

**Engineering Technology – Industrial**

CERTIFICATE OF ACHIEVEMENT (CA)

REQUIRED CREDITS: 32

DEGREE CODE: ETINDU-CT

**DESCRIPTION**

The Certificate of Achievement in Engineering Technology, Industrial Emphasis is an 18-month program that provides students with classroom and laboratory experiences in electricity, mechanical power, pneumatics, hydraulics and ferrous and non-ferrous material. The industrial emphasis focuses on those skills used in industrial settings. Courses include Industrial Electricity, Mechanical Power Transmission and Programmable Logic Controllers.

**STUDENT LEARNING OUTCOMES**

- Show the knowledge and demonstrate the ability to select, test, set up, and maintain various electromechanical systems and machinery and perform basic system calculations.
- Demonstrate the ability to apply various troubleshooting techniques for the identification and correction of faults in electrical, mechanical, and fluid power systems.
- Assemble, operate, and maintain various electrical motor controllers, mechanical power transmission systems, and high pressure fluid power systems.
- Show the ability and skills to prepare technical reports and communicate the results through effective oral communications.

**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 (3 CREDITS)****COMMUNICATIONS (3 credits)**

Choices: COM 115 or ENG 107

Recommended: COM 115 Applied Communication

**SPECIAL PROGRAM REQUIREMENTS (29 CREDITS)****CORE REQUIREMENTS (29 credits)**

CADD 100	Introduction to Computer Aided Drafting	3
CIT 119B	Business Data Networks	3
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 110B	Material Science I (Ferrous and Non-Ferrous)	4
MT 115B	Programmable Logic Controllers I	3

**Digital Literacy Requirement (0-3 credits)**

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

Computation included in MT 102B, 104B

Human Relations included in MT 115B

**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>
COM 115 Applied Communication	3
CIT 119B Business Data Networks	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
MT 115B Programmable Logic Controllers I	3
<b>TOTAL CREDITS</b> .....	<b>11</b>

<b>THIRD SEMESTER</b>	<b>Credits</b>
IS 100B or IS 101 <sup>1</sup>	0-3
MT 110B Material Science I (Ferrous and Non-Ferrous)	4
CADD 100 Introduction to Computer Aided Drafting	3
<b>TOTAL CREDITS</b> .....	<b>7-10</b>

**DEGREE PLAN TOTAL CREDITS**.....**32-35**<sup>1</sup>IS 100B is a certification test, if certification test isn't passed, student must take IS 101. The student can always bypass IS 100B and just take IS 101.

- 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.

