

**Engineering Technology – Power Utility – Mechanical Maintenance**

CERTIFICATE OF ACHIEVEMENT (CA)

REQUIRED CREDITS: 31

DEGREE CODE: ETPUMM-CT

**IMPORTANT**

Important information about the educational debt, earnings, and completion rates of students who attended this program are located at [www.csn.edu/gainful-employment](http://www.csn.edu/gainful-employment).

**DESCRIPTION**

The Engineering Technology, Power Utility Certificate of Achievement is an 18-month to two year program that prepares students for employment in Power Production. This program integrates two hands-on Co-Op/Internships in Operation, Electricity, and Hydro/Electricity that provide students with a wide-range of experiences. This program is presented in cooperation with the U.S. Bureau of Reclamation.

**STUDENT LEARNING OUTCOMES**

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

**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 (6 CREDITS)**

**MATHEMATICS (3 credits)**

Recommended: MATH 116 Technical Mathematics

**COMMUNICATIONS (3 credits)**

Recommended: COM 115 Applied Communication

**SPECIAL PROGRAM REQUIREMENTS (25 CREDITS)**

**CORE REQUIREMENTS (19 credits)**

MT 102B	Fundamentals of Electricity	4
MT 104B	Industrial Electricity	4
MT 106B	Mechanical Power Transmission	4
MT 108B	Fluid Power (Pneumatics, Hydraulics, Instrumentation)	4
MT 115B	Programmable Logic Controllers I	3

**ELECTIVES (choose 6 credits)**

EGG 131	Technical Physics I	3
EGG 131L	Technical Physics I - Lab	1
MT 110B	Material Science I (Ferrous and Non-Ferrous)	4
MT 180B	Co-Op/Internship First Semester	3
WELD 130B	Welding Support Equipment Operations	3
WELD 132B	Oxy/Fuel, Plasma and Carbon Arc-Air Cutting Operations	2
WELD 133B	SMAW (Stick)	4
WELD 134B	GTAW (Tig)	4

Computation included in MT 102B, 104B

**FULL-TIME STUDENT DEGREE PLAN**

*Add more semesters to modify this plan to fit part-time student needs.*

<b>FIRST SEMESTER</b>	<b>Credits</b>
MATH 116 Technical Mathematics	3
COM 115 Applied Communication	3
MT 102B Fundamentals of Electricity	4
MT 106B Mechanical Power Transmission	4
<b>TOTAL CREDITS</b> .....	<b>14</b>
<b>SECOND SEMESTER</b>	<b>Credits</b>
MT 104B Industrial Electricity	4
MT 108B Fluid Power (Pneumatics, Hydraulics, Instrumentation)	4
Complete Electives (see courses this page)	3-4
<b>TOTAL CREDITS</b> .....	<b>11-12</b>
<b>THIRD SEMESTER</b>	<b>Credits</b>
MT 115B Programmable Logic Controllers I	3
Complete Electives (see courses this page)	3-4
<b>TOTAL CREDITS</b> .....	<b>6-7</b>
<b>DEGREE PLAN TOTAL CREDITS</b> .....	<b>31-33</b>

- 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](http://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.

