

## ASSOCIATE IN SCIENCE DEGREES

### ASSOCIATE IN SCIENCE

# GENERAL ENGINEERING

(64 hrs. min.)

CIP: 14.0101

This degree prepares students to transfer to four-year institutions to earn bachelor's degrees in engineering. Students must work closely with their transfer institutions and their SFCC advisers to ensure the best transitions to four-year schools.

#### GENERAL EDUCATION REQUIREMENTS: (44 HRS.)

##### Communications (9 hrs.)

ENGL 111 Composition and Rhetoric (3)

ENGL 216 Technical Writing (3)

[or]

ENGL 112 Composition and Literature (3)

[and]

SPCH 111 Public Speaking (3)

[or]

SPCH 220 Interpersonal Communication (3)

##### Humanities (3 hrs.)

##### Behavioral/Social Sciences (3 hrs.)

ECON 200 Principles of Economics – Macroeconomics (3)

[or]

ECON 201 Principles of Economics – Microeconomics (3)

##### Math (12 hrs.)

MATH 162L Calculus I (4)

MATH 163L Calculus II (4)

MATH 264L Calculus III (4)

##### Science (12 hrs.)

CHEM 121 General Chemistry I (3)

CHEM 121L General Chemistry I Lab (1)

PHYS 161 Calculus Physics I (3)

PHYS 161L Calculus Physics I Lab (1)

PHYS 162 Calculus Physics II (3)

PHYS 162L Calculus Physics II Lab (1)

##### Computers/Technology (3 hrs.)

ENGR 215L Engineering Programming Using MATLAB (3)

##### Health, Physical Education and Recreation or Dance course (2 hrs. min.)

Activity course(s) (2)

[or]

HPER 155 Access to Health (2) online course only

[or]

HPER 200L Lifetime Fitness and Wellness (3)

#### CORE REQUIREMENTS: (20 HRS.)

DRFT 111 Computer-Aided Drafting (3)

ENGR 111 Introduction to Engineering (3)

ENGR 121 Engineering Graphics (3)

ENGR 122 Engineering Methods (3)

ENGR 212 Engineering Statics (3)

ENGR 222 Engineering Circuit Analysis (3)

ENGR 222L Engineering Circuit Analysis Lab (2)

Note: HUDV 115 College Success or STEM 111 Introduction to Science, Technology, Engineering and Mathematics is also required for most degree- or certificate-seeking students. See "Fulfillment of College Success Course Requirement" on Page 8.

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#### ENGINEERING CONCENTRATION

#### SUGGESTED SEQUENCE OF REQUIRED COURSES

##### Fall Semester/17 Credits

CHEM 121 General Chemistry I (3)

CHEM 121L General Chemistry I Lab (1)

DRFT 111 Computer-Aided Drafting I (3)

ENGL 111 Composition and Rhetoric (3)

ENGR 111 Introduction to Engineering (3)

MATH 162L Calculus I (4)

##### Spring Semester/17 Credits

ENGL 216 Technical Writing (3)

ENGL 121 Engineering Graphics (3)

ENGL 122 Engineering Methods (3)

MATH 163L Calculus II (4)

Humanities (3)

Health, Physical Education and Recreation or Dance course (1)

**Fall Semester/17 Credits**

ENGR 212	Engineering Statics (3)
ENGR 215L	Engineering Programming Using MATLAB (3)
ENGL 112	Composition and Literature (3)
[or]	
SPCH 111	Public Speaking (3)
[or]	
SPCH 220	Interpersonal Communication (3)
PHYS 161	Calculus Physics I (3)
PHYS 161L	Calculus Physics I Lab (1)
MATH 164L	Calculus III (4)

**Spring Semester/13 Credits Min.**

ECON 200	Principles of Economics – Macroeconomics (3)
[or]	
ECON 201	Principles of Economics – Microeconomics (3)
ENGR 222	Engineering Circuit Analysis (3)
ENGR 222L	Engineering Circuit Analysis Lab (2)
Health, Physical Education and Recreation or Dance course	(1)
PHYS 162	Calculus Physics II (3)
PHYS 162L	Calculus Physics II Lab (1)

**TOTAL 64 CREDITS MIN.**