Los Medanos College ASSOCIATE OF SCIENCE DEGREE ENGINEERING
Engineers design and oversee the construction of the structures, vehicles, devices, and processes that solve the technological problems facing society. Engineering is a profession with both licensing requirements and a code of ethics.

The LMC Engineering Program offers a solid foundation for upper division studies in most engineering fields, including mechanical engineering, civil engineering, electrical engineering, aerospace engineering, industrial engineering, and many other engineering disciplines.

Students who complete the program will have finished most or all of the lower division courses required for transfer to four-year engineering programs. Graduates of the Engineering Program at LMC will also be able to: identify and solve engineering problems; perform and interpret experiments; produce designs to meet various needs; demonstrate professional ethics; communicate effectively; judge how engineering projects affect society and the environment; engage in lifelong learning; and use the tools and techniques necessary for modern engineering practice.

For the Associate of Science Degree in Engineering, complete 55 units of coursework listed below, as well as the General Education requirements. Consult a Los Medanos College counselor to develop your education plan.

REQUIRED COURSES: UNITS
ENGIN-010 Introduction to Engineering 3
ENGIN-020 Programming with C++ for Engineers and Scientists 4
or
ENGIN-022 Programming with MATLAB for Engineers and Scientists 4
ENGIN-025 Engineering Graphics 3
ENGIN-030 Materials Science 4
ENGIN-045 Engineering Circuits 4
CHEM-025 General College Chemistry 5
PHYS-040 Physics for Scientists and Engineers I 4
PHYS-041 Physics for Scientists and Engineers II 4
PHYS-042 Physics for Scientists and Engineers III 4
MATH-210 Calculus and Analytic Geometry I 4
MATH-220 Calculus and Analytic Geometry II 4
MATH-230 Calculus and Analytic Geometry III 4
MATH-240 Differential Equations 3
TOTAL UNITS 50

AND SELECT TWO RESTRICTED ELECTIVES FROM:
ENGIN-036 Engineering Statics 3
ENGIN-038 Manufacturing Processes 3
ENGIN-046 Engineering Dynamics 3
MATH-250 Linear Algebra 3

TOTAL UNITS FOR THE MAJOR 55
TOTAL UNITS FOR THE DEGREE 60+

The courses required for transfer vary depending on the transfer destination institution and the desired engineering discipline.

IGETC is NOT appropriate for this major. Students interested in engineering should meet with a counselor to plan their schedules as soon as possible.

Program Student Learning Outcomes

1. Apply knowledge of math, science, and engineering, and use the techniques, skills, and tools of modern engineering, to identify, formulate, and solve engineering problems.
2. Design a system, component, or process to meet desired needs.
3. Demonstrate the behaviors of professional engineers, including ethical responsibility and lifelong learning.
4. Communicate effectively and perform on multi-disciplinary teams.
5. Judge the effects of engineering projects on society and the environment, and explain contemporary issues in engineering.