

# A unique partnership leading to your degree in Engineering with Special Option in Manufacturing Engineering

Two of Southern California's leading educational institutions have created a  
2 + 2 articulation agreement to expedite your studies to become a Manufacturing Engineer

## Mt. SAN ANTONIO COLLEGE

Physics and Engineering Department (909) 594-5611 ext. 4424

### GENERAL EDUCATION AT Mt. SAC

#### Required General Education Lower Division Courses

- |   |   |
|---|---|
| <input type="checkbox"/> ENGL 1A or 1AH | Freshman Composition or Freshman Composition - Honors |
| <input type="checkbox"/> HIST 7 or 8*   | History of United States                              |
| <input type="checkbox"/> SPCH 1A or 1AH | Public Speaking or Public Speaking - Honors           |

It is recommended that you take **three** of the six courses listed below. The **three** remaining lower division GE courses along with the three courses required to satisfy the GE Upper Division Theme will be useful in balancing the technical course load at Cal State L.A.

- |  |   |
|--|---|
| <input type="checkbox"/> ENGL 1C or 1CH      | Critical Thinking and Writing or Critical Thinking and Writing - Honors |
| <input type="checkbox"/> POLI 1 or 1H        | Political Science or Political Science - Honors                         |
| <input type="checkbox"/> BLOCK C (3 courses) | Arts and Humanities   |
| <input type="checkbox"/> BLOCK E (1 course)  | Lifelong Understanding and Self-Development                             |

\* HIST 7 is equivalent to Cal State L.A.'s HIST 202A and HIST 8 is equivalent to Cal State L.A.'s HIST 202B. You can also meet the Cal State L.A.'s History Requirement by taking any one course from HIST 1, 1H, 30, 31, 36, 40.

### COURSES IN MAJOR PROGRAM AT Mt. SAC

#### Basic Sciences and Mathematics

- |                                   |   |
|-----------------------------------|---|
| <input type="checkbox"/> CHEM 1A  | General Chemistry                         |
| <input type="checkbox"/> MATH 180 | Calculus and Analytic Geometry            |
| <input type="checkbox"/> MATH 181 | Calculus and Analytic Geometry            |
| <input type="checkbox"/> MATH 280 | Calculus and Analytic Geometry            |
| <input type="checkbox"/> MATH 285 | Linear Algebra and Differential Equations |
| <input type="checkbox"/> PHYS 4A  | Engineering Physics                       |
| <input type="checkbox"/> PHYS 4B  | Engineering Physics                       |

#### Technical Courses

- |                                       |  |
|---------------------------------------|--|
| <input type="checkbox"/> ENGR 8       | Properties of Materials  |
| <input type="checkbox"/> ENGR 24      | Engineering Graphics   |
| <input type="checkbox"/> ENGR 40      | Statics  |
| <input type="checkbox"/> ENGR 41      | Dynamics   |
| <input type="checkbox"/> ENGR 42      | Mechanics of Materials   |
| <input type="checkbox"/> ENGR 44      | Electrical Engineering   |
| <input type="checkbox"/> ENGR 48      | Introduction to Engineering  |
| <input type="checkbox"/> MFG 10 or 90 | Manufacturing Process I or Manufacturing Processes for Designers I |

## CAL STATE L. A.

Department of Mechanical Engineering (323) 343-4490

### GENERAL EDUCATION AT CAL STATE L.A.

#### General Education Lower Division

- |                                |  |
|--------------------------------|--|
| <input type="checkbox"/> _____ | Insert GE holdover course (See Mt SAC GE note) |
| <input type="checkbox"/> _____ | Insert GE holdover course (See Mt SAC GE note) |
| <input type="checkbox"/> _____ | Insert GE holdover course (See Mt SAC GE note) |

#### General Education Upper Division Theme

- |  |           |
|--|-----------|
| <input type="checkbox"/> Upper Division GE Theme *** | 3 courses |
|--|-----------|

\*\*\* A biology course must be included as part of GE Upper Division Theme

Note: You must select two diversity courses from among the GE courses you take at Cal State L.A.

### COURSES IN MAJOR PROGRAM AT CAL STATE L.A.

#### Lower Division Engineering Courses

- |  |  |
|--|--|
| <input type="checkbox"/> CE/ME 211 (formerly ENGR 211) ▶ | Statistics and Probability for Engineers |
| <input type="checkbox"/> CS 290 ▶▶                       | Introduction to FORTRAN Programming      |

▶ Credit will be granted for students who take MATH 110 at Mount San Antonio College.

▶▶ Credit will be granted for students who take CSCI 120 at Mount San Antonio College.

#### Upper Division Engineering Courses

- |   |  |
|---|--|
| <input type="checkbox"/> ENGL 306 or TECH 400 | Technical Writing or Written Communication Skills for Industrial Technology    |
| <input type="checkbox"/> ENGR 300             | Economics for Engineers  |
| <input type="checkbox"/> ENGR 301             | Ethics and Professionalism in Engineering                                      |
| <input type="checkbox"/> CE/ME 312            | Strength of Materials I Laboratory   |
| <input type="checkbox"/> ME 323               | Machine Design I   |
| <input type="checkbox"/> ME 327 ▶▶▶           | Manufacturing Processes  |
| <input type="checkbox"/> ME 328               | Introduction to Metallurgy   |
| <input type="checkbox"/> ME 329               | Metallography Laboratory I   |
| <input type="checkbox"/> ME 410 or EE 360     | Control of Mechanical Systems or Control Systems Theory I                      |
| <input type="checkbox"/> ME 428 or TECH 484   | Automation and Computer Aided Manufacturing or Automated Manufacturing Systems |

- |                                    |                          |
|------------------------------------|--------------------------|
| <input type="checkbox"/> EE/ME 481 | Introduction to Robotics |
| <input type="checkbox"/> EE/ME 491 | Robotics Laboratory      |

▶▶▶ Credit will be granted for students who take MFG 12 at Mount San Antonio College.

#### Technical and Management Electives

- |   |  |
|---|--|
| <input type="checkbox"/> 300 LEVEL TECHNICAL ELECTIVES      | Select 3 courses from CE/ME 303, EE 304, EE 336, ME 306, ME 326A   |
| <input type="checkbox"/> MANAGEMENT ELECTIVES               | Select 3 courses from MGMT 306, MGMT 460, MGMT 463, MGMT 464, MGMT 467, MGMT 496                             |
| <input type="checkbox"/> UPPER DIVISION TECHNICAL ELECTIVES | Select 4 courses from EE 336, EE 345, EE 372, EE 445, ME 414, ME 422, TECH 325, TECH 327, TECH 411, TECH 425 |

Note: You are required to take the Writing Proficiency Examination (WPE) prior to completing 135 quarter units.