

**A major of 32 units is required for the degree.**

**Required core courses (17 units):**

| COURSE                            | TITLE                 | UNITS |
|-----------------------------------|-----------------------|-------|
| <input type="checkbox"/> CHEM 150 | General Chemistry 1   | 5     |
| <input type="checkbox"/> MATH 182 | Calculus 2            | 4     |
| <input type="checkbox"/> PHYS 161 | Engineering Physics 1 | 4     |
| <input type="checkbox"/> PHYS 162 | Engineering Physics 2 | 4     |
| or                                |                       |       |
| <input type="checkbox"/> PHYS 163 | Engineering Physics 3 | 4     |

**Category A - Engineering: Select a minimum of 6 units from Category A and 9 units from selected from Category A and/or Category B.**

| COURSE                            | TITLE                     | UNITS |
|-----------------------------------|---------------------------|-------|
| <input type="checkbox"/> ENGR 152 | Statics                   | 3     |
| <input type="checkbox"/> ENGR 154 | Dynamics                  | 3     |
| <input type="checkbox"/> ENGR 156 | Strength of Materials     | 4     |
| <input type="checkbox"/> ENGR 161 | Materials Science         | 3     |
| and                               |                           |       |
| <input type="checkbox"/> ENGR 162 | Materials Science Lab     | 1     |
| <input type="checkbox"/> ENGR 170 | Electric Circuit Analysis | 3     |
| and                               |                           |       |
| <input type="checkbox"/> ENGR 171 | Electric Circuit Lab      | 1     |

**Category B - Engineering Support**

| COURSE                            | TITLE                                 | UNITS |
|-----------------------------------|---------------------------------------|-------|
| <input type="checkbox"/> CHEM 151 | General Chemistry 2                   | 5     |
| <input type="checkbox"/> CS 111   | Fundamentals of Programming 1         | 4     |
| <input type="checkbox"/> ET 140   | Engineering Drawing                   | 3     |
| <input type="checkbox"/> ET 145   | Advanced Engineering Drawing          | 3     |
| <input type="checkbox"/> MATH 183 | Multivariable Calculus                | 4     |
| <input type="checkbox"/> MATH 184 | Linear Algebra/Differential Equations | 5     |
| <input type="checkbox"/> PHYS 162 | Engineering Physics 2                 | 4     |
| or                                |                                       |       |
| <input type="checkbox"/> PHYS 163 | Engineering Physics 3                 | 4     |

**Recommended electives:**

| COURSE                            | TITLE                              | UNITS |
|-----------------------------------|------------------------------------|-------|
| <input type="checkbox"/> ENGR 100 | Introduction to Engineering        | 1     |
| <input type="checkbox"/> ENGR 124 | Excel for Science and Engineering  | 1     |
| <input type="checkbox"/> ENGR 126 | MATLAB for Science and Engineering | 1     |

## Suggested Course Sequence

The "Suggested Course Sequence" is an example of how to complete the requirements plus any additional general education that may be needed. If you would like to create a personalized Student Education Plan (SEP), schedule a meeting with a counselor.

This pathway is designed to meet transfer requirements in Civil Engineering at Cal Poly, SLO and earn a local AA degree in Engineering from AHC. It assumes students are entering AHC academically ready to enroll in CHEM 150 (General Chemistry) and MATH 181 (Calculus 1). If students are not academically ready for these courses, it is recommended that students enroll in the prior summer term to complete prerequisite courses (MATH 141 and CHEM 120) or see a counselor for adjustment to the plan.

### FALL SEMESTER (YEAR 1)

| Course                                | Title                            | Units     |
|---------------------------------------|----------------------------------|-----------|
| <input type="checkbox"/> ENGL 101     | Freshman Composition: Exposition | 4         |
| <input type="checkbox"/> ENGR 100     | Introduction to Engineering      | 1         |
| <input type="checkbox"/> MATH 181     | Calculus 1                       | 4         |
| <input type="checkbox"/> IGETC/AHC GE | US History Government            | 3         |
| <input type="checkbox"/> IGETC/AHC GE | Humanities/Multinatural Course   | 3         |
| <b>Total Units</b>                    |                                  | <b>15</b> |

#### Tasks:

- Complete Career Exploration
- Meet with Counselor (SEP)
- Visit library & tutoring
- Get involved with STEM
- Review Financial Aid Req.
- Apply AHC Scholarship
- Apply for MESA/STEM
- Engage w/STEM Tutors

### SPRING SEMESTER (YEAR 1)

| Course                            | Title                              | Units     |
|-----------------------------------|------------------------------------|-----------|
| <input type="checkbox"/> CHEM 150 | General Chemistry 1                | 5         |
| <input type="checkbox"/> MATH 182 | Calculus 2                         | 4         |
| <input type="checkbox"/> PHYS 110 | Introductory Physics               | 3         |
| <input type="checkbox"/> ET 100   | Computer Aided Drafting and Design | 3         |
| <b>Total Units</b>                |                                    | <b>15</b> |

#### Tasks:

- Meet with a STEM Counselor
- Set up Jobspeaker
- Attend Career Exploration Day
- Apply for STEM Internships
- Apply for STEM Scholarships
- Engage w/STEM Tutors
- Complete the FAFSA or Dream Act by March 2
- Apply AHC Scholarship
- Attend a Transfer Workshop
- Get involved with STEM

### SUMMER SEMESTER (YEAR 2)

| Course                                | Title                             | Units    |
|---------------------------------------|-----------------------------------|----------|
| <input type="checkbox"/> ENGL 103     | Critical Thinking and Composition | 3        |
| <input type="checkbox"/> IGETC/AHC GE | Social Science                    | 3        |
| <b>Total Units</b>                    |                                   | <b>6</b> |
| <b>Tasks</b>                          |                                   |          |

### FALL SEMESTER (YEAR 2)

| Course                                | Title                      | Units     |
|---------------------------------------|----------------------------|-----------|
| <input type="checkbox"/> CHEM 151     | General Chemistry 2        | 5         |
| <input type="checkbox"/> MATH 183     | Multivariable Calculus     | 4         |
| <input type="checkbox"/> PHYS 161     | Engineering Physics 1      | 4         |
| <input type="checkbox"/> AHC Grad Req | Dance or Physical Activity | .5-3      |
| <b>Total Units</b>                    |                            | <b>14</b> |

#### Tasks:

- Meet with a STEM Counselor
- Review Financial Aid Requirements
- Engage w/STEM Tutors
- Apply for AHC Scholarship
- Get involved with STEM

### SPRING SEMESTER (YEAR 2)

| Course                            | Title                                 | Units     |
|-----------------------------------|---------------------------------------|-----------|
| <input type="checkbox"/> ENGR 126 | MATLAB for Science and Engineering    | 1         |
| <input type="checkbox"/> MATH 184 | Linear Algebra/Differential Equations | 5         |
| <input type="checkbox"/> PHYS 162 | Engineering Physics 2                 | 4         |
| <input type="checkbox"/> CS 111   | Fundamentals of Programming 1         | 4         |
| <b>Total Units</b>                |                                       | <b>14</b> |

#### Tasks:

- Complete FAFSA or Dream Act by March 2
- Attend Job Fair/Career Exploration Day
- Get involved with STEM
- Apply for STEM Scholarships

- Meet with a STEM Counselor
- Engage w/STEM Tutors
- Apply for STEM Internships

## SUMMER SEMESTER (YEAR 3)

| Course                            | Title                | Units    |
|-----------------------------------|----------------------|----------|
| <input type="checkbox"/> BIOL 100 | Introductory Biology | 4        |
| <input type="checkbox"/> SPCH 101 | Public Speaking      | 3        |
| <b>Total Units</b>                |                      | <b>7</b> |

### Tasks

## FALL SEMESTER (YEAR 3)

| Course                            | Title                 | Units     |
|-----------------------------------|-----------------------|-----------|
| <input type="checkbox"/> ENGR 152 | Statics               | 3         |
| <input type="checkbox"/> ENGR 161 | Materials Science     | 3         |
| <input type="checkbox"/> ENGR 162 | Materials Science Lab | 1         |
| <input type="checkbox"/> HED 100  | Health and Wellness   | 3         |
| <input type="checkbox"/> PHYS 163 | Engineering Physics 3 | 4         |
| <b>Total Units</b>                |                       | <b>14</b> |

### Tasks:

- Meet with a STEM Counselor
- Develop Resume at Career Center
- Apply for University Transfer
- Engage w/STEM Tutors
- Review Financial Aid Requirements
- Apply for AHC Scholarship
- Get involved with STEM

## SPRING SEMESTER (YEAR 3)

| Course                            | Title                     | Units     |
|-----------------------------------|---------------------------|-----------|
| <input type="checkbox"/> ENGR 154 | Dynamics                  | 3         |
| <input type="checkbox"/> ENGR 156 | Strength of Materials     | 4         |
| <input type="checkbox"/> ENGR 170 | Electric Circuit Analysis | 3         |
| <input type="checkbox"/> ENGR 171 | Electric Circuit Lab      | 1         |
| <input type="checkbox"/> GEOL 100 | Physical Geology          | 4         |
| <b>Total Units</b>                |                           | <b>14</b> |

### Tasks:

- Apply for Degree with Counseling
- Utilize Job Search Resources
- Complete: Transfer next steps
- Apply for STEM Internships
- Get involved with STEM
- Complete FAFSA or Dream Act by March 2
- Attend Job Fair/Career Exploration Day
- Apply for STEM Scholarships
- Engage w/STEM Tutors