

# ENERGY EDUCATION

As the oil boom gets larger in North Dakota, the demand for trained workers continues to expand with it. Whether you're looking to get into the energy industry or you're already a part of it, Fort Berthold Community College can give you the training you need to succeed as a vital part of the state's energy expansion. We offer training in a wide variety of fields, all of which can get you to work quickly in a lucrative and in demand career path. Enroll today and we can get you going on your way to a better job and a better life.

# WELDING TECHNOLOGY

The state of North Dakota is in dire need of professional welders. The Fort Berthold Community College welding program provides students with the basic welding skills needed for entry-level welding jobs and apprenticeship programs.

**DEGREE:** Certificate

(9 months) 37 Credit Hours Required

## LIST OF CLASSES

### Spring:

• WELD 165	Blueprint Symbols for Welding	3 cr.
• WELD 170	Arc Welding Operations	2 cr.
• WELD 173	Methods in Arc Welding Operations	4 cr.
• WELD 180	Shielded Metal Arc Welding	2 cr.
• WELD 183	Testing in Shielded Metal Arc Welding	4 cr.
• WELD 187	Types of Non-Destructive Testing	3 cr.

### Fall:

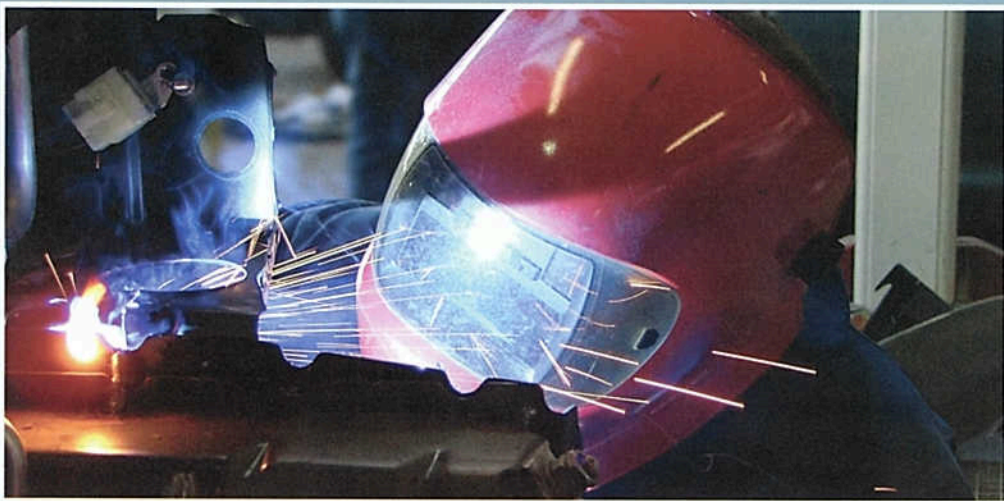
• WELD 110	Oxyfuel Operations	2 cr.
• WELD 118	Testing OA in Welding, Brazing, Cutting	2 cr.
• WELD 130	Advanced Testing OA in Welding, Brazing, Cutting	3 cr.
• WELD 135	Welding Principles	2 cr.
• WELD 140	Methods in GMA & FCA Welding	2 cr.
• WELD 145	Advanced Methods in GMA & FCA Welding	2 cr.
• WELD 150	Methods in GTA & PA Welding	2 cr.
• WELD 155	Blueprint Reading for Welders	3 cr.
• WELD 160	Advanced Methods in GTA & PA Welding	2 cr.

## FUNDAMENTALS

- Welding in all positions (flat, horizontal, vertical, overhead) with the six basic welding processes: Oxy-acetylene, Shielded Metal Arc, Gas Metal Arc, Flux Cored Arc (self-shielded), Flux Cored Arc (gas shielded), Gas Tungsten Arc
- Capability of passing the (AWS) certification process
- Ability to cut metals using thermal cutting processes (Oxy-acetylene, Plasma, Air Carbon Arc)
- Capacity to get your state industrial first aid and CPR cards
- Knowledge of basic fundamentals of welding processes and applications, metallurgy, and math and measurement
- Ability to read and interpret basic blueprints, welding symbols and welding codes and specifications

## CAREER OPPORTUNITIES

- Oilfield Work
- Shop (Custom Fab, Machine Shop)
- Industrial Welding (Structure/Ornamental)
- Tank Repair and Fab (Oil Field)
- Iron Worker
- Auto Body Repair
- Hobby
- Art





## CONSTRUCTION TECHNOLOGY (CT)

The Fort Berthold Community College Construction Technology program provides students with the skills necessary for the construction industry, integrating theory and application of today's construction technologies. All projects completed by the carpentry students are related directly to course topics.

### DEGREE: Certificate

(3-4 months) 45 Credit Hours Required

### LIST OF CLASSES

• CAR 101	Core Curriculum	3 cr.
• CAR 102	Carpentry 1	4 cr.
• CAR 103	Carpentry 1 Lab	6 cr.
• CAR 104	Carpentry 2	4 cr.
• CAR 105	Carpentry 2 Lab	6 cr.
• CAR 206	Carpentry 3	4 cr.
• CAR 207	Carpentry 3 Lab	6 cr.
• CAR 208	Carpentry 4	4 cr.
• CAR 209	Carpentry 4 Lab	6 cr.
• CAR 197	Cooperative Education/Internship 2	2 cr.

### FUNDAMENTALS

- Performance of basic construction techniques
- Identification of tools and products
- Performance of routine maintenance on tools
- Identification of parts of walls, stairs, floors and roof
- Performance of techniques involved in framing walls and stairs
- Reading of basic blueprints
- Becoming familiar with building codes and framing with steel studs
- Handling of sheetrock, texture, do trim work, hand-installing siding and paint, along with other basic functions for finished work
- Performance of basic functions for tiling, laying laminate flooring, hanging cabinets and many other functions for specialty work
- Performance of site layout for construction
- Identification of concrete components
- Performance of basic concrete pouring functions

### CAREER OPPORTUNITIES

- Journeyman Carpentry
- Master Carpentry
- Foreman/Lead Carpentry
- Supervisor
- Safety Manager
- Project Manager/Administrator
- Estimator
- General Contractor
- Construction Manager

# COMMERCIAL DRIVER'S LICENSE

The CDL program at Fort Berthold Community College is designed to provide students with the knowledge, skills and competencies to obtain entry-level employment driving large trucks and operating heavy equipment.

**DEGREE:** Certificate

(4-5 weeks) 15 Credit Hours Required

## LIST OF CLASSES

• CDL 101	Novice Driver Training	3 cr.
• CDL 102	Commercial Driver Training	12 cr.
• CDL 103	On-the-Job Training	

## HOW CLASSES ARE STRUCTURED

- Basics of safety (First Aid/CPR, OSHA 10)
- Commercial driving (tractor/trailer)
- Flagging
- Air brake systems
- Equipment maintenance
- Project organization and heavy equipment operations (front end loader, back hoe, loading/unloading, docking)
- Introductory college courses



## FUNDAMENTALS

- Commercial driving that allows successful students to apply and test for a driving permit
- Usage of simulators before "hands-on" practice activities with modern road equipment
- Quality practice time with instructors
- Training geared toward meeting demonstration proficiencies required by the state of North Dakota and the U.S. Department of Transportation (DOT)
- Successful graduates can transfer their CDL credentials according to regulations in their home state

## CAREER OPPORTUNITIES

- Dry Van Puller
- Freight Haulers
- Hauling Flat Beds
- Tankers
- Bull Haulers
- Auto Haulers
- Household Movers
- Container Haulers
- LTL Freight
- Class B Drivers
- Dedicated Drivers
- Local Driving Jobs
- OTR Trucking
- Team Driving Jobs
- Oilfield Trucking
- Heavy Equipment Hauler



## REFINERY OPERATIONS

The Fort Berthold Community College refinery operations program is customized to the needs of the oil industry. The graduates of the refinery operations program will receive an Associates of Applied Science Degree. The specialization is in Energy Technology.

**DEGREE:** Associate of Applied Science  
(18 months) 48 Credit Hours Required

### LIST OF CLASSES

#### Semester I Fall:

• PTAC 1302	Introduction to Process Technology	4 cr.
• PTAC 1308	Safety, Health & Environment	4 cr.
• PTAC 2410	Process Technology & Equipment	4 cr.

#### Semester II Spring:

• PTAC 2000	Petroleum Production & Refining Chemistry	4 cr.
• PTAC 1352	Instrumentation	4 cr.
• PTAC 2436	Instrumentation	4 cr.

#### Semester III Fall:

• PTAC 2001	Plant Science	4 cr.
• PTAC 2420	Petroleum Production & Refining Systems	4 cr.
• PTAC 2314	Quality/Production Operating Techniques	4 cr.

#### Semester IV Spring:

• PTAC 2445	Refinery Unit Operations	4 cr.
• PTAC 2446	Troubleshooting Refinery Operations	4 cr.
• PTAC 2438	Refinery Operations - Thunder Butte	4 cr.

### LAB EQUIPMENT

- |                    |                       |
|--------------------|-----------------------|
| • Pump Valves      | • Distillation Column |
| • Hand Tools       | • Solar Panel         |
| • Safety Equipment | • Wind Turbine        |
| • Biodiesel Unit   |                       |

### CAREER OPPORTUNITIES

- |                                |                        |
|--------------------------------|------------------------|
| • Oil Refineries               | • Water Treatment      |
| • Electrical Generating Plants | • Wastewater Treatment |
| • Ethanol Plants               | • Building Maintenance |
| • Wind Turbines                | • Petrochemical        |
| • Heating Boilers              | • Gasification         |



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