

Resource: PDCCC College Catalog and Student Handbook 2017-18  
Update #: 12  
Title: **Industrial Technology – ETR 273**  
Type: Correction to Credit Hours associated with *ETR 273 Computer Electronics I* in the Electronic Controls specialization. To be consistent with the Electronic-Electrical specialization, this course should be listed as 3 credit hours, not 4. This makes the total credits required in the Electronic Controls specialization 64 credits, which remains in compliance with VCCS policy on program length.  
Effective: January (spring) 2018

---

## INDUSTRIAL TECHNOLOGY

**Program:** Industrial Technology  
**Award:** Associate of Applied Science  
**Plan Code:** 883  
**Length:** 66 Credits, 4 semesters  
**Lead Faculty:** Keisha Nichols

**Specialization:** Industrial Technology – Electronic-Electrical (883-02), 65 Credits  
Industrial Technology – Electronic Controls (883-03), 64 Credits

**Purpose:** The Associate in Applied Science degree is designed to provide a broad base of instruction and industrial knowledge that will prepare the graduate to enter the technical work force upon graduation. Graduates will be trained for jobs with local industries.

**Occupational Objectives:** Upon completion of the Industrial Technology Associates in Applied Science graduates possess the knowledge and skills required for entry into the following careers: electronics technician, industrial automated systems, industrial designer, operations manager, operator, planner, production manager, quality assurance technician, safety coordinator, and technician. These jobs can be found in small, medium and large industrial settings, health care and the government.

**Student Learning Outcomes:** Upon successful completion of the AAS Industrial Technology Program, students will be able to:

- Calculate direct current (DC) circuit loads.
- Calculate alternating current (AC) circuit loads.
- Demonstrate how to set-up and maintain a safe working environment.
- Utilize a working knowledge of electrical fundamentals, precision tools, and techniques to perform identified tasks.
- Plan and execute technical applications for the set-up and operation of electrical/electronic equipment.
- Communicate ideas, findings, and results using written, oral, and graphical communication skills.

**Admission Requirements:** In addition to the general admission requirements of the College, entry into the Industrial Technology Degree program requires proficiency in basic arithmetic and English. High school graduates enrolling under the provisions of the Industrial Technology Careers Program must meet the terms of their signed agreement. All students who are not proficient in these subjects will be required to take developmental courses prior to taking any ELE, ETR, IND or MEC classes.

**Program Requirements:** The curriculum for the Industrial Technology Degree program combines general academic instruction in mathematics, science, and communication with technical instruction geared toward gaining competence for entry-level positions within business, industry, and government.

<b>Industrial Technology – General (883)</b> <i>Required Courses and Credits</i> <i>Sample Schedule</i>		
<b>FIRST YEAR</b>		
<b>Fall Term</b>		
DRF 175	Schematics and Mechanical Diagrams	2
ENG 131	Technical Writing	3
IND 165	Principles of Industrial Technology I	4
MTH 121	Fundamentals of Mathematics	3
SAF 126	Principles of Industrial Safety	3
SDV 100	College Success Skills or SDV 106	1
<b>Total Semester Credits</b>		<b>16</b>
<b>Spring Term</b>		
IND 113	Materials and Processes in Manufacturing	3
IND 137	Team Concepts and Problem Solving	3
IND 166	Principles of Industrial Technology II	4
INS 110	Principles of Instrumentation	3
ITE 115	Intro. to Computer Applications and Concepts	3
<b>Total Semester Credits</b>		<b>16</b>
<b>SECOND YEAR</b>		
<b>Fall Term</b>		
CST 100	Principles of Public Speaking	3
ETR 113	DC and AC Fundamentals I	4
HLT ____	Health or PED xxx Physical Education elective	2
IND 265	Principles of Industrial Technology III	4
Social Science elective		3
<b>Total Semester Credits</b>		<b>16</b>
<b>Spring Term</b>		

ETR 114	DC and AC Fundamentals II	4
IND 266	Principles of Industrial Technology IV	4
MEC 161	Basic Fluid Mechanics – Hydraulics/Pneumatics	4
Humanities ____	Humanities elective	3
Social Science elective		3
<b>Total Semester Credits</b>		<b>18</b>
<b>Total Credits</b>		<b>66</b>

<b>Industrial Technology - Electronic-Electrical (883-02)</b> <i>Required Courses and Credits</i> <i>Sample Schedule</i>		
<b>FIRST YEAR</b>		
<b>Fall Term</b>		
DRF 175	Schematics and Mechanical Diagrams	2
ENG 131	Technical Writing	3
ETR 113	DC and AC Fundamentals I	4
IND 165	Principles of Industrial Technology I	4
MTH 121	Fundamentals of Mathematics	3
SDV 100	College Success Skills or SDV 106	1
<b>Total Semester Credits</b>		<b>17</b>
<b>Spring Term</b>		
ELE 160	Power Controls	3
ETR 114	DC and AC Fundamentals II	4
HLT ____	Health or Physical Education elective	2
IND 166	Principles of Industrial Technology II	4
<b>Total Semester Credits</b>		<b>13</b>
<b>SECOND YEAR</b>		
<b>Fall Term</b>		
CST 100	Principles of Public Speaking	3
ELE 133	Practical Electricity I	3
ETR 203	Electronic Devices I	4
ITE 115	Introduction to Computer Applications and Concepts	3
Social Science elective		3
<b>Total Semester Credits</b>		<b>16</b>
<b>Spring Term</b>		
ELE 134	Practical Electricity II	3
ETR 204	Electronic Devices II	4
ETR 273	Computer Electronics I	3

Humanities ____	Humanities elective	3
Social Science elective		3
<b>Total Semester Credits</b>		<b>16</b>
<b>Summer Term</b>		
ELE 135	National Electrical Code	3
<b>Total Semester Credits</b>		<b>3</b>
<b>Total Credits</b>		<b>65</b>

<b>Industrial Technology - Electronic Controls (883-03)</b>		
<i>Required Courses and Credits</i>		
<i>Sample Schedule</i>		
<b>FIRST YEAR</b>		
<b>Fall Term</b>		
DRF 175	Schematics and Mechanical Diagrams	2
ENG 131	Technical Writing	3
ETR 113	DC and AC Fundamentals I	4
IND 165	Principles of Industrial Technology I	4
MTH 121	Fundamentals of Mathematics	3
SDV 100	College Success Skills or SDV 106	1
<b>Total Semester Credits</b>		<b>17</b>
<b>Spring Term</b>		
ETR 114	DC and AC Fundamentals II	4
ELE 239	Programmable Logic Controllers	3
IND 166	Principles of Industrial Technology II	4
ITE 115	Intro. to Computer Applications and Concepts	3
Social Science elective		3
<b>Total Semester Credits</b>		<b>17</b>
<b>SECOND YEAR</b>		
<b>Fall Term</b>		
CST 100	Principles of Public Speaking	3
ETR 203	Electronic Devices I	4
ETR 221	Electronic Controls I	4
HLT ____	Health or Physical Education elective	2
Social Science elective		3
<b>Total Semester Credits</b>		<b>16</b>
<b>Spring Term</b>		
ETR 204	Electronic Devices II	4
ETR 222	Electronic Controls II	4

ETR 273	Computer Electronics I	3
Humanities ____	Humanities elective	3
		<b>Total Semester Credits 14</b>
		<b>Total Program Credits 64</b>