

# ENGINEERING, ASSOCIATE IN SCIENCE

Ventura College offers a two-year lower-division engineering program that prepares students for transfer to colleges and universities in California and across the nation. The first two years of the engineering curriculum, at most colleges and universities, are similar with specialization commencing in the junior year. Completion of the lower division core courses listed is essential in facilitating progress as an upper division engineering transfer student. It is important that engineering students meet with an engineering transfer counselor and/or the Engineering Department for specific requirements for transfer.

Upon successful completion of this program, students will be able to:

- Analyze and interpret data to make engineering problem decisions.
- Identify, formulate, and solve basic engineering problems

Course ID	Title	Units/ Hours
<b>Required Courses</b>		
CHEM V01A	General Chemistry I	3
CHEM V01AL	General Chemistry I Laboratory	2
ENGR V01	Introduction to Engineering	1
MATH V21A	Calculus with Analytic Geometry I	5
MATH V21B	Calculus with Analytic Geometry II	5
PHYS V04 & V04L	Mechanics for Scientists and Engineers and Mechanics Laboratory for Scientists and Engineers	5
PHYS V05 & V05L	Electricity and Magnetism for Scientists and Engineers and Electricity and Magnetism Laboratory for Scientists and Engineers	5
<b>Required Additional Courses</b>		
Select 8 units from the following:		8
CHEM V01B	General Chemistry II	
CHEM V01BL	General Chemistry II Laboratory	
MATH V21C	Multivariable Calculus	
MATH V22	Introduction to Linear Algebra	
MATH V23	Introduction to Differential Equations	
PHYS V06 & V06L	Optics, Heat, and Modern Physics: For Scientists and Engineers and Optics, Heat, and Modern Physics Laboratory for Scientists and Engineers	
Select 9 units from the following:		9
ENGR V02	Engineering Graphics and Design	
ENGR V12	Engineering Statics	
ENGR V16	Electronic Circuit Analysis	
ENGR V16L	Electronic Circuits Laboratory	
ENGR V18 & V18L	Engineering Materials and Engineering Materials Laboratory	
May select 6 units from the following courses as part of the 9 units additionally required:		
CS V11	Programming Fundamentals	
CS V13	Object-Oriented Programming	
CS V30	Beginning C++	
CS V40	Beginning Java	
<b>Total Units</b>		<b>43</b>