

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

L.A. TRADE-TECHNICAL COLLEGE

Department of Science and Math (213) 744-9091

GENERAL EDUCATION AT LATTC

Required General Education Lower Division Courses

- | | | |
|--------------------------|-------------|-----------------------------------|
| <input type="checkbox"/> | ENGLISH 101 | College Reading and Composition |
| <input type="checkbox"/> | ENGLISH 103 | Composition and Critical Thinking |
| <input type="checkbox"/> | SPEECH 101 | Oral Communications I |

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"/> | U.S. HISTORY* | HISTORY 11, 12, 13, 41, 42, 43, or 44 |
| <input type="checkbox"/> | POLSCI 1 | The Government of the U.S. |
| <input type="checkbox"/> | BLOCK C (3 courses) | Arts, Literature, Philosophy and Foreign Language |
| <input type="checkbox"/> | BLOCK E (1 course) | Lifelong Understanding and Self-Development |

*HISTORY 11 is equivalent to Cal State L.A.'s HIST 202A and HISTORY 12 or 13 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 HISTORY 41, 42, 43, 44.

COURSES IN MAJOR PROGRAM AT LATTC

Basic Sciences and Mathematics

- | | | |
|--------------------------|-----------|--------------------------------------|
| <input type="checkbox"/> | CHEM 101 | General Chemistry I |
| <input type="checkbox"/> | MATH 265 | Calculus with Analytic Geometry I |
| <input type="checkbox"/> | MATH 266 | Calculus with Analytic Geometry II |
| <input type="checkbox"/> | MATH 267 | Calculus with Analytic Geometry III |
| <input type="checkbox"/> | MATH 275 | Ordinary Differential Equations |
| <input type="checkbox"/> | PHYSICS 1 | Mechanics of Solids |
| <input type="checkbox"/> | PHYSICS 2 | Mechanics of Fluids, Heat, and Sound |
| <input type="checkbox"/> | PHYSICS 3 | Electricity and Magnetism |

Technical Courses

- | | | |
|--------------------------|--------------|--|
| <input type="checkbox"/> | CIS 739** | Programming in C |
| <input type="checkbox"/> | GEN ENGR 101 | Introduction to Science, Engineering, and Technology |
| <input type="checkbox"/> | GEN ENGR 131 | Statics |
| <input type="checkbox"/> | GEN ENGR 151 | Materials of Engineering |
| <input type="checkbox"/> | GEN ENGR 241 | Strength of Materials |
| <input type="checkbox"/> | GEN ENGR 242 | Strength of Materials Laboratory |
| <input type="checkbox"/> | MSCNC 111 | Principles of Machine Tools I |

** May substitute a course in any high-level programming language.

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"/> | Lower Division GE | 3 remaining courses |
|--------------------------|-------------------|---------------------|

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 210 (formerly ENGR 210) ▶ | Matrix Algebra for Engineers |
| <input type="checkbox"/> | CE/ME 211 (formerly ENGR 211) ▶ ▶ | Statistics and Probability for Engineers |
| <input type="checkbox"/> | EE 204 (formerly ENGR 204) | Circuit Analysis I |
| <input type="checkbox"/> | EE 210 or ME 310 | Electrical Measurements Laboratory or Mechanical Engineering Measurements Laboratory |
| <input type="checkbox"/> | EE 211 | Electrical Circuits Laboratory |
| <input type="checkbox"/> | ME 103 | Introduction to Mechanical Design |

▶ Credit will be granted for students who take MATH 270 at LA Trade-Technical College.

▶ ▶ Credit will be granted for students who take MATH 225 at LA Trade-Technical 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"/> | 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 4 courses from CE/ME 303, CE/ME 320, 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.