Mechanical engineering plays a role in nearly everything made or used by humans, from large-scale machinery, through biomechanisms, down to nanotechnology. Mechanical engineers are involved in wide-ranging activities such as design, analysis, testing and manufacturing. In order to prepare students for this field, the mechanical engineering curriculum at Binghamton University offers a balance among theory, design and laboratory experience in the areas of thermal-fluid sciences, mechanics, dynamic systems and materials.

Graduates from our BSME program, within the first few years of their career, will either achieve professional employment in the broad field of mechanical engineering or related disciplines, or enroll in programs of advanced study in engineering, science and other professions, including business and law. These objectives are consistent with the mission of the Thomas J. Watson

**SAE Supermileage Competition**

Each year the Society of Automotive Engineers (SAE) International sponsors a team competition to design and construct a single-occupant vehicle with very high fuel economy. Each team starts with an identical 3.5-HP four-cycle engine. They must design and construct a chassis, suspension, drive-train, steering/braking systems and aerodynamic body — all with the goal of maximizing gas mileage. The most recent vehicle designed by a Binghamton team achieved over 1,321 miles per gallon.
School of Engineering and Applied Science, which is to provide instructional and research services in the broad field of engineering and applied science. Our mechanical engineering curriculum emphasizes the application of engineering fundamentals rather than specialized areas within mechanical engineering. The curriculum has been designed to provide strong technical preparation in mechanical engineering.

Students enter the BSME program either as freshmen or as transfers from other colleges and universities. Students entering as freshmen are part of the Engineering Design Division. After studying the fundamental concepts, students advance to more specialized and robust mechanical engineering topics in our upper-division courses. Exploration of individual interests is encouraged through the use of technical and open electives. The primary goal of the curriculum is to prepare graduates for professional practice in mechanical engineering or continued study at the graduate level, based on a thorough grounding in the fundamentals and skills used by the mechanical engineer.

**FAST-TRACK BS/ MBA AND BS/MS MECHANICAL ENGINEERING PROGRAMS**

The Department of Mechanical Engineering and the School of Management cooperate to offer a combined fast-track BS/MBA program that enables ME students to earn an MBA in one additional year beyond the normal four-year BS degree in mechanical engineering. Similarly, the Department of Mechanical Engineering and the Graduate School offer a combined BS/MS five-year program in mechanical engineering.

**DEPARTMENTAL HONORS**

Students are given the opportunity to earn honors in mechanical engineering, provided they fulfill the following three requirements:

- complete a minimum of six semester hours in courses designated as “honors”;
- complete a minimum of two honors research hours; and
- submit and defend an honors thesis, publish a journal paper that lists the student as an author, or present a paper at a national conference.

“I had some fabulous professors at Binghamton University. One of them helped me get an internship and pushed me to pursue a higher degree, both of which helped me get the incredible job I now have.”

— BSME Graduate 2000

“Four years of engineering equal a lifetime of opportunities.”

— ME Student, Class of 2009