

**ENGINEERING AND INDUSTRIAL TECHNOLOGY – POWER GENERATION OPTION**

(Note: Program requirements for this degree are offered on NOC Tonkawa campus only.

At the beginning of each course listing, the four letter abbreviation indicates the department and the four digits indicate the course code used for enrollment. The total course hour value follows each.)

<p><b>Program Requirements</b></p> <p><b>General Education Courses - 18 Total Credit Hours</b></p> <p><b>English Composition Courses</b></p> <p>ENGL 1113 English Composition I 3 hours</p> <p>ENGL 1213 English Composition II 3 hours</p> <p>(or) ENGL 1223 Technical Writing</p> <p>(or) SPCH 1713 Introduction to Oral Communication</p> <p><b>History &amp; Government Courses</b></p> <p>HIST 1483 Amer. History to 1877 3 hours</p> <p>(or) HIST 1493 Amer. History Since 1877</p> <p>POLI 1113 American Government 3 hours</p> <p><b>Mathematics Courses</b></p> <p>MATH 1493 Math Applications 3 hours</p> <p>(or) other college-level math</p> <p><b>Computer Science Courses</b></p> <p>BSAD 1113 Digital/Financial Literacy 3 hours</p> <p>(or other approved computer course)</p> <p><b>Technical Occupational Specialty - 42 total hours</b></p> <p><b>Total Credit Hours 60 hours</b></p>	<p>Students will be awarded 42 credit hours of extra-institutional credit for certified coursework and job performance demonstration at the OGE Energy Corporation in the areas of Plant Operations, Instrumentation, and Control, Plant Electricians, and Plant Mechanics at the following levels:</p> <p>Apprenticeship Level C-1, C-2, and C-3:</p> <p>Safety-PPE and First-aid; Fall Suppression, Worker Right to Know/HAZCOM, Envirochemical, Confined space, Basic Shop Equipment, Prints &amp; Drawings, Clearance Procedures, fuel Systems, SAP Notifications &amp; Confirmation Notes, ash Removal systems, Circulating Water Systems, Steam Cycle, Compressed Air Systems, Turbine Auxiliaries, Generator, Plant Electrical Systems, Water Treatment, Plant Instrumentation, Fire Protection Systems, Hand Signals, Electrical Circuit Basics.</p> <p>Apprenticeship Level B-1 and B-2:</p> <p>Coal System, Pulverizes and Feeders, Ash Systems, Closed Cooling Water System, Stator Cooling Water system, MCC Breaker System, Motor Megger, Pump/Motor Rigging &amp; Removal, Small Motor (25 HP or less) Overhaul, Tubing and Fittings, Metal Work and Welding, Main Turbine, Generator and Turbine Lube Oil Systems, Hydrogen Seal Oil system, Pump seal Inspection, Heat Exchanger Inspection and Repair, Calibrate Gauge, Test &amp; Repair Pressure Switches.</p> <p>Apprenticeship Level A-1 and A-2:</p> <p>Control Loops, Piping, Condensate system, Feedwater System, Steam System, Closed Cooling Water System, Fuel System-Gas/Oil, Fuel system-Coal, Plant/Service Air System, Instrument/Control Air Systems, Emergency Generator, Waste Water Treatment System, Circulating Water System, Calibrate a Transmitter, Freeze Protection System, Centrifugal Pump, Test &amp; Calibrate Positioners &amp; Actuators, Lube Oil Systems, Generator/Electrical System, Test &amp; Repair Pneumatic &amp; Electronic Solenoid, Small Valve Refurbishment, Troubleshoot and Repair a Piston Actuator, Pump Bearing Inspection.</p> <p>Students are required to pass the OGE certification examination for each of the above levels and complete 12 credit hours at Northern before credit can be transcribed.</p>	<p>The associate in Applied Science degree program is designed to provide the employees of the OGE Energy Corporation of Oklahoma an opportunity to complete an associate degree specifically designed to prepare them with the knowledge, technical skills, and job-related experiences necessary to make a significant contribution to their corporation. The specific areas of operations, instrumentation and control, electrical, and mechanics form the basis of the degree program. Additional focus of this program is the perpetuation of a quality workforce, a higher quality of life for our citizenry and state-wide economic development.</p> <p><b>Career Opportunities</b></p> <p>Instrument and Control Operator</p> <p>Plant Mechanic</p> <p>NOC evaluates students for placement into either foundational or college-level courses, whichever will lead to the greatest possibility of student success. Academic placement is determined either by A.C.T. test scores or by Accuplacer test scores. These tests are administered in the Testing Center at NOC. Based upon the scores, students may be required to take one or more courses for remediation in English, Math, or Reading, either prior to or concurrent with credit courses. See the NOC testing web page by clicking on the following link: <a href="http://www.noc.edu/act">http://www.noc.edu/act</a> for placement guidelines.</p>
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