



Engineering, Civil 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: 66-70

First Year

Semester 1

14 Units

| CAT. | COURSE | TITLE | UNIT | AA/AS GE |
|------|-------------------------|-----------------------------|------|-------------|
| Maj | CHEM 400 ⁺ | General Chemistry I | 5 | IV |
| Maj | ENGR 300 | Introduction to Engineering | 1 | |
| Maj | MATH 400 ⁺ | Calculus I | 5 | IIB |
| GE | INDIS 313 ^{**} | Freshman Seminar | 3 | IIIB |

+Prerequisite for CHEM 400: CHEM 300 with a grade of "C" or better or placement through process

+Prerequisite for MATH 400: MATH 372 & MATH 373 with grades 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 IIb, such as HCD 310-College Success.**

Semester 2

16-18 Units

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

+Prerequisite for MATH 401 & PHYS 410: MATH 400 with a grade of "C" or better

^Corequisite for PHYS 410: Concurrent enrollment in MATH 401

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

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

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).

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.

*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.

Second Year

Semester 3

13 Units

| CAT. | COURSE | TITLE | UNIT | AA/AS GE |
|------|-----------------------|---------------------------------|------|-------------|
| Maj | PHYS 420 ⁺ | Electricity and Magnetism | 5 | |
| Maj | ENGR 310 ⁺ | Engineering Survey Measurements | 4 | |
| GE | | Physical Education | 1 | IIIA |
| GE | | Humanities | 3 | I |

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

+Prerequisite for ENGR 310: MATH 373 with a grade of "C" or better

Semester 4

12 Units

| CAT. | COURSE | TITLE | UNIT | AA/AS GE |
|------|---|--|------|-------------|
| Maj | MATH 410 ⁺ | Introduction to Linear Algebra | 3 | |
| Maj | ENGR 422 ⁺ | Engineering Mechanics, Statics | 3 | |
| GE | HIST 310 / 311 / 320 / 321 / 327 / 483 ^H / 484 ^H / 485 ^H / 486 ^H / 487 ^H | History of the United States (To 1877) | 3 | VA/VI |
| GE | | Social & Behavioral Sciences | 3 | VB |

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

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

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.

Placement Information

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

Special Counselor Notes for Transfer Students

AST Mathematics major courses

- MATH 400
- MATH 401
- MATH 402
- MATH 410
- MATH 420

PLUS ADT Requirements below

ADT Requirement

Transfer degrees require the following:

1. Complete all required courses for a major with a grade of "C" or better.
2. Complete 60 CSU-transferable units. At least 12 of the 60 units must be earned at Sacramento City College.
3. Complete one of the following general education (GE) patterns. Meet with your SCC Counselor to discuss the appropriate GE pattern for your individual transfer/graduation goals:

- [CSU General Education Breadth Requirements](#)
- [Intersegmental General Education Transfer Curriculum \(IGETC\) – CSU option](#)

Important Links

[SCC General Counseling](#)
[Engineering - Civil Engineering](#)

Third Year

Semester 5

11-13 Units

| CAT. | COURSE | TITLE | UNIT | AA/AS GE |
|------|-----------------------|-------------------------|------|-------------|
| Maj | ENGR 412 ⁺ | Properties of Materials | 4 | |
| Maj | MATH 420 ⁺ | Differential Equations | 4 | |
| ME | | *Major Elective | 3-5 | |

+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

*Major Elective -Transfer Pathway: One course from this group is required to earn an AS degree. For students transferring in Civil 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 ENGR 312: MATH 373 with a grade of "C" or better

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

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

[Science, Math, & Engineering Meta Majors](#)