MASTER OF MATERIALS ENGINEERING, PLAN C

The Masters of Materials Engineering, Plan C, is aimed at having students develop a fundamental understanding of the Materials Science & Engineering (MSE) triad: processing, structure, and property relations in materials through in-depth specialized coursework. This program emphasizes a depth in materials science and engineering theory and practice that is enabled through a coursework only degree. The coursework in this program covers the fundamentals of characterization, processing and properties of materials. This includes coursework in thermodynamics, kinetics, mechanical properties and physical properties of materials.

Students interested in graduate work should refer to the Graduate and Professional Bulletin (http://catalog.colostate.edu/general-catalog/graduate-bulletin/).

Program Learning Objectives

Graduate students in the Master of Materials Engineering will take coursework in core materials competencies as well as electives to achieve the following learning objectives:

1. Utilize and apply advanced mathematical, computational, design and / or experimental skills to materials engineering problems.
2. Identify, formulate, justify and solve advanced problems in materials engineering.
3. Effectively communicate technical ideas to a variety of audiences through reports, presentations, or other media at the high-level associated with graduate education.
4. Have knowledge of and recognize the interconnectedness of materials science and engineering and society and the need for lifelong learning.
5. Learn and develop techniques, skills and tools necessary for materials engineering practice.

Institutional Learning Objectives

CSU's Institutional Learning Objectives (ILO's) are Creativity, Reasoning, Communication, Responsibility, and Collaboration. Below are the ways Master of Materials Engineering students engage in each ILO by the time of their graduation:

- **Creativity and Responsibility**: Students will learn new ways of understanding their place in the world and how their contributions to MSE impact society on an individual, group, and institutional level.
- **Reasoning**: In all their MSE subject courses, students learn to identify and understand problems related to the MSE field.
- **Communication**: Several courses require presentations and/or discussion posts to peers. These assignments are designed to improve oral and written communication of their course understanding.
- **Collaboration**: All MSE courses require some form of collaboration in class through group discussion, assignments, homework or presentations. As an interdisciplinary program, all MSE students collaborate with students and faculty from a variety of departments across campus.