

CERTIFICATE OF ACHIEVEMENT

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 - Graduates of this program will have the opportunity to:

- 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.

GENERAL EDUCATION REQUIREMENTS (6 Credits):

	CR	SEMESTER
COMMUNICATIONS: COM 115, ENG 107	3	_____
MATH MATH 111B, 116, 124, 126, 127 or higher	3	_____

SPECIAL PROGRAM REQUIREMENTS (25 Credits):

	CR	SEMESTER
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	_____

Plus at least 6 credits from the following:

FOR ELECTRICAL MAINTENANCE:

EGG 131 Technical Physics I	4	_____
ESH 207B Introduction to Safety Management	3	_____
ESH 240B Wastewater Treatment I	3	_____
ET 100B Survey of Electronics	3	_____
ET 104B Fabrication and Soldering Techniques	0.5-6	_____
ET 106B Test Equipment Operation	3	_____
MT 110B Material Science I (Ferrous and Non-Ferrous)	4	_____
MT 180B Co-Op/Internship First Semester	3	_____

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	CR	SEMESTER
FOR MECHANICAL MAINTENANCE:		
EGG 131 Technical Physics I	4	_____
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	_____
FOR PLANT OPERATIONS:		
EGG 131 Technical Physics I	4	_____
EMA 101 Principles of Emergency Management	3	_____
EMA 102 Disaster Mitigation and Preparedness	3	_____
ESH 207B Introduction to Safety Management	3	_____
ET 100B Survey of Electronics	3	_____
ET 104B Fabrication and Soldering Techniques	0.5-6	_____
ET 106B Test Equipment Operation	3	_____
MT 110B Material Science I (Ferrous and Non-Ferrous)	4	_____
MT 180B Co-Op/Internship First Semester	3	_____

Computation included in MT 102B, 104B

Human Relations included in MT 106B

NOTE: Courses with a B suffix (example - XYZ 123B) may be non-transferable for a NSHE baccalaureate degree.

ETPWR-CT

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Total Credits

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.

**Guided Pathway
Certificate of Achievement
Engineering Technology – Power Utility Emphasis
Total Credits – 31 credits**

First Semester	Requirement	Credit Hours	Term
Communications	COM 115, ENG 107	3	
MATH	MATH 111B, 116, 124, 126, 127, or higher	3	
Fundamentals of Electricity	MT 102B	4	
Mechanical Power Transmission	MT 106B	4	
	TOTAL	14	
Second Semester	Requirement	Credit Hours	Term
Industrial Electricity	MT 104B	4	
Fluid Power (Pneumatics, Hydraulics, Instrumentation)	MT 108B	4	
Concentration Elective –	Electrical Maintenance, Mechanical Maintenance, Plant Operations	3	
	TOTAL	11	
Third Semester	Requirement	Credit Hours	Term
Programmable Logic Controllers I	MT 115B	3	
Concentration Elective	Electrical Maintenance, Mechanical Maintenance, Plant Operations	3	
	TOTAL	6	
	CA TOTAL	31	

More detailed information can be found on the ET Web page at <http://www.csn.edu/et>