

# Associate in Science Track 2 MRP Computer and Electrical Engineering 104 Credits

This Associate in Science-Transfer degree program is applicable to students planning to prepare for Computer and Electrical Engineering majors at universities in Washington.

Students completing the AS-T, Track 2 degrees will, if admitted to the university, be admitted as juniors with all or most prerequisites for the specific engineering major completed (depending on choices made among engineering electives) and with lower division general education courses partially completed in a manner similar to the partial completion by freshmen-entry engineering students. Note that engineering programs are competitive and may require a higher GPA overall or a higher GPA in specific courses. Baccalaureate institutions will apply up to 110 quarter credits required under this agreement to the credits required in the bachelor's degree, subject to institutional policy on the transfer of lower division credits. AS-T Degree students should, however, maintain careful contact with an advisor at the potential transfer institution in regard to choice in engineering classes.

Upon successful completion of this degree a student will be able to:

- Understand patterns and make connections among different disciplines and schools of knowledge and to integrate studies with personal experience
- Learn actively and gain comprehensive understanding; to think critically, creatively, and reflectively in
  order to solve problems; to communicate with clarity and originality for personal growth and productive
  work; and to interact in diverse and complex environments and complicated, dynamic, and ambiguous
  situations
- Demonstrate a solid foundation for baccalaureate science studies through the completion of an appropriate range of courses in the sciences and liberal arts

#### **Completion Requirements**

The Associate in Science-Transfer Track 2 Engineering degree requires at least 90 credit hours in college level courses (numbered 100 or above), a minimum cumulative 2.0 grade point average, a minimum of 25 credits in residence at Cascadia, and completion of all of the requirements for this degree. Students must complete and submit an application for graduation to Enrollment Services for review and approval before the degree is granted.

## **GENERAL EDUCATION CORE REQUIREMENTS**

**45 CREDITS** 

# **Foundations for College Success**

Must be completed within first 30 credits.

| Course ID | Course Name        | Lec | Lab | Other | Credits |
|-----------|--------------------|-----|-----|-------|---------|
| COLL 101  | College Strategies | 55  |     |       | 5.0     |

### Communication

| Course ID | Course Name           | Lec | Lab | Other | Credits |
|-----------|-----------------------|-----|-----|-------|---------|
| ENGL&101  | English Composition I | 55  |     |       | 5.0     |
| ENGL& 235 | Technical Writing     | 55  |     |       | 5.0     |

#### **Quantitative or Symbolic Reasoning**

| Course ID | Course Name            | Lec | Lab | Other | Credits |
|-----------|------------------------|-----|-----|-------|---------|
| MATH& 151 | Calculus I             | 55  |     |       | 5.0     |
| MATH& 152 | Calculus II            | 55  |     |       | 5.0     |
| MATH& 163 | Calculus 3             | 55  |     |       | 5.0     |
| MATH 208  | Linear Algebra         | 55  |     |       | 5.0     |
| MATH 238  | Differential Equations | 55  |     |       | 5.0     |

### **Cultural Knowledge Requirement**

| Course ID                        | Course Name                  | Lec | Lab | Other | Credits |
|----------------------------------|------------------------------|-----|-----|-------|---------|
| CMST, GS, HIST,<br>HUMAN, or SOC | 150 series designated course | 55  |     |       | 5.0     |

Students are also required to take an additional CKR designated course. This CKR designated course may also be used to satisfy either the Humanities or Social Science Distribution requirement below.

### **HUMANITIES / SOCIAL SCIENCES DISTRIBUTION REQUIREMENT**

10 CREDITS

Students must complete courses from at least two different disciplines. No more than five credits may be included from those courses designated **HP** as performance/skills, applied theory or lecture/studio courses. Only one course of ASL or a world language at the 100 level may be included.

| Course ID        | Course Name          | Lec | Lab | Other | Credits |
|------------------|----------------------|-----|-----|-------|---------|
|                  | H designated course  | 55  |     |       | 5.0     |
| ECON recommended | SS designated course | 55  |     |       | 5.0     |

#### PRE-MAJOR REQUIREMENTS

31 CREDITS

Students must complete courses from at least two different disciplines, and include at least five credits of a lab course (**LAB**). At least 10 credits required in physical, and earth sciences. Students are required to complete the sequence courses listed below at one institution.

| Course ID              | Course Name   | Lec | Lab | Other | Credits |
|------------------------|---|-----|-----|-------|---------|
| CHEM&161               | General Chemistry w/ Lab I                              | 44  | 44  |       | 6.0     |
| ENGR& 204              | Electrical Circuits                                     | 55  |     |       | 5.0     |
| BIT 142, or<br>BIT 143 | Intermediate Programming<br>Programming Data Structures | 55  |     |       | 5.0     |
| PHYS&221               | Engineering Physics I                                   | 44  | 22  |       | 5.0     |
| PHYS&222               | Engineering Physics II                                  | 44  | 22  |       | 5.0     |
| PHYS&223               | Engineering Physics III                                 | 44  | 22  |       | 5.0     |

# **PROGRAM REQUIRED ELECTIVES**

18+ CREDITS

Students should select four courses from the list below as appropriate for intended major and intended baccalaureate institution. Consult an advisor for more information.

| Course ID                     | Course Name   | Lec | Lab | Other | Credits |
|-------------------------------|---|-----|-----|-------|---------|
| BIOL& 211                     | Majors Cellular   | 55  | 22  |       | 6.0     |
| BIT 143, <b>or</b><br>BIT 265 | Programming Data Structures, <b>or</b><br>Structures and Algorithms | 55  |     |       | 5.0     |
| CHEM&162                      | General Chemistry w/ Lab II   | 44  | 44  |       | 6.0     |
| ENGR& 214                     | Statics   | 55  |     |       | 5.0     |
| ENGR& 215                     | Dynamics  | 55  |     |       | 5.0     |
| ENGR 240                      | Applied Numerical Methods   | 44  | 22  |       | 5.0     |
| MATH& 264                     | Calculus 4  | 55  |     |       | 5.0     |