



Master of Engineering in Manufacturing Engineering (MEME)

Prepare for careers in semiconductor manufacturing, advanced manufacturing, automation, equipment engineering, MEMS, microelectronics, and manufacturing leadership.

Funding opportunities: Eligible admitted U.S. citizens and permanent residents may qualify for a \$15,000 per year Intel scholarship in manufacturing engineering or related areas. All students may be considered for available research, project, TA, or other funding depending on availability. Funding is not automatic. Contact Dr. Matthias Pleil at mpleil@unm.edu for details.

Why MEME at UNM?

How the program supports students

- Graduate-level manufacturing engineering coursework with flexible paths for working engineers and full-time students.
- Specialized semiconductor and microsystems option connected to cleanroom-based training at MTTC.
- Options for coursework only (Plan III), an applied project (Plan II), or a thesis (Plan I).
- Technical and management coursework supporting engineering depth and leadership development.

Who should apply?

- Graduates with bachelor's degrees in engineering, computer science, or other STEM fields seeking applied graduate training.
- Working engineers interested in manufacturing systems, automation, process improvement, equipment engineering, or technical leadership.
- Students interested in semiconductor fabrication, MEMS, microelectronics, microsystems, and advanced manufacturing careers.

Concentrations

Concentration	Credit Hours	Focus / Highlights
MEME / SMM Semiconductor & Microsystems Manufacturing	31 credit hours	Semiconductor fabrication, MEMS, microelectronics, microsystems, process development, and cleanroom-based manufacturing.
MEME / CIM Computer Integrated Manufacturing	33 credit hours	Automation, robotics, controls, manufacturing data systems, computer-integrated production, and smart manufacturing.
MEME / MEM Mechanical & Equipment Manufacturing	33 credit hours	Mechanical systems, equipment design, tooling, production systems, and manufacturing of mechanical/equipment components.

Career Pathways

Graduates may pursue roles such as **process engineer, equipment engineer, manufacturing engineer, semiconductor fabrication engineer, MEMS/microsystems engineer, automation engineer, quality/process improvement engineer, operations engineer, and technical project lead in a wide spectrum of high technology fields.**

SMM Concentration Highlight

The Semiconductor & Microsystems Manufacturing concentration emphasizes microelectronics, MEMS, semiconductor fabrication, microsystems, process development, and manufacturing methods. Example courses include Microelectronics Processing, Microsystems Fabrication, MEMS Design, Advanced Micro/Nano Fabrication, Lean Manufacturing, Industrial Statistics, Managerial Economics, and Managing People in Organizations.

SMM Example Technical Electives

SMM concentration electives may include VLSI Design, Analog Electronics, Random Signal Processing, Physics of Semiconductors, Modern VLSI Devices, and MEMS Transducer Devices & Technology. Elective selection should be coordinated with program advising and the student's plan of study.

Funding and advising

Funding opportunities vary by year and project. Faculty may have research, project, or tuition support. Speak with the MEP graduate advisor about degree planning, and contact Dr. Matthias Pleil about program funding opportunities.

Admission Requirements & Program Notes

Admission requirements

- Bachelor's degree in engineering, computer science, or another STEM field; applicants from other backgrounds may be considered based on preparation.
- International applicants should review current English proficiency requirements and applicable waivers.
- Applicants should review current UNM Graduate Studies and program-specific requirements before applying.

Program options

- Coursework-only path.
- Coursework plus industry or laboratory project.
- Coursework plus thesis for students pursuing a research-focused plan.

Application timing

Apply early for your intended admission term. Check the current UNM Manufacturing Engineering application deadline and any separate scholarship deadline before applying. For spring Intel scholarship consideration, submit your UNM application as soon as possible; the scholarship application is due October 15.

Apply or Learn More

mfg.unm.edu/programs-and-degrees/degrees.html



Scan for MEME details



Hands-on learning connected to MTTC cleanroom-based manufacturing and microsystems education.