

Natural Gas Program Changes – Executive Overview

Changes to the program are being proposed to provide quality instruction for students in order to meet industry standards and requirements.

Rational

16 Hour Certificate: Stop offering this certificate level starting fall 2013. Enrollment in this level has been zero for the past few semesters. To be better prepared for the job market, students enroll in at least the 33 hour certificate to gain sufficient knowledge for an entry level position in industry.

33 Hour Certificate: Current certificate hours will remain the same, but three courses need to have a name change (course description, outcomes and competencies will remain the same):

| Current Course Name: | Proposed Course Name: |
|--|--|
| PETR 1500 Intro to Natural Gas Distribution and Transmission Technologies/Techniques | NATG 1115 Introduction to Gas Technology |
| PETR 1501 Intermediate Natural Gas Distribution and Transmission Technologies/Techniques | NATG 1120 Intermediate Gas Technology |
| PETR 1508 Gas Regulators Operations and Maintenance | NATG 1145 Gas Regulators |

Change to AAS Natural Gas Distribution & Transmission Degree: The above courses will also change the “required” courses for this degree. In addition, a new course “NATG 1170 Natural Gas Flow Measurement and Control” (4 hours) will be added to the required list of courses. This will change the major requirements hours from 30 to 34.

This change will then make the electives go from 17 to 13 credit hours.).

We wish to change the Course Subject to NATG on the following *required* courses:

- ELEC1330 DC Circuit Fundamentals (NATG 1100)
- ELEC1332 AC Circuit Fundamentals (NATG 1105)
- PETR1505 Fundamentals of Natural Gas (NATG 1110)
- PETR1460 Basic Corrosion Field Technician (NATG 1135)
- ELTR1100 Electrical Devices & Controls I (NATG 1125)
- ELTR1105 Intro to Programmable Logic Controllers (NATG 1150)
- PETR1510 Trenching and Excavation Practices (NATG 1160)

Also to the following *elective* courses:

- ELTR1107 Advanced Programmable Logic Controllers (NATG 1155)
- PETR1515 Natural Gas Technician Internship (NATG 1165)
- ELTR1102 Electrical Devices and Controls II (NATG 1130)
- CHEM 1818 Basic Corrosion (NACE Seminar) (NATG 1140)

We wish to change the offering for Oral Communications to read:

COMM 1200 Interpersonal Communications OR COMM 1230 Public Speaking

We wish to change the offering for Mathematics to read:

MATH 1806 Technical Mathematics OR MATH 1828 College Algebra

We also wish to take the following classes off the list of electives:

- PETR 1461-Intermediate Corrosion Field Tech Level II
- All of the MEAS courses will be deleted from the elective area (MEAS1100-Common Technical Skills, MEAS1101-Gas Industry Concepts, MEAS1102-Instrumentation and Controls, MEAS1103-Gas Quality Analysis, MEAS1104-Flow Measurement and MEAS1105-Pressure and Volume Control
- Listing of “Any HazMat Course”

We wish to add the following classes to the list of electives:

- PHED 1229 Scuba Diving (3 hours)
- BSTC 1786 Customer Service (3 hours)
- PSYC 1000 General Psychology
- ECON 1610 Principles of Macroeconomics
- ECON 1615 Personal Finance
- HLTH 1248 Personal & Community Health
- LIFE 1413 Environmental Science
- PHSC 1400 Physical Science
- ACCT 1602 General Accounting
- BUSI 1600 Introduction to Business
- OFTC 1600 Beginning Keyboarding
- HZMT 1914 OSHA General Industry Reg
- HZMT 1917 Dept of Transportation Regs

This program will not be offered online at this time.

Implementation Date: Fall 2013

Revised Curriculum Guides are attached.

Natural Gas Distribution & Transmission



Certificate (Total Credit Hours 33)

| REQUIREMENTS | | | |
|-------------------------------|------|---|-----------|
| <input type="checkbox"/> MATH | 1806 | Technical Math | 3 |
| <input type="checkbox"/> ELEC | 1330 | DC Circuit Fundamentals | 3 |
| <input type="checkbox"/> NATG | 1100 | | |
| <input type="checkbox"/> ELEC | 1332 | AC Circuit Fundamentals | 4 |
| <input type="checkbox"/> NATG | 1105 | | |
| <input type="checkbox"/> PETR | 1505 | Fundamentals of Natural Gas | 3 |
| <input type="checkbox"/> NATG | 1110 | | |
| <input type="checkbox"/> PETR | 1460 | Basic Corrosion Field Technician | 3 |
| <input type="checkbox"/> NATG | 1135 | | |
| <input type="checkbox"/> PETR | 1500 | Intro to Natural Gas Distribution and Transmission Technologies/Techniques <i>Introduction to Gas Technology</i> | 2 |
| <input type="checkbox"/> NATG | 1115 | | |
| <input type="checkbox"/> PETR | 1501 | Intermediate Natural Gas Distribution and Transmission Technologies /Techniques <i>Intermediate Gas Technology</i> | 2 |
| <input type="checkbox"/> NATG | 1120 | | |
| <input type="checkbox"/> ELTR | 1100 | Electrical Devices & Controls I | 3 |
| <input type="checkbox"/> NATG | 1125 | | |
| <input type="checkbox"/> ELTR | 1105 | Introduction to Programmable Logic Controllers | 3 |
| <input type="checkbox"/> NATG | 1150 | | |
| <input type="checkbox"/> PETR | 1508 | Gas Regulators Operations and Maintenance <i>Gas Regulators</i> | 2 |
| <input type="checkbox"/> NATG | 1145 | | |
| <input type="checkbox"/> ENGL | 1200 | Business English | 3 |
| <input type="checkbox"/> PETR | 1510 | Trenching and Excavation Practices | 2 |
| <input type="checkbox"/> NATG | 1160 | | |
| TOTAL | | | 33 |

NOTE: Courses must be taken in this order.

NOTE: Most classes taught in block format M-F 8:00am-5:00pm

Review Date: 04/11

Revision Date: 08/10

Items in red are the requested changes.

Student Name: _____ ID#: _____

Placement Scores: ___ English ___ Math ___ Reading

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Natural Gas Distribution & Transmission



Associate in Applied Science (Total Credit Hours – 64)

GENERAL EDUCATION REQUIREMENTS

WRITTEN / ORAL COMMUNICATIONS

| | | | |
|--------------------------------------|-------------|--|----------|
| <input type="checkbox"/> ENGL | 1200 | Business English | 3 |
| <input type="checkbox"/> COMM | 1200 | Interpersonal Communications OR | 3 |
| <input type="checkbox"/> COMM | 1230 | Public Speaking | |
| <input type="checkbox"/> | | | |
| TOTAL | | | 6 |

HUMANITIES

| | | | |
|--|--|--|--|
| Fine Arts | | | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| Language Arts | | | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| Philosophy / History / Religion | | | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| TOTAL | | | |

SOCIAL and BEHAVIORAL SCIENCES

| | | | |
|--------------------------------------|--|--|--|
| Social Science | | | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| Behavioral Science | | | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| Economics / Political Science | | | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| TOTAL | | | |

NATURAL SCIENCE and MATHEMATICS

| | | | |
|--------------------------------------|-------------|-----------------------------------|----------|
| <input type="checkbox"/> MATH | 1806 | Technical Mathematics OR | 3 |
| <input type="checkbox"/> MATH | 1828 | College Algebra | |
| <input type="checkbox"/> CHEM | 1802 | Fundamentals of General Chemistry | 5 |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| TOTAL | | | 8 |

PHYSICAL EDUCATION (maximum of two credit hours) OR HEALTH (maximum of three credit hours)

| | | | |
|-------------------------------|------|---|----------|
| <input type="checkbox"/> PHED | 1246 | First Aid Emergency Care (1 hour counts toward 15 hour gen ed requirement – 2 hours toward graduation hours) | 3 |
| TOTAL | | | 3 |

REQUIREMENTS for SPECIFIC MAJOR:

MAJOR REQUIREMENTS

| | | | |
|--------------------------------------|-------------|---|-----------|
| <input type="checkbox"/> ELEC | 1330 | DC Circuit Fundamentals | 3 |
| <input type="checkbox"/> NATG | 1100 | | |
| <input type="checkbox"/> ELEC | 1332 | AC Circuit Fundamentals | 4 |
| <input type="checkbox"/> NATG | 1105 | | |
| <input type="checkbox"/> PETR | 1505 | Fundamentals of Natural Gas | 3 |
| <input type="checkbox"/> NATG | 1110 | | |
| <input type="checkbox"/> PETR | 1460 | Basic Corrosion Field Technician | 3 |
| <input type="checkbox"/> NATG | 1135 | | |
| <input type="checkbox"/> PETR | 1500 | Intro to Natural Gas Distribution and Transmission Technologies/Techniques | 2 |
| <input type="checkbox"/> NATG | 1115 | Introduction to Gas Technology | |
| <input type="checkbox"/> PETR | 1501 | Intermediate Natural Gas Distribution and Transmission Technologies | 2 |
| <input type="checkbox"/> NATG | 1120 | /Techniques Intermediate Gas Technology | |
| <input type="checkbox"/> ELTR | 1100 | Electrical Devices & Controls I | 3 |
| <input type="checkbox"/> NATG | 1125 | | |
| <input type="checkbox"/> ELTR | 1405 | Introduction to Programmable Logic Controllers | 3 |
| <input type="checkbox"/> NATG | 1150 | | |
| <input type="checkbox"/> PETR | 1508 | Gas Regulators Operation and Maintenance | 2 |
| <input type="checkbox"/> NATG | 1145 | Gas Regulators | |
| <input type="checkbox"/> PETR | 1510 | Trench and Excavation Practices | 2 |
| <input type="checkbox"/> NATG | 1160 | | |
| <input type="checkbox"/> BSTC | 1036 | Computer Concepts & Applications | 3 |
| <input type="checkbox"/> NATG | 1170 | Natural Gas Flow Measurement and Control (new course) | 4 |
| TOTAL | | | 30 |
| | | | 34 |

Electives are listed on the back!

Student Name: _____ ID#: _____

Placement Scores: ___ English ___ Math ___ Reading

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| MAJOR ELECTIVES | | | |
|---|------|--|-----------|
| <input type="checkbox"/> MEAS | 1100 | Common Technical Skills | 3 |
| <input type="checkbox"/> MEAS | 1101 | Gas Industry Concepts | 5 |
| <input type="checkbox"/> MEAS | 1102 | Instrumentation and Controls | 9 |
| <input type="checkbox"/> MEAS | 1103 | Gas Quality Analysis | 4 |
| <input type="checkbox"/> MEAS | 1104 | Flow Measurement | 6 |
| <input type="checkbox"/> MEAS | 1105 | Pressure and Volume Control | 3 |
| <input type="checkbox"/> ELTR | 4407 | Advanced Programmable Logic Controllers | 4 |
| <input type="checkbox"/> NATG | 1155 | | |
| <input type="checkbox"/> PETR | 4515 | Natural Gas Technician Internship | 1-4 |
| <input type="checkbox"/> NATG | 1165 | | |
| <input type="checkbox"/> ELTR | 4402 | Electrical Devices and Controls II | 3 |
| <input type="checkbox"/> NATG | 1130 | | |
| <input type="checkbox"/> PETR | 4461 | Intermediate Corrosion Field Tech Level II | 4 |
| <input type="checkbox"/> CHEM | 4818 | Basic Corrosion (NACE Seminar) | 1 |
| <input type="checkbox"/> NATG | 1140 | | |
| <input type="checkbox"/> WELD | 1330 | Welding I | 3 |
| <input type="checkbox"/> WELD | 1331 | Welding II | 3 |
| <input type="checkbox"/> HZMT | | Any HazMat Course | |
| <input type="checkbox"/> ENGL | 1236 | Technical Communications | 3 |
| <input type="checkbox"/> LANG | 1933 | Spanish for the Workplace | 1-3 |
| Add the following courses to electives: | | | |
| <input type="checkbox"/> PSYC | 1100 | General Psychology | 3 |
| <input type="checkbox"/> PHED | 1229 | Scuba Diving | 3 |
| <input type="checkbox"/> BSTC | 1786 | Customer Service | 3 |
| <input type="checkbox"/> ECON | 1610 | Principles of Macroeconomics | 3 |
| <input type="checkbox"/> ECON | 1615 | Personal Finance | 3 |
| <input type="checkbox"/> HLTH | 1248 | Personal & Community Health | 3 |
| <input type="checkbox"/> LIFE | 1413 | Environmental Science | 3 |
| <input type="checkbox"/> PHSC | 1400 | Physical Science | 5 |
| <input type="checkbox"/> ACCT | 1602 | General Accounting | 3 |
| <input type="checkbox"/> BUSI | 1600 | Introduction to Business | 3 |
| <input type="checkbox"/> OFTC | 1600 | Beginning Keyboarding | 2 |
| <input type="checkbox"/> HZMT | 1914 | OSHA General Industry Regulations | 2-3 |
| <input type="checkbox"/> HZMT | 1917 | Dept of Transportation Regulations | 3 |
| <input type="checkbox"/> | | | |
| TOTAL | | | 17 |
| | | | 13 |

NOTE: Most classes taught in block format M-F 8:00am-5:00pm

Review Date: 04/11

Revision Date: 11/12

Student Name: _____ ID#: _____

Placement Scores: ___ English ___ Math ___ Reading

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Natural Gas Distribution & Transmission



Associate in Applied Science (Total Credit Hours – 64)

MUST BE TAKEN IN THIS ORDER

| 1 st Semester | | | |
|-------------------------------|------|--|-----------|
| <input type="checkbox"/> MATH | 1806 | Technical Math or | 3 |
| <input type="checkbox"/> MATH | 1828 | College Algebra | |
| <input type="checkbox"/> ELEC | 1330 | DC Circuit Fundamentals | 3 |
| <input type="checkbox"/> NATG | 1100 | | |
| <input type="checkbox"/> ELEC | 1332 | AC Circuit Fundamentals | 4 |
| <input type="checkbox"/> NATG | 1105 | | |
| <input type="checkbox"/> PETR | 1505 | Fundamentals of Natural Gas | 3 |
| <input type="checkbox"/> NATG | 1110 | | |
| <input type="checkbox"/> PETR | 1460 | Basic Corrosion Field Technician | 3 |
| <input type="checkbox"/> NATG | 1135 | | |
| <input type="checkbox"/> PETR | 1500 | Intro to Natural Gas Distribution and Transmission Technologies/Techniques | 2 |
| <input type="checkbox"/> NATG | 1115 | Introduction to Gas Technology | |
| <input type="checkbox"/> PETR | 1501 | Intermediate Natural Gas Distribution and Transmission Technologies/Techniques | 2 |
| <input type="checkbox"/> NATG | 1120 | Intermediate Gas Technology | |
| <input type="checkbox"/> ELTR | 1400 | Electrical Devices & Controls I | 3 |
| <input type="checkbox"/> NATG | 1125 | | |
| <input type="checkbox"/> ELTR | 1405 | Introduction to Programmable Logic Controllers | 3 |
| <input type="checkbox"/> NATG | 1150 | | |
| <input type="checkbox"/> PETR | 1508 | Gas Regulators Operation and Maintenance | 2 |
| <input type="checkbox"/> NATG | 1145 | Gas Regulators | |
| <input type="checkbox"/> ENGL | 1200 | Business English | 3 |
| <input type="checkbox"/> PETR | 1510 | Trenching and Excavation Practices | 2 |
| <input type="checkbox"/> NATG | 1160 | | |
| <input type="checkbox"/> | | | |
| TOTAL | | | 33 |

| | | | |
|-------------------------------|------|---|------------------------|
| <input type="checkbox"/> PETR | 1461 | Intermediate Corrosion Field Tech Level II | 4 |
| <input type="checkbox"/> HZMT | 1935 | Intro to Water/Wastewater Oper | 3 |
| <input type="checkbox"/> HZMT | 1914 | OSHA General Industry Regulations | 2-3 |
| <input type="checkbox"/> HZMT | 1945 | Intro to Brownfields | 3 |
| <input type="checkbox"/> HZMT | 1960 | Renewable Energy Sources | 3 |
| <input type="checkbox"/> CHEM | 1818 | Basic Corrosion (NACE Seminar) | 1 |
| <input type="checkbox"/> NATG | 1140 | | |
| <input type="checkbox"/> HZMT | 1917 | Dept of Transportation Regs | 3 |
| <input type="checkbox"/> WELD | 1330 | Welding I | 3 |
| <input type="checkbox"/> WELD | 1331 | Welding II | 3 |
| <input type="checkbox"/> HZMT | | Any HazMat Course | |
| <input type="checkbox"/> ENGL | 1236 | Technical Communications | 3 |
| <input type="checkbox"/> LANG | 1933 | Spanish for the Workplace | 1-3 |
| <input type="checkbox"/> PSYC | 1000 | General Psychology | 3 |
| <input type="checkbox"/> PHED | 1229 | Scuba Diving | 3 |
| <input type="checkbox"/> BSTC | 1786 | Customer Service | 3 |
| <input type="checkbox"/> ECON | 1610 | Principles of Macroeconomics | 3 |
| <input type="checkbox"/> ECON | 1615 | Personal Finance | 3 |
| <input type="checkbox"/> HLTH | 1248 | Personal & Community Health | 3 |
| <input type="checkbox"/> LIFE | 1413 | Environmental Science | 3 |
| <input type="checkbox"/> PHSC | 1400 | Physical Science | 5 |
| <input type="checkbox"/> ACCT | 1602 | General Accounting | 3 |
| <input type="checkbox"/> BUSI | 1600 | Introduction to Business | 3 |
| <input type="checkbox"/> OFTC | 1600 | Beginning Keyboarding | 2 |
| TOTAL | | | 17 13 |

Review Date: 11/12

Revision Date: 11/12

All changes are in red.

New course in green.

| 2 nd Semester | | | |
|-------------------------------|------|---|------------------------|
| <input type="checkbox"/> CHEM | 1802 | Fundamentals of General Chemistry | 5 |
| <input type="checkbox"/> COMM | 1200 | Interpersonal Communications or Public | 3 |
| <input type="checkbox"/> COMM | 1230 | Speaking | |
| <input type="checkbox"/> BSTC | 1036 | Computer Concepts & Applications | 3 |
| <input type="checkbox"/> PHED | 1246 | First Aid Emergency Care | 3 |
| <input type="checkbox"/> NATG | 1170 | Natural Gas Flow Measurement and Control | 4 |
| TOTAL | | | 14 18 |

| MAJOR ELECTIVES | | | |
|-------------------------------|------|--|-----|
| <input type="checkbox"/> ELTR | 1407 | Advanced Programmable Logic Controllers | 4 |
| <input type="checkbox"/> NATG | 1155 | | |
| <input type="checkbox"/> PETR | 1515 | Natural Gas Technician Internship | 1-4 |
| <input type="checkbox"/> NATG | 1165 | | |
| <input type="checkbox"/> ELTR | 1102 | Electrical Devices and Controls II | 3 |
| <input type="checkbox"/> NATG | 1130 | | |

Student Name: _____ ID#: _____

Placement Scores: ___ English ___ Math ___ Reading

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