

with an emphasis in Manufacturing

Bachelor of Science in Engineering



California State University, Los Angeles
College of Extended Studies and International Programs
5151 State University Drive
Los Angeles, CA 90032-8619
TE441-201800-04149



College of Extended Studies and International Programs

Bachelor of Science Degree in



Engineering

with an emphasis in
Manufacturing

California State University, Los Angeles
brings its award-winning professors
to you!

Complete your
Bachelor's Degree in Engineering
at College of the Canyons!

Bachelor of Science in Engineering

with an emphasis in
Manufacturing

Manufacturing engineers turn design ideas and engineering drawings into reality. Mechanical engineers who specialize in manufacturing are familiar with machine tools, manufacturing processes, and properties of engineering materials. They work closely with design engineers and technicians to fabricate parts, components, sub-assemblies, or complete systems. Manufacturing engineers utilize modern computer-aided design and manufacturing (CAD/CAM) software, high-tech precision machines, and computer-controlled manufacturing technologies to produce highly complex and efficient systems.

Admission Requirements

The College of the Canyons (CoC) currently offers all prerequisite courses required for admission to the program. Prerequisite courses required for admission to the program include:

| Prerequisite Course: | CoC Equivalent Course: |
|-------------------------------------|--------------------------------|
| • One (1) term of general chemistry | CHEM 201 |
| • Three (3) terms of physics | PHYSIC 220, 221, and 222 |
| • Three (3) terms of calculus | MATH 211, 212, and 213 |
| • One (1) term each of: | |
| ◦ Differential equations | MATH 215 |
| ◦ Introduction to engineering | ENGR 101 |
| ◦ Statics | ENGR 152 |
| ◦ Strength of materials | ENGR 161 |
| ◦ Strength of materials (lab) | ENGR 161L |
| ◦ Materials science | ENGR 151 |
| ◦ Matrix algebra | MATH 214 |
| ◦ Statistics | MATH 140 or Math 140H (Honors) |
| ◦ Economics | ENGR 154 |
| ◦ Dynamics | ENGR 155 |

Degree Requirements

Core Courses

ME 303 Fluid Mechanics I
 ME 310 Mechanical Engineering Writing Lab.
 ME 313 Fluid Mechanics Laboratory I
 ME 323 Machine Design I
 ME 326A Thermodynamics I
 ME 327 Manufacturing Processes
 ME 428 Automation & Computer-Aided Drafting
 ME 430 Properties & Selection of Eng. Materials
 ME 431 Material Laboratory
 ENGR 301 Ethics and Professionalism
 ENGR 497A, B, C Mechanical Eng. Senior Project

Upper Division General Education Theme
 (12 units)

Elective Courses

Technology Electives (6 units)
 Management Electives (8 units)
 Technical Electives (16)

PROGRAM SCHEDULE

YEAR ONE

Fall Quarter

| Course # | Course Name | Units |
|----------|----------------------------|-----------------|
| ME 326a | Thermodynamics I | (4) |
| ME 303 | Fluid Mechanics I | (4) |
| ENGR 301 | Ethics and Professionalism | (1) |
| | Technology elective | (3) |
| | Upper Division Theme | (4) |
| | | <i>16 units</i> |

Winter Quarter

| | | |
|--------|---|-----------------|
| | Technical elective | (4) |
| ME 428 | Automation and Computer-Aided Manufacturing | (4) |
| ME 430 | Properties & Selection of Engineering Materials | (4) |
| ME 431 | Material Laboratory | (1) |
| ME 313 | Fluid Mechanics Laboratory I | (1) |
| | | <i>14 units</i> |

Spring Quarter

| | | |
|--------|--|-----------------|
| ME 327 | Manufacturing Processes | (4) |
| ME 323 | Machine Design I | (4) |
| ME 310 | Mechanical Engineer Writing Laboratory | (1) |
| | Technology elective | (3) |
| | Upper Division Theme | (4) |
| | | <i>16 units</i> |

YEAR TWO

Fall Quarter

| Course # | Course Name | Units |
|-----------|----------------------|-----------------|
| ENGR 497a | Senior Project | (4) |
| | Technical elective | (4) |
| | Upper Division Theme | (4) |
| | | <i>12 units</i> |

Winter Quarter

| | | |
|-----------|---------------------|-----------------|
| ENGR 497b | Senior Project | (4) |
| | Technical elective | (4) |
| | Management elective | (4) |
| | | <i>12 units</i> |

Spring Quarter

| | | |
|-----------|---------------------|-----------------|
| ENGR 497c | Senior Project | (4) |
| | Technical elective | (4) |
| | Management elective | (4) |
| | | <i>12 units</i> |

FOR MORE INFORMATION CONTACT

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Enrollment Services

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