



MECHANICAL ENGINEERING

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me.msstate.edu

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Find the Bagley College on



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UNIVERSITY™

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MECHANICAL ENGINEERING

Master's and Ph.D. Programs



MISSISSIPPI STATE UNIVERSITY™
JAMES WORTH
BAGLEY
COLLEGE OF ENGINEERING

me.msstate.edu

WHY CHOOSE MECHANICAL ENGINEERING @ MSU?

- **RESEARCH EXPERIENCE.** MSU has been dedicated to engineering and research since its establishment in 1878. Bagley College of Engineering ME students have the opportunity to engage in significant research opportunities available for both graduate students and undergraduate students.
- **TOP HONORS.** The ME department has been ranked in the top 25 for research expenditures by the National Science Foundation.
- **ASSISTANTSHIPS.** Nearly all ME graduate students hold paid assistantship positions.
- **BE PREPARED.** Our mechanical engineering faculty have excellent academic credentials and extensive industrial experience.
- **GREAT LOCATION.** Mississippi State University is located in rapidly growing Starkville, a city of approximately 25,000 in the center of the southern United States.
- **JOIN US.** The ME department has a long history of quality engineering education and research and is the largest of the engineering programs at MSU.

"Attending graduate school in Mechanical Engineering at MSU was the perfect decision for me. I was a part of an intellectual community where professors and student colleagues both challenged and supported me. It provided me with opportunities to build the skills I needed to be successful as both a researcher and a teacher."

Amanda Smith
(Ph.D. '12)
Assistant Professor,
University of Utah



OFFERED THROUGH ME

M.S. Mechanical Engineering - Thesis
M.S. Mechanical Engineering - Non-Thesis
Ph.D. Engineering
Mechanical Engineering Concentration

All ME degrees are also available through the Bagley College of Engineering distance programs (bagley.msstate.edu/distance).

LIFE @ MSU

Student life at MSU is very dynamic with more than 300 student organizations representing a wide spectrum of hobbies and interests. Students can enjoy the great outdoors, arts, entertainment, sports, and dining, as well as a vibrant social life.

ADMISSION REQUIREMENTS

Graduate admissions decisions are made on an individual basis.

Admission requirements include:

- A good academic transcript (B average or better).
- Three letters of recommendation.
- Graduate Record Examination (GRE) is required for international students or students without an ABET accredited undergraduate degree in engineering.
- With some exceptions, TOEFL is required of international students.

Online applications can be submitted to the MSU graduate school at:

www.bagley.msstate.edu/grad/apply

COMPLETION REQUIREMENTS

Master of Science in Mechanical Engineering Thesis

- Complete 24 credit hours of coursework.
- Complete 6 credit hours of research/thesis.
- Complete 1 credit hour of graduate seminar.
- Submit and defend thesis.

Master of Science in Mechanical Engineering Non-Thesis

- Complete 30 credit hours of coursework.
- Complete 1 credit hour of graduate seminar.
- An oral presentation is required.

Doctor of Philosophy in Engineering with Mechanical Engineering Concentration

- Complete 42 hours of course work with up to 6 hours of Directed Individual Studies (DIS) as recommended by the student's committee.
- Complete 20 credit hours of research/dissertation.
- Complete 2 credit hours of graduate seminar.
- A written qualifying examination is required within 24 months of beginning the Ph.D. program.
- An oral preliminary comprehensive examination is required at least 6 months prior to graduation and after determination of dissertation topic. A final oral dissertation defense and submission are required.



RESEARCH INTERESTS

The importance of research in graduate education is paramount, which is why every graduate student in the Mechanical Engineering department is involved in sponsored research projects. Current research topics include:

- Sustainable and renewable energy systems
- Multiscale materials modeling
- Computational fluid dynamics
- Materials processing
- Fatigue and failure
- Internal combustion engines
- Mechanical systems design
- Heat transfer
- Heating, ventilating, and air conditioning
- Uncertainty analysis

Many interdisciplinary projects are conducted at research centers throughout Mississippi State University such as the Center for Advanced Vehicular Systems (cavs.msstate.edu), the Energy Institute (ei.msstate.edu), and HPC² (erc.msstate.edu).

JOB OPPORTUNITIES

MSU ME graduates have gone on to work for some of the world's top companies or have begun successful careers in academia and research.

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| • Aerojet | • NASA Marshall Space Flight Center |
| • Bell Helicopter | • National and International Universities |
| • Boeing | • Naval Sea Systems Command |
| • Car manufacturers: Ford, Honda, Nissan, Toyota, Volvo, etc. | • Northrop Grumman |
| • Cascade Energy Engineering | • Oil companies: Chevron, Exxon, Shell, etc. |
| • DOE National Renewable Energy Laboratory | • PACCAR |
| • Eaton Aerospace | • Pacific Northwest National Laboratory |
| • Eglin Air Force Base | • SouthWest Research Institute |
| • Intel | • Whitbybird Engineers |
| • Los Alamos National Laboratory | • and many more |
| • Lockheed Martin | |

