

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

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

## EAST LOS ANGELES COLLEGE

Department of Engineering and Technology (323) 265-8858

### GENERAL EDUCATION AT ELAC

#### General Education Lower Division

It is recommended that you take English 101 and Speech 101 plus **four** courses from the list below. The **three** remaining 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 101            | College Reading and Composition I           |
| <input type="checkbox"/> | SPCH 101            | Oral Communication I                        |
| <input type="checkbox"/> | U.S. HISTORY*       | HIST 5 or 6 or 11 or 12                     |
| <input type="checkbox"/> | POL SCI 1           | The Government of the United States         |
| <input type="checkbox"/> | BLOCK C (3 courses) | Humanities                                  |
| <input type="checkbox"/> | BLOCK E (1 course)  | Lifelong Understanding and Self-Development |
| <input type="checkbox"/> | ENGL 103**          | Composition and Critical Thinking           |

\* HIST 11 and 12 are equivalent to Cal State L.A.'s HIST 202A and 202B respectively. You can also meet the Cal State L.A.'s U.S. History requirement by taking HIST 5 or 6.

\*\* English 103 is not a General Education course, but is a Cal State L.A. university graduation requirement

### COURSES IN MAJOR PROGRAM AT ELAC

#### Basic Sciences and Mathematics

- |                          |          |                                      |
|--------------------------|----------|--------------------------------------|
| <input type="checkbox"/> | CHEM 101 | General Chemistry I                  |
| <input type="checkbox"/> | MATH 261 | Calculus I                           |
| <input type="checkbox"/> | MATH 262 | Calculus II                          |
| <input type="checkbox"/> | MATH 263 | Calculus III                         |
| <input type="checkbox"/> | MATH 275 | Ordinary Differential Equations      |
| <input type="checkbox"/> | PHYS 1   | Mechanics of Solids                  |
| <input type="checkbox"/> | PHYS 2   | Mechanics of Fluids, Heat, and Sound |
| <input type="checkbox"/> | PHYS 3   | Electricity and Magnetism            |

#### Lower Division Engineering Courses

- |                          |               |  |
|--------------------------|---------------|--|
| <input type="checkbox"/> | GEN ENGR 101  | Introduction to Science, Engineering, and Technology |
| <input type="checkbox"/> | GEN ENGR 110  | Engineering Graphics                                 |
| <input type="checkbox"/> | GEN ENGR 121  | Engineering Applications of Digital Computation      |
| <input type="checkbox"/> | GEN ENGR 131  | Statics  |
| <input type="checkbox"/> | GEN ENGR 151  | Materials of Engineering                             |
| <input type="checkbox"/> | GEN ENGR 161  | Processing of Engineering Materials                  |
| <input type="checkbox"/> | GEN ENGR 221  | Engineering Probability and Statistics               |
| <input type="checkbox"/> | GEN ENGR 231  | Dynamics   |
| <input type="checkbox"/> | GEN ENGR 241  | Strength of Materials                                |
| <input type="checkbox"/> | GEN ENGR 242  | Strength of Materials Laboratory                     |
| <input type="checkbox"/> | GEN ENGR 272  | Principles of Engineering Economy                    |
| <input type="checkbox"/> | ELEC ENGR 220 | Electrical Circuits 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 ELAC GE note) |
| <input type="checkbox"/> | _____ | Insert GE holdover course (See ELAC GE note) |
| <input type="checkbox"/> | _____ | Insert GE holdover course (See ELAC 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.

#### 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 301             | Ethics and Professionalism in Engineering                                      |
| <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"/> | ME 481               | Introduction to Robotics   |
| <input type="checkbox"/> | ME 491               | Robotics Laboratory  |

#### 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 4-5 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.