focus)	3
CIS 240 Micro-Computer Database Mgt. Systems	3
Social Science Elective	<u>3</u>
	15

##### 2<sup>nd</sup> Semester

NGT 225 Instrumentation and Control	3
NGT 215 Pneumatics	3
LAW 150 Environmental Law and Awareness	3
NGT 230 Pipelining (incl. compression and corrosion)	3
Electives	<u>3</u>
	15

Program Total: 64

## PROGRAM OBJECTIVES

The Natural Gas Technology Program is designed to prepare students for work in the production and operations part of the natural gas industry. As a result of their training in this program students will be able to:

- Describe the geologic setting of oil and gas deposits and how they were formed.
- Describe surface and groundwater occurrence, movement, and protection relative to oil and gas development and production.
- Read topographic maps; determine coordinates for locations and find locations by coordinates; describe and define drainage basins; and determine elevations and plot profiles for pipelines, roads, and other features.
- Describe the economic significance of the oil and gas industry worldwide and in the U.S. and state economies.
- Describe the process of energy fuels exploration, discovery, development, production, processing, and marketing.
- Describe the equipment used in natural gas production, processing, metering, and measurement and understand how it works and how to maintain it.
- Describe the environmental laws applicable to the natural gas industry and how the industry complies with these laws in the development and production of natural gas.
- Describe the health and safety laws applicable to the natural gas industry as defined by the Occupational Safety and Health Administration (OSHA) and understand the individual worker's responsibility in complying with these laws on a company and personal level.