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Northeast Wisconsin Technical College

Land Acknowledgement Statement

The region served by NWTC **occupies the ancestorial home** of the Menominee Nation, who have **persisted here** in Northeast Wisconsin from **before recorded history** to the present day. The College's Green Bay campus exists **upon lands ceded from the Menominee Tribe to the Oneida Nation.** We acknowledge this land we stand upon today as sacred, historical, and significant to the Menominee and Oneida Nations as are the **lands of all First Nations People.**

See more detail at https://tinyurl.com/244wh3xf

Gas Field 1 SYLLABUS

Catalog #31-469-311 & Class #51403

Starts: June 5th **Ends: July 27th**

NORTHEAST WI Technical College

INSTRUCTOR INFORMATION & RESPONSIBILITIES

Instructor	Jason Nelson
Office	EE101M
Telephone	(920)498-6392 Cell (920)606-7176
Email	Jason.nelson@nwtc.edu
Availability	*By Appointment*

To help you be successful, I will

- Maintain an inclusive, safe learning environment
- Provide open and frequent communication regarding your progress in this class.
- Reply to communications within 48 business hours.
- Grade assignments regularly and provide feedback to guide you toward improvement of your coursework.
- Communicate changes due to student and instructor needs, class cancelations, or college closures in a timely manner.

CLASS INFORMATION

Class Schedule & Class Meeting Location: Room EE 103

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
7:00 - 11:30	7:00 - 11:30	7:00 – 11:30	7:00 – 11:30			

Class Delivery Mode & How to Participate: This class meets in-person. For a definition of this delivery mode, please see information on the **Ways of Learning** page. For a detailed explanation of class participation and expectations, please see the Attendance & Participation section.

- **This class meets in an 8-Week format with both in-person and online components.**

Course Description: ***This course provides the opportunity for the learner to develop the knowledge skills process and understanding of characteristics and hazards of natural gas, tools used in the industry, personal protective equipment, operation of backhoes, trenchers,***

air compressors, pipe burial methods, joining plastic pipe, locating underground facilities, excavation hazards, and job site protection.

Credits: ***5***

Pre-requisites/Corequisites: *Pass drug screen*

Textbooks:

NFPA 54 Fuel gas code book

Operator Qualification Training Program – Set of 5 orange books

EnergyU Online Computer courses provided by Midwest Energy Association (MEA)

*Students must have a computer or access to computer with internet access.

Supplies/Technology:

1. ANSI Approved Safety Glasses (clear and shaded)
2. ANSI Approved Work Shoes-Safety toes-(not low cut-at least 6" high for ankle support)
3. Rubber Boots – (over the shoe- knee high)
4. Rain Suit - Construction grade (jacket with hood preferred)
5. Pocket Knife or Leatherman style plier/knife combo
6. Watch – Digital or analog with second hand
7. ANSI Approved Hard Hat
8. ANSI Approved Traffic Vest – with reflective strips and/or High visibility cotton shirt
9. Steel Tape Measure – at least 12 foot
10. Work gloves (leather preferred)
11. Sunscreen
12. Hard Hat winter liner * winter
13. Insulated Coveralls * winter
14. Insulated Boots * winter
15. Black sharpie marker
16. Flashlight
17. Thumb Drive 4GB

Students must have the materials listed above available every day or your grade

will be affected. A locker is provided for storage of student supplies, but each student must provide their own lock and are responsible for the security of their personal items

Course Competencies: Upon successful completion of this course, you will be able to:

1. Characteristics and hazards of Propane & Natural gas
2. Understand Specialized Tools used in the gas industry
3. Safe operation of common utility vehicles
4. Personal protective equipment
5. Operate Backhoe/loader
6. Operate Trenchers
7. Operate Air Compressors
8. Pipe Burial methods
9. Joining plastic pipe with Heat fusion
10. Tracer wire connections
11. Locating underground facilities
12. Excavation hazards
13. Confined Space Entry and Rescue

14. Familiarization and complete Operator Qualifications (OQ)

Field/Lab Core Abilities:

Safety

Attitude

Teamwork

Initiative/Motivation

Responsibility

Quality/performance

NOTE: This core abilities will be used to determine your instructor/lad aide field work evaluation score. This score will be 20% of your final grade.

Program Outcomes: Program outcomes are the macro skills that go beyond the context of a specific course and are essential for an individual's occupational role. Program Outcomes are taught and reinforced in numerous program courses throughout a program curriculum.

This course addresses the following program outcomes:

Communicate technical information
Operate tools and equipment
Join Pipe
Install Natural gas distribution systems
Maintain gas distribution systems
Operate pipeline excavation equipment

Employability Skills: In addition to specific job-related training, NWTC has identified the following transferrable employability skills reaching beyond the context of a specific course:

1. Communicate Effectively
2. Work Cooperatively and Professionally
3. Think Critically and Creatively
4. Solve Problems Effectively
5. Value Individual Differences and Abilities
6. Demonstrate Personal Accountability
7. Demonstrate Community and Global Accountability

Student Services to Support You:

Being in college is an exciting time to develop skills, further your career path, and build community. We don't want financial challenges to get in your way! Our team is ready to support basic needs such as groceries, housing assistance, transportation assistance, and more. Our goal is to keep you on track with your studies and educational goals. If you are experiencing a financial emergency or an unexpected event in your life, let us help. Support services are available at all NWTC locations. Our main office is located on the Green Bay campus in SC133. We can be reached by phone (920) 498-6258, email supportservices@nwtc.edu or in-person. For more information, please visit us at www.nwtc.edu/student-experience/student-support-services.

Additionally, NWTC provides many services and support networks to assist our students. Descriptions of these services can be found in the NWTC Student Handbook or at www.nwtc.edu/students. We encourage you to learn about the resources available to you, ranging from student involvement and personal counseling to

academic, financial aid, or career advising. When you are looking for services, please contact your instructor or academic advisor via Starfish, or by calling (920) 498-5444.

Academic Coaching (Tutoring) at NWTC: Academic Coaching provides an additional layer of support to ensure students achieve their academic goals. Academic Coaching is committed to serving all students as an academic resource to promote student growth and success. Students who use Academic Coaching receive content help, but also gain study skills, organization skills, time management, and confidence. We understand that school can be challenging; let us help you reach your academic goals at **www.nwtc.edu/academiccoaching**

NWTC ALL-COLLEGE POLICIES

These policies are in effect for all classes at NWTC.

This syllabus is a learning contract between you and your instructor. In addition to your syllabus, there are policies and procedures listed in the NWTC Student Handbook that all students must uphold. Please refer to the NWTC Student Handbook to raise your awareness and understanding of the College's expectations.
NWTC Student Handbook

- Academic Integrity (includes Plagiarism, cheating and collusion)
- Drop from a Class or Program
- Student Academic Grievance
- **Discrimination and Harassment Prevention:** NWTC is committed to embracing the worth of every individual and promoting a respectful environment. Discrimination and harassment of protected categories in its employment and educational programs is prohibited. For questions or concerns, contact Mohammed Bey, Chief Diversity Officer, by email at mohammed.bey@nwtc.edu or by phone at (920) 498-6826.
- **Disability Act Statement:** NWTC is committed to creating a learning environment that meets the needs of its diverse student body. NWTC complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. If you have a disability, please call Disability Services at (920) 498-6904 to begin a conversation regarding the support services available to you or to request an official accommodation.
    - Accessibility & Data Privacy

Student Academic Calendar: Visit **Academic Calendar page** for important College dates you should add to your personal calendar.

CLASS SPECIFIC POLICIES

In addition to the college policies referenced, the following instructor policies also apply to this course.

Attendance and Participation:

Attendance is imperative as demonstrations and practice labs build cumulative skills and many times cannot be repeated due to guest speakers and/or specialized equipment furnished by the industry.

Homework assignments are due at the beginning of class on the date they are required to be completed.

Attendance records will be made available to potential employers. The student will be required to call the instructor prior to the class start time if they will be absent. This notification will result in an excused absence. If no prior notification is given it will be recorded as unexcused. All absences will be recorded and made available to potential employers upon request.

Labs are considered part of the class and all students are expected to participate. Labs will not be complete until all material, tools and equipment have been properly stored and the work area cleaned. Students will not be allowed to leave until formally dismissed by the instructor. It will be counted as an absence for the day when a student leaves without notifying the instructor.

Smoking or chewing tobacco will not be allowed in the classroom, lab room or field lab.

Students are not allowed to wear sleeveless shirts or shorts for outside field or shop activities.

Estimated number of hours required to be successful in the class, (class hours and outside hours for homework, readings, etc.) ***200 hrs to unlimited***

Technology Skills & Assistance:

Technology Help

Get technical assistance by calling the Student Help Desk at (920) 498-6900 or 1-866-235-5037.

Learn more about the technology skills needed to be successful at NWTC (such as sending email, using software for assignments, submitting online work, and using test monitors) by watching the Technology 101 video series or visiting the Ask a Librarian FAQ site.

Find out how to Download Office 365 for Free and access Off-Campus Software. Learn how to borrow equipment from NWTC.

Appropriate Use of Technology in Class:

Cell phone usage is prohibited during all class sessions, shop and field activities. This includes both cell phone calls and text messaging. Your cell phone should always be set on the 'silent mode' so an incoming call will not disrupt the class. The only exception is if you have an emergency. Advise your instructor prior to start of class of your need to use cell phone. Refer to written cellphone policy that you will be required to sign at the beginning of this semester.

Class size will be limited to 22 students

All students will conduct themselves as if this were a position in the gas industry. Will be required to wear protective uniform at times.

Safety rules will be emphasized and strictly enforced throughout the course.

Safety Rule: Two Man Rule – When operating any excavation equipment there must always be two students. One student will always be the safety 'spotter' when the other student is operating the equipment. Also, when backing up any of the program vehicles there must always be a safety 'spotter' to direct the driver to prevent backing accidents.

Most employers require our graduates to be able to obtain a Class A Commercial Driver's License. If your current driving record will not allow you to obtain a CDL your employment potential will be affected. It is important to maintain a clean driving record in this industry! Students should self-study the requirements needed for the CDL from the Wisconsin Motor Vehicle Department and take the test to get their permit as soon as possible, but no later than end of the summer semester in the year they enroll in the Gas Utility Program. Equipment is available to use to assist the student in practicing and taking the required driving test for the CDL license, so they have it upon graduating from the course.

Most positions in the Gas Utility field are classified as "safety sensitive positions" by the Federal regulations for this industry. This means that employees in these positions are subject to entry level and routine random drug testing. NWTC **does** require a drug screen as a prerequisite for this program. Students will also participate in a random drug/alcohol screens throughout the program. Any student who fails the drug/alcohol screens will be removed from the program. Any evidence of drug use or alcohol during attendance in the program labs or classroom will result in removal from the program.

Campus Closure Day(s) Procedure: In the event of a campus closure,
In the event a campus closure occurs, there are two emergency closure dates built into the end of each 8-week session. Within 24-hours of a college cancellation, Instructors will provide detailed information regarding expectations for students. .

Syllabus Changes: Instructors retain the right to make changes based on the timeline of the class, feedback from learners and/or logistical issues. Students will be informed as soon as a change is made. A current copy of the course syllabus will be maintained by the division office.

Grading Components

Grading Component: 100% of Grade	Points Earned		Points Possible		Weighted Percent		Grade
Energy U		/	700	x	20	=	
Lab/Fieldwork		/	800	x	20	=	
Tests		/	300	x	20	=	
Instructor Evaluations		/	100	x	15	=	
CDL permit		/	100	x	5	=	
Finals			90	x	20	=	
Totals		**/**	**2090**	**x**	**100%**	=	

Grading Scale:

	Percentage	Grade
	100-90	A
	80-89	B
	70-79	C*
	60-69	D
	59-0	F

* C is the minimum passing grade for this class.

Course Calendar:
See Blackboard for detailed weekly schedule

GAS FIELD 1

WEEK 1

** Roll call, introductions, and course syllabus. Orientation – social media, representing the program in hall and main campus, assign lockers, field trip to shop, field, bookstore, resource learning center, letter to self, and DNR field rules.

1. Energy U Intro do 192-0101 TNG.. assign first Energy U Due Wednesday morning. Complete first one with students and handout Schedule

1. Power Point-Properties of Natural Gas and Propane and Source to stove video U tube.
2. LAB - Excavation Hand Dig…. Wednesday - Thursday
3. **TEST** Properties of Fuel Gas and Gas Combustion

4. EnergyU – 192-0101 Characteristics and hazards of Natural Gas

WEEK 2

2. LAB – Check fluids and Operate gas utility vehicles in field
3. Module 111 PPE
4. Hand signals handout and DEMO
5. Intro backhoe operation, butt fusion, and wire splicing DEMO
6. Battery jumping DEMO and handout.
7. **CPR/First Aid Classes**
8. Module 121 – power tool safety

WEEK 3

1. Handout WUA gas fusion procedures
2. Module 403 – backhoe safety
3. Review Butt Fusion Procedure/Practice Butt fusion on 2" pipe
4. LAB – Backhoe bucket wide trench 10' long 3' deep and backfill with each brand of excavator.
5. LAB - Tracer wire splicing 1 branch and 1 western union.
6. Operate generators DEMO.
7. Module 401 job site protection
8. EnergyU – 192-1003 Butt Fusion

WEEK 4

1. LAB - Butt fusion 2"and 4" ….. Continue backhoe lab
2. **TEST** General Fusion Section (use procedure)
3. Socket Fusion DEMO
4. **TEST** Butt Fusion (use procedure)
5. EnergyU 192-1006 Socket Fusion

WEEK 5

1. Check fluids and operate air compressors (air tool DEMO)
2. **TEST** Hand Signals
3. Review socket fusion procedure/Practice 1" socket fusion
4. Trencher DEMO
5. LAB – Check fluids and operate Trenchers (See sheet)
6. **TEST** Socket Fusion (use procedure)
7. Odorant and meter set Handouts
8. Module 122 Fire extinguisher training
9. Training - Fire Fighting DEMO and handouts (John ext. 5485)
10. EnergyU 192-AOC's Abnormal Operating Conditions

WEEK 6

1. Power Point - Gas Distribution System
2. LAB - Trench – 10' long 18" deep (Hand/Pneumatic Tools Only)
3. LAB – 2" Socket Fusion/ Tracer wire
4. Module 404 - Excavation Safety
5. Hole Hog DEMO
6. Pipe code/SDR handout
7. **TEST** Gas Distribution
8. BBQ yum
9. EnergyU 192-1802 Vault Maintenance

WEEK 7

1. Pipe locating DEMO hands on practice in the field
2. Module 402 locating and marking facilities
3. LAB –Fusion 2" and 4" butt fusions with a 2" socket coupling fused to the end of the 2" butt fusion hand in as one 12" piece (one observed)
4. LAB – Excavator, fusion, and tracer wire final assessment (see sheet)
5. Squeezing pipe DEMO

6. Excavation and Diggers Hotline handouts
7. EnergyU 192-0503 Electrical Connections

WEEK 8

1. Finish labs
2. Clean equipment
3. **FINAL EXAM** -practical / hands-on
4. **Fire Training 2022**
5. EnergyU 192-0801 Locating Pipelines