

Engineering Technology – Power Utility - Plant Operation

ASSOCIATE OF APPLIED SCIENCE DEGREE (AAS)

REQUIRED CREDITS: 60

DEGREE CODE: ETPUPO-AAS

DESCRIPTION

This degree prepares students for employment in Power production. This program integrates two hands-on Co-Op/Internships in Operation, Electricity, and Hydro/Electricity that provides students with a wide-range of experiences. This program is presented in cooperation with the U.S. Bureau of Reclamation. Academic skills emphasizing related math, science and human relations are stressed to prepare students to meet challenges common in the workplace.

STUDENT LEARNING OUTCOMES

- Identify the occupational positions available in the Power Utility and other power generating plants.
- Participate in an on-job training experience in a power generating plant or dam.
- Identify acceptable work performance standards.
- Develop positive attitudes towards work and service to others.
- Be prepared to accept management and/or supervisory positions in the Power Utility and other generating plants.

PLEASE NOTE - The courses listed below may require a prerequisite or corequisite. Read course descriptions before registering for classes. All MATH and ENG courses numbered 01-99 must be completed before reaching 30 total college-level credits. No course under 100-level counts toward degree completion.

GENERAL EDUCATION REQUIREMENTS (27 CREDITS)**MATHEMATICS (3 credits)**

Recommended: MATH 116 Technical Mathematics

ENGLISH COMPOSITION (3-5 credits)

See AAS policy p. 46 for courses

COMMUNICATIONS (3 credits)

Recommended: COM 115 Applied Communication

HUMAN RELATIONS (3 credits)

Recommended: HIST 106 European Civilization Since 1648

NATURAL SCIENCE (8 credits)

Required: EGG 131 and 131L

Recommended: MT 102B Fundamental of Electricity

FINE ARTS/HUMANITIES/SOCIAL SCIENCE (3 credits)

Recommended: MUS 231 Recording Techniques I

U.S. AND NEVADA CONSTITUTIONS (4-6 credits)

Recommended: PSC 101 Introduction to American Politics

SPECIAL PROGRAM REQUIREMENTS (33 CREDITS)**CORE REQUIREMENTS (22 credits)**

| | | |
|---------|---|---|
| MT 104B | Industrial Electricity | 4 |
| MT 106B | Mechanical Power Transmission | 4 |
| MT 108B | Fluid Power (Pneumatics, Hydraulics, Instrumentation) | 4 |
| MT 110B | Material Science I (Ferrous and Non-Ferrous) | 4 |
| MT 115B | Programmable Logic Controllers I | 3 |
| MT 116B | Programmable Logic Controllers II | 3 |

Choose one from the following (0-3 credits)

| | | |
|---------|-------------------------------------|---|
| IS 100B | Core Computing Competency | 0 |
| IS 101 | Introduction to Information Systems | 3 |

ELECTIVES (choose 11 credits)

| | | |
|----------|--------------------------------------|---|
| CADD 105 | Intermediate Computer Aided Drafting | 3 |
| EMA 101 | Principles of Emergency Management | 3 |
| EMA 102 | Disaster Mitigation and Preparedness | 3 |
| ET 100B | Survey of Electronics | 3 |
| ET 104B | Fabrication and Soldering Techniques | 2 |
| ET 106B | Test Equipment Operation | 3 |
| MT 180B | Co-Op/Internship First Semester | 3 |
| MT 181B | Co-Op/Internship Second Semester | 3 |

See Degree Plan on next page.

- NOTE**
- Course numbers with the “B” suffix may be non-transferable for a NSHE baccalaureate degree.
 - Course numbers with the “H” suffix are designated Honors-level courses and can be used to fulfill equivalent general education requirements. For more information visit www.csn.edu/honors.
 - In no case, may one course be used to meet more than one requirement except for the Values and Diversity general education requirement (only AA, AS, and AB degrees) which may be used to fulfill the corresponding general education or emphasis requirement.
 - Students may elect to graduate using the degree requirements in effect at the time of matriculation, or when they declared or changed major or the current catalog. If a program is official after a student has matriculated, the student may choose the degree requirements of the new program. In no case may a student use a catalog which is more than six years old at the time of graduation.



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FULL-TIME STUDENT DEGREE PLAN*Plan can be modified to fit the needs of part-time students by adding more semesters.*

| FIRST SEMESTER | Credits |
|---|----------------|
| MATH 116 Technical Mathematics | 3 |
| Complete AAS English Composition p. 46 | 3 |
| MT 102B Fundamentals of Electricity | 4 |
| IS 100B or IS 101 | 0-3 |
| Complete Electives (see courses previous page) | 2-3 |
| TOTAL CREDITS | 12-16 |
| SECOND SEMESTER | Credits |
| COM 115 Applied Communication | 3 |
| MT 104B Industrial Electricity | 4 |
| MT 108B Fluid Power (Pneumatics, Hydraulics, Instrumentation) | 4 |
| Complete Electives (see courses previous page) | 3 |
| TOTAL CREDITS | 14 |
| THIRD SEMESTER | Credits |
| PSC 101 Introduction to American Politics | 4 |
| HIST 106 European Civilization Since 1648 | 3 |
| TOTAL CREDITS | 7 |
| FOURTH SEMESTER | Credits |
| EGG 131 and 131L | 4 |
| MT 106B Mechanical Power Transmission | 4 |
| MT 115B Programmable Logic Controllers I | 3 |
| Complete Electives (see courses previous page) | 3 |
| TOTAL CREDITS | 14 |
| FIFTH SEMESTER | Credits |
| MUS 231 Recording Techniques I | 3 |
| MT 110B Material Science (Ferrous and Non-Ferrous) | 4 |
| MT 116B Programmable Logic Controllers II | 3 |
| Complete Electives (see courses previous page) | 3 |
| TOTAL CREDITS | 13 |
| DEGREE PLAN TOTAL CREDITS | 60-66 |

