



ENGINEERING

Transfer Major Advisement for CSU Long Beach

| SAC COURSES | AEROSPACE | CHEMICAL | COMPUTER | CIVIL | ELECTRICAL | CONSTRUCTION MGMT. | ENGINEERING TECHNOLOGY PROGRAMS | | | | | ENGINEERING | | | | | |
|---|-----------|----------|----------|-------|------------|--------------------|---------------------------------|-------------|-----------|---------------|---------------|--------------------|-------|------------------|-----------|------------|---|
| | | | | | | | COMPUTER | ELECTRONICS | EDUCATION | ENVIRONMENTAL | MANUFACTURING | BIO-MED & CLINICAL | AUDIO | INDUSTRIAL MGMT. | MATERIALS | MECHANICAL | |
| ACCOUNTING 101, FINANCIAL ACCOUNTING | | | | | | ● | | | | | | | | | | | |
| BUSINESS 101, BUSINESS LAW | | | | | | | | | | 8 | | | | | ● | | |
| MATHEMATICS 219, STATISTICS | | | | | | ● | ● | ● | | ● | ● | | | | | | |
| MATHEMATICS 170, PRE-CALCULUS | | | | | | | | | 5 | 5 | | | | | | | |
| MATHEMATICS 180, CALCULUS | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | ● | ● | ● | ● |
| MATHEMATICS 185, CALCULUS | ● | ● | | ● | ● | ● | ● | ● | | | | ● | 7 | ● | ● | ● | ● |
| MATHEMATICS 280, INTERMEDIATE CALCULUS | ● | ● | | ● | ● | | | | | | | ● | 7 | ● | ● | ● | ● |
| MATHEMATICS 290, INTERMEDIATE ALGEBRA | | | | | | | | | | | | | | | | | |
| CHEMISTRY 219, GENERAL CHEMISTRY | ● | ● | | ● | | | | | | ● | ● | ● | | ● | ● | ● | ● |
| CHEMISTRY 229, GENERAL CHEMISTRY/QUALITATIVE | | ● | | | | | | | | | | | | | | ● | |
| CHEMISTRY 239, QUANTITATIVE ANALYSIS | | 1 | | | | | | | | | | | | | | | |
| PHYSICS 217, ENGINEERING PHYSICS I | ● | ● | ● | ● | ● | | | | | | | ● | ● | ● | ● | ● | ● |
| PHYSICS 227, ENGINEERING PHYSICS II | ● | ● | ● | ● | ● | | | | | | | ● | | ● | ● | ● | ● |
| PHYSICS 237, ENGINEERING PHYSICS III | | | | | ● | | | | | | | ● | | | | | |
| PHYSICS 279, COLLEGE PHYSICS I | | | | | | ● | ● | ● | ● | ● | ● | | | | | | |
| PHYSICS 289, COLLEGE PHYSICS II | | | | | | ● | ● | ● | ● | ● | ● | | | | | | |
| ENGINEERING 125, ENGINEERING GRAPHICS | ● | | | ● | | | | | | | | | | | ● | ● | ● |
| ENGINEERING 188, MACHINE TECHNOLOGY SURVEY | | | | | | | | | | 6 | | | | | | | |
| ENGINEERING 235, STATICS | ● | ● | | ● | | | | | | ● | ● | | ● | ● | ● | ● | ● |
| ENGINEERING 250, ELECTRIC CIRCUITS | | ● | | | | | | | | | | | | | | | |
| ENGINEERING 250 & 250L, ELECTRIC CIRCUITS & LAB | | | | | ● | | ● | ● | | | | ● | 7 | ● | ● | ● | ● |
| COMPUTER SCIENCE 112, JAVA PROGRAMING | | | ● | | | | | | ● | | | | 7 | | | | |
| BIOLOGY 109/109L, FUNDAMENTALS OF BIOLOGY & LAB | | | | 4 | | | | | | | | | | | | | |
| BIOLOGY 249, HUMAN PHYSIOLOGY | | | | | | | | | | | | ● | ● | | | | |
| MUSIC 101, MUSIC APPRECIATION | | | | | | | | | | | | | ● | | | | |
| OTHER | | | 2 | | | | 3 | 3 | 3 | 3 | 3 | | | | | | |

● = SAC course meets this requirement.

- 1 Add Chemistry 239 or Biology 139 or 229 or Biology 211.
- 2 Additional lower division Computer Science courses are required for this major. Course equivalents are not offered at SAC. See the CSULB catalog and www.assist.org for more information.
- 3 Add Engineering 122.
- 4 Take Biology (109 and 109L), or Biology 139 or 229.
- 5 Math 140 or 170 are suggested in preparation for Math 120, Calculus for Technology, at CSULB.
- 6 Take Engineering 188 or Manufacturing Technology 188.
- 7 For Computer Engineering Track add Computer Science 112. For Electrical Engineering Track add Math 185, 280 and Engineering 250, 205L.
- 8 For Quality Assurance emphasis add Business 101.

NOTES:

This Engineering transfer grid compares SAC course offerings in mathematics, science, and engineering with major lower-division engineering requirements for various options at CSULB. Please be aware this information is intended as a guide only. The student should verify all information with the transfer university and www.assist.org.

Consult the current CSULB catalog and a SAC counselor for further information.

The major preparation listed above ONLY includes courses for which articulation exists. This information is based upon university course articulation and catalog information available at the time of publication. It is to be used as a guide for lower division preparation for the major and not as an official document. **It is the student's responsibility to check the current catalog and articulation for any additional course requirements, or for any changes which may occur. Students are advised to consult with a SAC counselor. Additional articulation information can be obtained at www.assist.org. (01/09)**