

MECHATRONICS ENGINEERING, MASTER OF SCIENCE

Specific Admission Requirements

A successful applicant will have a quantitatively based baccalaureate degree from a regionally accredited college or university. Students with non-quantitatively based baccalaureate degrees may be admitted conditionally, but additional prerequisites may be required. Admission to the MSME program requires prior admission to graduate study at CSU-Pueblo. Regulations governing graduate studies are contained in the university catalog under graduate programs & admissions..

Specific Program Requirements

The MSME Program consists of three components:

1. **Core Component:** 14 credit hours
2. **Track Component:** 9 credit hours
3. **Elective Component:** 10 credit hours (non-thesis option), or 7 credit hours (thesis option)

Non-Thesis Total: 33 credit hours

Thesis Total: 30 credit hours

Core Component

Course	Title	Credits
EN 507	Virtual Reality	3
EN 513	Artificial Intelligence	3
EN 561	Advanced Controls	3
EN 563	Intelligent Robotics	3
EN 593	Graduate Seminar	2
Total Credits		14

Track Component

The Track Component consists of 9 credit hours of coursework selected by the student and his or her adviser to advance the professional and/or educational goals of the student. In the MSME program, individualized tracks are tailored to the needs of the student. An individualized track must consist of 9 credit hours of graduate coursework subject to the approval of the adviser and department.

In order to count towards graduation, any Special Projects, Special Topics, Graduate Projects or Independent Study course must consist of content appropriate for the track selected. The determination of an appropriate topic is at the discretion of the adviser and department.

Elective Component

Non-Thesis Option

The Elective Component consists of 10 credit hours of coursework of courses approved as electives by the department.

Thesis Option

The Elective Component consists of 6 credit hours of thesis and 1 credit hour of coursework of courses approved as electives by the department.

Prerequisites for the MS in Mechatronics Engineering

(CSU-Pueblo Course Equivalents)

Note that some of the courses listed below may have prerequisites not listed here.

- Problem Solving for Engineers (EN 103 Problem Solving for Engineers (3 c.h.))
- Engineering Economy (EN 343 Engineering Economy (3 c.h.))¹
- Calculus I and II (MATH 126 Calculus & Analytic Geometry I (GT-MA1) (5 c.h.) and MATH 224 Calculus and Analytic Geometry II (5 c.h.))
- Calculus-Based Physics I and II (PHYS 221 General Physics I (4 c.h.) and PHYS 222 General Physics II (4 c.h.))
- Engineering mechanics (statics and dynamics) (EN 211 Engineering Mechanics I (3 c.h.) and EN 212 Engineering Mechanics II (3 c.h.))
- Circuits (EN 231 Circuit Analysis I (4 c.h.) and EN 231L Circuit Analysis I Lab (1 c.h.))
- Controls (EN 360 Control Systems I (2 c.h.))
- Electromechanical devices (EN 263 Electromechanical Devices (3 c.h.))

¹ Any material substituted for EN 343 Engineering Economy (3 c.h.) must include the time value of money topic.

Specific Graduation Requirements

For a student to be awarded the MSME degree, the student's program of study must also satisfy the following requirements. Additionally, the program of study must be approved by the MSME Program Director.

- At least 21 credit hours must be in graduate level engineering courses.
- No more than 9 credit hours of graduate coursework may be accepted as transfer credit from another institution.
- Any course taken as a prerequisite to engineering graduate study at CSU-Pueblo may not be counted towards graduation and must be taken for credit (i.e., not audited).