



Curriculum for B.S. Degree in Engineering Technology (120 units)

CALIFORNIA STATE UNIVERSITY, LOS ANGELES

Draft 08/26/2021

Lower Division General Education Requirements (27 units)

BLOCK A – Basic Subjects (9 units)

A1: COMM 1100 or HNRS 1100

A2: ENGL 1005B or ENGL 1010

A3: COMM1200/ENGL 1050/PHIL 1600/POLS 1555

American Institutions (6 units)

U.S. History

U.S. Constitution

BLOCK B – Natural Sciences & Mathematics/ Quantitative

Reasoning (9 units)

B1 – Physical

B2 – Biological

B3 – Interdisciplinary Physical /Biological

B4 – Mathematics/Quantitative Reasoning

BLOCK C – Arts and Humanities (6 units)

BLOCK D – Social Sciences (3 units)

BLOCK E – Lifelong Understanding and Self-Development (3 units)

BLOCK F – Ethnic Studies (3 units)

1 course each A1, A2, A3

Oral Communication (3)

Written Communication (3)

Critical Thinking and Composition (3)

1 course (3)

1 course (3)

1 course from B2 or B3

Met in major with PHYS 1560/1570 (3)

1 course (3)

Not applicable if B2 course taken

Met in Major with Math 2110 (4)

1 course each C1 and C2 (6)

Met in major with ME/CE/EE 3000

Met in major with ENGR 1500 (3)

1 course (3)

Lower Division Core Courses (34 units)

CHEM 1000

Molecules Matters (3) *Prerequisites: None*

ENGR 1500

Introduction to Engineer and Technology (3) *Prerequisites: None*

ETEC 1000

Introduction to Automotive Mechanisms (3) *Prerequisites: None*

ETEC 1020

Industrial Safety (3) *Prerequisites: None*

ETEC 1100

Introduction to Design Application (3) *Prerequisites: None*

ETEC 1200

Practical Electronics (3) *Prerequisites: PHYS 1560 and PHYS 1570 both with minimum C-*

ETEC 1600

Introduction to Metalworking (3) *Prerequisites: ETEC 1020*

ETEC 2070

Engineering Tech. Materials (3) *Prerequisites: CHEM 1000 or CHEM 1040 with min C-*

MATH 2110

Calculus I (4) *Prerequisites: MATH 1040 or (MATH 1081 or MATH 1082 and MATH 1083) with min C*

PHYS 1560

Physics for the 21st Century (2) *Corequisites: PHYS 1570*

PHYS 1570

Physics for the 21st Century Lab (1) *Prerequisite/Corequisite: 1560*

TECH 1300

Introduction to Graphics Communication (3) *Prerequisites: None*

Upper Division Core Courses (26 units)

ETEC 3600

Lean Manufacturing (3) *Prerequisites: PHYS 1560/1570, MATH 2110 all with a minimum C-; and ETEC 1600.*

ETEC 3700

Sustainable Engineering and Transportation (3) *Prerequisites: MATH 2110, PHYS 1560, and PHYS 1570*

All with a minimum grade of C-.

ETEC 4210

Internetworking Technology (3) *Prerequisites: ETEC 1200*

ETEC 4880

Fluid Power (3) *Prerequisites: MATH 2110, PHYS 1560, and PHYS 1570 all with minimum grade C-.*

ETEC 4890

Industrial Training Methods (2) *Prerequisites: ETEC 3600, ETEC 3700*

ETEC 4950

Engineering Technology Senior Project I (3) *Prerequisites: ETEC 3600, ETEC 3700, Senior Standing*

ETEC 4951

Engineering Technology Senior Project II (3) *Prerequisites: ETEC 4950 with grade C or better.*

TECH 3300

Graphic Communication Processes and Materials (3) *Prerequisites: Junior Standing.*

TECH 4000

Written Communication Skills for Technology (3) *Prerequisites: Completion of GE A2*

Related Core Courses (9 units)

ACCT 2100

Principles of Financial Accounting (3) *Prerequisites: None*

ECON 3060

Statistics for Business Analysis and Decision Making (3) *Prerequisites: GE 4 basic subject.*

ME/CE/EE 3000

Economics for Engineers (3) *Prerequisites: Junior or Senior Standing.*

Elective Courses (15 units): *Students must choose five courses from any combination of Categories below.*

Category 1: Elective Courses in Manufacturing System & Processes

ETEC 3130	Product Design and Development (3) <i>Prerequisites: ETEC 1100</i>
ETEC 3150	Project Design and Document Control (3) <i>Prerequisites: ETEC 3130</i>
ETEC 3820	Metrology and Statistical Process Control (3) <i>Prerequisites: MATH 2110, and ETEC 1600</i>
ETEC 4600	Advanced Manufacturing Processes (3) <i>Prerequisites: MATH 2110, and ETEC 3600</i>
ETEC 4620	Digital Manufacturing (3) <i>Prerequisites: ETEC 1100, ETEC 3600</i>
ETEC 4660	Additive Manufacturing (3) <i>Prerequisites: ETEC 1100 / Corequisite: ETEC 3600</i>
ETEC 4670	Emerging Manufacturing Technologies (3) <i>Prerequisites: ETEC 1100 / Corequisite: ETEC 3600</i>

Category 2: Sustainable Energy and Transportation Technologies

ETEC 4700	Electric and Hybrid Vehicles (3) <i>Prerequisites: ETEC 3700 or with consent of instructor</i>
ETEC 4710	Engine Design and Performance (3) <i>Prerequisites: ETEC 3700 or with consent of instructor</i>
ETEC 4720	Photovoltaic Applications (3) <i>Prerequisites: ETEC 3700 or with consent of instructor</i>
ETEC 4740	Fuel Cell Applications and Hydrogen Infrastructure (3) <i>Prerequisites: ETEC 3700 or with consent of instructor</i>
ETEC 4760	Measurement, Instrumentation and Control (3) <i>Prerequisites: ETEC 3700</i>
ETEC 4780	Emerging Sustainable Technologies (3) <i>Prerequisites: ETEC 3700 or with consent of instructor</i>

Category 3: Management

MGMT 3060	Operations Management (3) <i>Prerequisites: None</i>
MGMT 4505	Project Management (3) <i>Prerequisites: None</i>

Elective Courses (3 units): *Students must take any 3 unit additional elective course to make the total units to 120.*

General Education Upper Division Theme (6 units)

UPPER DIVISION GE B – NATURAL SCIENCES AND QUANTITATIVE REASONING (3 units)	Met with ECON 3060 (3)
UPPER DIVISION GE C – ARTS AND HUMANITIES (3 units)	1 course (3)
UPPER DIVISION GE D – SOCIAL SCIENCES (3 units)	1 course (3)

Notes:

- GE requirements must add up to at least 48 semester units. (39 Lower Division, 9 Upper Division units).
- An Introduction to Higher Education course (IHE) is required of all first-time freshman.
- A minimum C- grade in A1, A2, A3, and B4 classes is required. This does not apply to meeting prerequisite for courses that require these courses to be completed with a grade of C or better.
- A minimum C grade average in general education is required of all students following the Fall 2016 or later catalog.
- Civic Learning/Community Engagement Requirement (6 semester units). Three semester units will be fulfilled by completing the IHE course. One (cl) course must be completed at the upper division general education level. These courses are designated as (cl) after the course listing.
- Diversity Requirement (6 semester units). Students must complete one race/ethnicity (re) course and one diversity(d) course or another race/ethnicity (re) course. These courses are designated as (re) and (d) after the course listing.
- Writing Intensive Requirement (3 semester units). Students must complete one writing intensive (wi) course in their major. These courses are designated as (wi) after the course listing