

Major Code: 095300

The certificate of achievement in Drafting provides the student with the minimum information required for entry-level positions in the technical drafting field. It is also designed for persons seeking to enhance their advancement potential or for those who cannot pursue a full degree program or who already hold degrees in related fields. See the program learning outcomes listed under the associate's degree in this subject.

<b>Major</b>	<b>34-36</b>
<b>Additional Requirements</b>	<b>3</b>
<b>Total</b>	<b>37-39</b>

#### Major Component II (34-36 units)

DRAFT 4	Applied Descriptive Geometry (4)
DRAFT 9	Mechanical Drafting (3)
DRAFT 16	Blueprint Reading I (2)
DRAFT 17	Blueprint Reading II (2)
DRAFT 51	Tool Design (4)
or ENG GEN 912	Elementary Engineering Drafting (3)
DRAFT 54	Simplified Stress Analysis (4)
DRAFT 55	Computer-Aided Drafting (3)
DRAFT 56	Automated Manufacturing (3)
DRAFT 81	Projects Laboratory (1)
DRAFT 82	CAD Drafting Laboratory (2)
PHYSICS 11	Introductory Physics (4)

#### Additional Requirements (6-8 units)

ENGLISH 28	Intermediate Reading and Composition (3)
or ENGLISH 100	Accelerated Prep: College Writing (3)
or ENGLISH 101	College Reading and Composition I (3)
ENG TEK 49	Technical Mathematics II (5)
or MATH 123A	Elementary and Intermediate Algebra I (4)
or MATH 123B	Elementary and Intermediate Algebra II (4)
or a higher level math course	(3-5)

Recommended for students also pursuing an engineer major.  
*Effective Fall 2017*

## Electronic Engineering Technology

### Associate in Science Degree in Electronic Engineering Technology

Major Code: 093401

This course of study combines theory with manipulative skill training, vocabulary, use of test equipment, and the technical knowledge required for employment in the Electronics Industry. Skilled technologists may find employment with a wide variety of industrial and government contract firms dealing with aerospace, computers, aviation, automotive, quality control, circuit design, and research and development. Though this program is not specifically designed for transfer, Students wishing to transfer are advised to use either the CSU GE or IGETC plan instead, depending on their intended transfer institution.

**Program Learning Outcomes:** Upon successful completion of the program, students will be able to articulate and justify technical problems through oral, written, and graphical communication; troubleshoot a variety of electronic and/or computer-based components and systems including signal processing, communications, computer networks, and controls; employ mathematics, science, and computing techniques in a systematic, comprehensive manner to support the study and solution of engineering problems; demonstrate industry-standards when interpreting and creating engineering drawings; and describe professional and ethical responsibilities in engineering.

<b>Major</b>	<b>28</b>
<b>Additional LACCD GE Requirements</b>	<b>21</b>
(Students wishing to transfer are advised to use either the CSU GE or IGETC plan instead.)	
<b>Additional Degree-applicable Requirements</b>	<b>11</b>
<b>Total</b>	<b>60</b>

#### Major (32 units)

CO TECH 35	Linux + (3)
ELECTRN 4	Fundamentals of Electronics (4)
ELECTRN 5	Fundamentals of Electronics I Lab (1)

ELECTRN 6	Fundamentals of Electronics II (4)
ELECTRN 7	Fundamentals of Electronics II Lab (1)
ELECTRN 16	Selected Elements of Electronics Mathematics (5)
ELECTRN 22	Electronics Circuits II (4)
ELECTRN 054	Computer Logic and Arithmetic (4)
ENG TEK 49	Technical Mathematics II (5)
ENG TEK 81	Fabrication Techniques (1)

*Effective Fall 2017*

Updated program learning outcomes may appear on one or both of the following websites: <http://www.lahc.edu/slo/program.html> and/or [https://effectiveness.lahc.edu/cpc/haps/SitePages/2015-18\\_SLO-SAO\\_Assessment.aspx](https://effectiveness.lahc.edu/cpc/haps/SitePages/2015-18_SLO-SAO_Assessment.aspx). If so, those listed on the latter site supersede all others.

## Certificate of Achievement in Electronic Technology

Major Code: 093400

The certificate of achievement in Electronic Technology provides the student with the minimum training required for entry-level positions in the electronics field. See the program learning outcomes listed under the associate's degree in this subject.

<b>Major (Core and Electives)</b>	<b>29</b>
<b>Additional Requirements</b>	<b>8</b>
<b>Total</b>	<b>37</b>

### Core (19 units)

CO TECH 35	Introduction to Linux + (3)
ELECTRN 4	Fundamentals of Electronics (4)
ELECTRN 6	Fundamentals of Electronics II (4)

ELECTRN 22	Electronics Circuits II (4)
ELECTRN 54	Computer Logic and Arithmetic (4)

### Electives (choose 5 units minimum)

DRAFT 1	General Drafting (3)
ELECTRN 5	Fundamentals of Electronics I Lab (1)

ELECTRN 7	Fundamentals of Electronics II Lab (1)
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ELECTRN 16	Selected Elements of Electronics Mathematics (5)
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ELECTRN 20	Electronics Circuits I (4)
ENG TEK 81	Fabrications Techniques (1)

### Additional Requirements (8 units)

ENGLISH 28	Intermediate Reading and Composition (3)
or ENGLISH 100	Accelerated Prep: College Writing (3)
or ENGLISH 101	College Reading and Composition I (3)
Eng Tek 49	Technical Mathematics II (5)

*Effective Fall 2017*

## Engineering

### Associate in Science Degree in Engineering

Major Code: 090100

This program provides the student with the opportunity to experience a broad introduction into the field of engineering and aid in his or her selection of a specific area of specialization within the broad spectrum of engineering. This degree requires greater than 60 units and therefore may take more time to complete than other degrees.

**Program Learning Outcomes:** Upon successful completion of the program, students will be able to articulate and justify technical problems through oral, written, and graphical communication; troubleshoot a variety of electronic and/or computer-based components and systems including signal processing, communications, computer networks, and controls; employ mathematics, science, and computing techniques in a systematic, comprehensive manner to support the study and solution of engineering problems; demonstrate industry-standards when interpreting and creating engineering drawings; and describe professional and ethical responsibilities in engineering.

<b>Major Requirements</b>	<b>53*62</b>
(Not including 6 double-countable major units and 3 Area E units that may be waived for this degree via graduation petition. Students wishing to transfer are advised to use either the CSU GE or IGETC plan instead.)	
<b>Additional LACCD GE Plan Requirements</b>	<b>9</b>
<b>Total</b>	<b>65*-74</b>

### Major (53\*-62 units)

CHEM 65	Introductory General Chemistry (4) or high school chemistry (approved by petition)
CHEM 101	General Chemistry (5)
<del>CHEM 102</del>	<del>General Chemistry II (5)</del>
CO SCI 340	Programming in C++ (3)
or CO SCI 344	Programming in Java (3)

DRAFT 16	Blueprint Reading I (2)
DRAFT 51	Tooling Drafting (4)
or ENG GEN 112	Elementary Engineering Drafting (3)
DRAFT 55	Computer-Aided Drafting (3)
or ENG GEN 111	Engineering Drafting (3)
<del>ENG GEN 112</del>	<del>Descriptive Geometry (3)</del>
ENG GEN 243	Statics and Strength of Materials (4)
<del>ENG GEN 912</del>	<del>Elementary Engineering Drafting (3)</del>
MATH 240	Trigonometry (3)*
MATH 260	Precalculus (5)*
MATH 265	Calculus with Analytic Geometry I (5)
MATH 266	Calculus with Analytic Geometry II (5)
MATH 267	Calculus with Analytic Geometry III (5)
MATH 275	Ordinary Differential Equations (3)

*Program listings do not include basic skills prerequisites for college-level courses or prerequisites for GE courses. Numbers appearing in parentheses beside each course title represent course units. Courses may not be offered every term. Students are strongly advised to see a counselor prior to enrolling in any program.*