

Mechanical Engineering at the University of Washington

Revised 12/3/2007

The Department of Mechanical Engineering, established in 1897, offers a program leading to the Bachelor of Science in Mechanical Engineering degree. The B.S.M.E. program is accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700. The Mechanical Engineering department's graduate program offers a Master of Science and Doctor of Philosophy in Mechanical Engineering degree.

What is Mechanical Engineering?

Mechanical Engineering is the broadest of all engineering disciplines, encompassing areas such as energy, fluid mechanics, dynamics, combustion, vibration, design, manufacturing processes, systems modeling and simulation, mechatronics, robotics, mechanics of material, rapid prototyping and composites.

What do Mechanical Engineers do?

Mechanical engineers are employed in virtually every kind of industry. They are involved with seeking new knowledge through research, creative design and development, and with the construction, control, management, and sales of the devices and systems needed by society. A major strength of a mechanical engineering education is the flexibility it provides in future employment opportunities for its graduates.

What is the BSME curriculum?

The undergraduate curriculum includes the study of the principles governing the use of energy, principles of design, instruments and control devices, and the application of these studies to the creative solution of practical, modern problems. Senior level electives are in four areas: Environment, Health Care, Information Technology and Manufacturing. Covered within these thrust areas the following topics: energy conversion, light weight materials, energy storage, noise & vibration, design for the environment, energy usage, MEMS, acoustic monitoring, bio-materials, prosthesis, robotic surgery, healthcare systems, electronic cooling, smart materials, electronic packaging, disk drives, mechatronics, CAD/CAM/CAE/KBE, polymer processing, casting, cutting and forming, robotics, production control, design for manufacturing, and rapid prototyping.

What types of special projects are available for undergraduates?

- 10 specialized laboratories for investigation composite materials, manufacturing systems, fluid mechanics, combustion, heat transfer, and other topics
- year-long senior design projects to build a formula racecar, human-powered submarine, fuel cell and mechatronics

Applying to the University of Washington

All undergraduates are admitted to the University of Washington through the Office of Undergraduate Admissions. To apply you must submit an application and supporting information to:

Office of Admissions
320 Schmitz Hall, Box 355852
University of Washington
Seattle, WA 98195
(206) 543-9686

<http://admit.washington.edu/admission/applynow.html>

Admissions Requirements and Procedures

Early Admission: Deadline July 1st

Students enrolled at the University of Washington and have completed ALL of the following requirements may apply for Early Admission.

1. 15 credits of Mathematics at the level of MATH 124, 125, 126 or higher
2. 10 credits of physical science and accompanying laboratories, at the level of PHYS 121, 122 or CHEM 142, 152 or higher
3. 5 credits of English Composition
4. Grades of at least 2.5 in each of the required classes together with a cumulative GPA of 2.50 or higher

Upper Division Admission: Deadline July 1st

Apply to the Department of Mechanical Engineering for admission when the following requirements have been met:

A cumulative GPA of 2.5 or higher and a minimum grade of 2.0 in each class is required:

MATH 124, 125, 126 - *Calculus w/ Analytical Geometry*
CHEM 142, 152 - *General Chemistry w/ Lab*
CEE 220 - *Mechanics of Materials*
TC 231 - *Intro to Technical Writing*
ENGLISH COMPOSITION

PHYS 121, 122 - *Mechanics, Electromagnetism & Oscillatory Motion*
AA 210 - *Engineering Statics*
ME 230 - *Kinematics and Dynamics*

Procedures

To apply, you must submit an online application by July 1. Paper applications will not be accepted. Please refer to www.engr.washington.edu/uapp/ for online application instructions. The Department of Mechanical Engineering requires one unofficial transcript from each college or university that you have attended, except for UW transcripts, which will not be required. A brief Statement of Purpose must be submitted for consideration as part of the application. The statement of purpose should include your goals, relevant work experience, undergraduate research experience and reasons why you're interested in Mechanical Engineering.

Note: The Department of Mechanical Engineering requires unofficial transcripts from all college-level transfer institutions. Late applications and late unofficial transcripts from transfer schools received will not be considered. The Department of Mechanical Engineering Admission Committee recommends that you arrange to have your transcript sent to ME Department **prior** to the July 1st deadline.

Selection and Notification Process

The Department of Mechanical Engineering and the University of Washington reaffirms its policy of equal opportunity regardless of race, color, creed, religion, national origin, sex, sexual orientation, age, marital status, disability, or status as a disabled veteran or Vietnam era veteran in accordance with University policy and applicable federal and state statutes and regulations. The Equal Employment Officer, Dr. Helen Remick, 126 Brooklyn Building, 4045 Brooklyn Avenue NE, Box 354560, University of Washington, Seattle, WA 98195 (206) 543-1830.

The Admissions Committee meets in mid-July to evaluate the applicant pool. We encourage prospective students to schedule an advising appointment with our Academic Counselors during the year. Selection is based on academic performance in core courses, overall cumulative grade point average, and statement of purpose. Notification letters of acceptance or denial will be mailed to the address indicated on the application form by the end of July.

Departmental Appeals

If you are denied admission to the ME department, there is an appeals procedure if you feel that important facts were overlooked by the committee. You must submit a formal letter within two weeks of the date of the notification letter. The letter of appeal should be addressed to the Department Chair to request a review of the Admissions Committee's decision. You may submit any additional relevant information that you wish the Department Chair to consider to support your case.

Scholarships

The College of Engineering and the Department of Mechanical Engineering offers a limited number of scholarships. The scholarship forms will be available in January at MEB 143, ME website or via the College of Engineering Advising Loew 301.

The COE and Departmental Scholarship deadline: April 1st.

The Undergraduate Scholarship Office provides UW students with information about merit-based awards and helps students prepare for national scholarship competitions. The office also schedules scholarship orientation sessions on how to search for and apply for awards. For more scholarship information visit the Undergraduate Scholarship Office in Mary Gates Hall 171, Gateway Center, or visit <http://www.washington.edu/students/ugrad/scholar/>

More info? Check out the Mechanical Engineering website: www.me.washington.edu/
To schedule an advising appointment contact (206) 543-5090, or merecept@u.washington.edu

Mechanical Engineering Student Services
University of Washington
143 Mechanical Engineering Building
Box 352600
Seattle, WA 98195-2600

Mechanical Engineering Sample Schedule I

First Year - Pre Engineering

MATH 124	(5)	MATH 125	(5)	MATH 126	(5)
CHEM 142	(5)	CHEM 152	(5)	PHYS 121	(5)
ENGL. COMPOSITION	(5)	VLPA / I&S	(5)	VLPA/ I&S or ME 123	(5)
Quarter Total	(15)	Quarter Total	(15)	Quarter Total	(15)

Year Total (45)

Second Year - Pre Engineering

PHYS 122	(5)	PHYS 123	(5)	CEE 220	(4)
MATH 307 or AMATH 351	(3)	MATH 308 or AMATH 352	(3)	MATH 309 or 324 or AMATH 353	(3)
TC 231	(3)	VLPA / I&S or ME 123	(3)	ME 230	(4)
ME 123	(4)	AA 210	(4)	VLPA / I&S	(4)
Quarter Total	(15)	Quarter Total	(15)	Quarter Total	(15)

Year Total (45)

Third Year - Mechanical Engineering

MSE 170	(4)	ME 333	(5)	ME Option	(4)
EE 215	(4)	ME 354	(5)	ME 355 / ME 356	(4)
ME 323	(5)	ME 373	(5)	ME 374	(5)
AMATH 301 (pre-req for ME 333 and ME 374)	(4)			IND E 315 or MATH 390	(3)
Quarter Total	(17)	Quarter Total	(15)	Quarter Total	(16)

Year Total (48)

Fourth Year - Mechanical Engineering

ME Option	(4)	ME Option	(3)	ME Option	(4)
ME 331	(4)	ME 355 / ME 356	(4)	ME 495	(4)
ME 395	(4)	TC 333 or English 182, 281, 381	(4)	VLPA / I&S	(4)
VLPA/I&S	(3)	ME Option	(4)		
Quarter Total	(15)	Quarter Total	(15)	Quarter Total	(12)

Year Total (42)

Total=180 credits

NOTE: Courses are subject to change. It is the responsibility of the student to check with an ME academic counselor for up-to-date course offering information.

Mechanical Engineering Sample Schedule II

First Year - Pre Engineering

MATH 124	(5)	MATH 125	(5)	MATH 126	(5)
CHEM 142	(5)	CHEM 152	(5)	PHYS 121	(5)
ENGL. COMPOSITION	(5)	VLPA / I&S	(5)	ME 123	(4)
Quarter Total	(15)	Quarter Total	(15)	Quarter Total	(14)

Year Total (44)

Second Year - Pre Engineering

MATH 307 or AMATH 351	(3)	PHYS 123	(5)	MSE 170	(4)
PHYS 122	(5)	AMATH 301 (pre-req for ME 333 and ME 374)	(4)	ME 230	(4)
TC 231	(3)	VLPA / I&S	(2)	EE 215	(4)
AA 210	(4)	CEE 220	(4)	VLPA / I&S	(3)
Quarter Total	(15)	Quarter Total	(15)	Quarter Total	(15)

Year Total (45)

Third Year - Mechanical Engineering

ME 354	(5)	ME 323	(5)	ME 333	(5)
TC 333 or English 182, 281, 381	(4)	ME 355 or ME 356	(4)	ME 355 / ME 356	(4)
MATH 308 or AMATH 352	(3)	ME 373	(5)	ME 374	(5)
VLPA / I&S	(2)			IND E 315 or Math 390	(3)
Quarter Total	(14)	Quarter Total	(14)	Quarter Total	(17)

Year Total (45)

Fourth Year - Mechanical Engineering

ME Option	(4)	ME Option	(4)	ME Option	(3)
ME 331	(4)	MATH 309 or 324 or AMATH 353	(3)	ME Option	(4)
ME 395	(4)	VLPA / I&S	(4)	ME 495	(4)
VLPA / I&S	(4)	ME Option	(4)	VLPA / I&S	(4)
Quarter Total	(16)	Quarter Total	(15)	Quarter Total	(15)

Year Total (46)

Total=180 credits

NOTE: Courses are subject to change. It is the responsibility of the student to check with an ME academic counselor for up-to-date course offering information.