



# Engineering, Mechanical/Aeronautical Engineering A.S. Degree

This program map represents one possible path for completing this program. **Please see a counselor** to create an educational plan that is customized to meet your needs. This path is not a guarantee of course availability or financial aid applicability.

**Catalog:** 2024-25

**Total Units:** 70-74

## First Year

### Semester 1

17 Units

CAT.	COURSE	TITLE	UNIT	AA/AS GE
Maj	CHEM 400 <sup>+</sup>	General Chemistry I	5	IV
Maj	ENGR 300	Introduction to Engineering	1	
Maj	MATH 400 <sup>+</sup>	Calculus I	5	IIB
Maj	ENGR 312 <sup>+</sup>	Engineering Graphics	3	
GE	INDIS 313 <sup>+</sup>	Freshman Seminar	3	IIIB

**+Prerequisite for CHEM 400:** CHEM 300 with a grade of "C" or better or through placement completed within one year prior to enrollment in CHEM 400 or placement through the assessment process (ACS California Chemistry Diagnostic Exam) completed within one year prior to enrollment in CHEM 400 AND Intermediate Algebra, High School Integrated Math 3, or equivalent with a "C" or better

**+Prerequisite for MATH 400:** MATH 372 & MATH 373 with grades of "C" or better

**+Prerequisite for ENGR 312:** MATH 373 with a grade of "C" or better

**\*INDIS 313 - Freshman Seminar is specifically designed for First Time in College students. If you're not a First Time in College student, please select a GE course from SCC General Education Area IIIb, such as HCD 310-College Success.**

### Semester 2

16-18 Units

CAT.	COURSE	TITLE	UNIT	AA/AS GE
ME	ENGR 405 / CISP 360	Engineering Problem Solving	3-4	
Maj	MATH 401 <sup>+</sup>	Calculus II	5	
Maj	PHYS 410 <sup>+</sup>	Mechanics of Solids and Fluids	5	
GE	ENGWR 300 <sup>*</sup> / 488 <sup>H</sup> / ESLW 340	College Composition	3-4	IIA

### Legend

- (H) - Honors
- Elec - Elective
- GE - General Education
- Maj - Required Core
- ME - Major Elective

### Disclaimer

Every effort has been made to ensure that what is listed in the SCC Program Paths are accurate. The courses, the course sequencing, and the programs are subject to change without notice by the administration of the Los Rios Community College District and Sacramento City College at the discretion of the district and Sacramento City College. Further, Sacramento City College reserves the right to amend any course or program.

**PLEASE SEE AN SCC COUNSELOR.**

### AA/AS Requirements

Associate Degrees require the following:

1. Completion of a minimum of 60 degree-applicable units with an overall grade point average (GPA) of 2.0 ("C" average). A minimum of 12 units must be completed at Sacramento City College.
2. Completion of each required course with a grade of "C" or better for a major offered at Sacramento City College.
3. Completion of Sacramento City College's general education requirements – Area I; Area II(a) and II(b); Area III(a) and III(b), or Area III(c); Area IV; Area V; and Area VI – with an overall 2.0 GPA.
4. Completion of all three competency requirements (reading, writing, and mathematics).

**+Prerequisite for ENGR 405:** MATH 401 with a grade of "C" or better or concurrent enrollment

**+Prerequisite for CIPS 360:** CISP 301 with a grade of "C" or better

**+Prerequisite for MATH 401 & PHYS 410:** MATH 400 with grades of "C" or better.

**^Corequisite for PHYS 410.** Concurrent enrollment in MATH 401.

\*If you don't place directly in ENGWR 300 (check your e-Services account), you will need to take ENGWR 80/ENGWR 300 combo course.

**Students with Advanced Placement (AP) and International Baccalaureate Credit (IB) test scores should notify their Counselor to learn more about how test scores may be used for credit.**

*Exception: Students who possess a bachelor's (BA/BS) or higher degree from a college or university accredited through a regional accrediting agency recognized by the Council for Higher Education Accreditation (CHEA) are deemed to have satisfied both the general education and graduation competency requirements for an AA/AS degree. Degrees from accredited institutions outside of the US will be evaluated on a case-by-case basis.*

## Second Year

### Semester 3

16 Units

CAT.	COURSE	TITLE	UNIT	AA/AS GE
Maj	MATH 402 <sup>+</sup>	Calculus III	5	
Maj	PHYS 420 <sup>+</sup>	Electricity and Magnetism	5	
Maj	ENGR 422 <sup>+</sup>	Engineering Mechanics, Statics	3	
GE		Social & Behavioral Sciences	3	VB

**+Prerequisite for MATH 402:** MATH 401 with a grade of "C" or better

**+Prerequisite for PHYS 420 & ENGR 422:** MATH 401 & PHYS 410 with grades of "C" or better

### Placement Information

Support courses required for English and Math per placement. **Check your e-Services account under "Academic Records" to determine your placements.**

### Important Links

[SCC General Counseling](#)  
[Engineering - Mechanical/Aeronautical Engineering](#)  
[ring](#)  
[Science, Math, & Engineering Meta Majors](#)

### Semester 4

15-17 Units

CAT.	COURSE	TITLE	UNIT	AA/AS GE
Maj	ENGR 412 <sup>+</sup>	Properties of Materials	4	
Maj	MATH 420 <sup>+</sup>	Differential Equations	4	
Maj	ENGR 400 <sup>+</sup> ^	Introduction to Electrical Circuits and Devices	3	
ME	CHEM 401 <sup>+</sup> / MATH 410 <sup>+</sup> / PHYS 430 <sup>+</sup>	General Chemistry II	3-5	
GE		Physical Education	1	IIIA

**+Prerequisite for ENGR 412:** CHEM 400 & PHYS 410 with grades of "C" or better

**+Prerequisite for MATH 420:** MATH 401 with a grade of "C" or better.

**+Prerequisite for ENGR 400:** PHYS 420 with a grade if "C" or better

**^Corequisite for ENGR 400:** Concurrent enrollment in MATH 420

\*Major Elective - One course from this group is required to earn an AS degree. For students transferring in Mechanical/Aeronautical Engineering to a four-year institution, all courses from this group may be required by the desired transfer institution; please see a counselor to determine which of these courses are required for successful transfer.

**+Prerequisite for CHEM 401:** CHEM 400 with a grade of "C" or better

**+Prerequisite for MATH 410:** MATH 401 with a grade of "C" or better

**+Prerequisite for PHYS 430:** MATH 401 & PHYS 410 with grades of "C" or better

## Third Year

### Semester 5

6 Units

CAT.	COURSE	TITLE	UNIT	AA/AS GE
GE		Humanities	3	I
GE	HIST 310 / 311 / 320 / 321 / 327 / 483 <sup>H</sup> / 484 <sup>H</sup> / 485 <sup>H</sup> / 486 <sup>H</sup> / 487 <sup>H</sup>	American Institutions/Ethnic - Multicultural Studies	3	VA/VI

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