BACHELOR OF SCIENCE WITH A MAJOR IN MECHANICAL ENGINEERING, PATENT LAW OPTION

Mechanical engineering encompasses a vast range of industrial activities. Mechanical engineers conceive, plan, design, and direct the manufacture, distribution, and operation of complex systems. Applications include aerospace, energy conversion, computer-aided design and manufacturing, power and propulsion systems, robotics, and control systems. The bachelor of science with a major in mechanical engineering, patent law option degree program provides a strong foundation in fundamental principles of patent law and the influences of the U.S. patent system on modern engineering design. Students in this option obtain skills and knowledge that can lead to work as a technical specialist in a patent law firm or in the patent department of an industrial employer. The option provides excellent preparation for pursuit of a law degree that may focus on intellectual property law.

Visit the program website (http://www.mae.seas.gwu.edu/programs-degrees) for additional information.

Bachelor of Sciences with a Second Major in Mechanical Engineering, Patent Law Option

Any undergraduate student who is enrolled at GW may declare a second major in mechanical engineering only if his or her primary degree is a BS. The student must meet the degree requirements for a bachelor of science in mechanical engineering, including SEAS general, major, technical electives, humanities/social science, and SEAS/technical GPA requirements. Students earning other degrees (e.g., BA, BBA, BFA) must meet the requirements for a double degree (http://bulletin.gwu.edu/university-regulations/#DDegrees).

Graduation grade-point average criteria:
To satisfactorily complete a second major in biomedical engineering, a student must have a minimum grade-point average of 2.2 in all technical engineering courses outlined in the fifth, sixth, seventh, and eighth semesters of the curriculum.

REQUIREMENTS

Recommended program of study

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td><strong>First semester</strong></td>
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<tr>
<td>CHEM 1111</td>
<td>General Chemistry I ¹</td>
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<tr>
<td>UW 1020</td>
<td>University Writing ¹</td>
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<tr>
<td>Humanities or social sciences elective ²</td>
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MAE 3134  Linear System Dynamics
MAE 3187  Heat Transfer
MAE 3193  Mechanical Systems Design
MAE 3167W  Mechanics of Materials Lab

Humanities or social sciences elective $^2$

**Seventh semester**

MAE 4149  Thermal Systems Design
MAE 4182  Electromechanical Control System Design
MAE 3192  Manufacturing Processes and Systems
MAE 4151  Capstone Design Project I

Humanities or social sciences elective $^2$

Technical elective $^3$

**Eighth semester**

MAE 4152W  Capstone Design Project II
MAE 4172  Engineering Design and the Patent System

Humanities or social sciences elective $^2$

Two Technical electives $^3$

$^1$Course satisfies the university general education requirement in math, science, and writing.

$^2$To satisfy the SEAS humanities and social sciences requirement, all mechanical engineering students must take one (1) humanities course and two (2) social sciences courses from the University General Education Requirement (http://bulletin.gwu.edu/university-regulations/general-education); PHIL 2135 Ethics in Business and the Professions; and two (2) additional humanities or social sciences or non-technical courses from the MAE Department’s pre-approved list of electives. Each course selected to satisfy this requirement must be taken for at least 3 credits. NOTE: Students in the patent law concentration must take MAE 2170 History and Impact of the U.S. Patent System in lieu of one of the additional humanities or social sciences or non-technical course.

$^3$All technical electives must be approved by the undergraduate advisor. On a case-by-case basis, technical electives may be chosen from other departments if approved by both the undergraduate advisor and the department chair. Technical electives are chosen from MAE courses in the 3000, 4000, and 6000 series, excluding: MAE 3171 Patent Law for Engineers, MAE 4172 Engineering Design and the Patent System, MAE 6298 Research, MAE 6998 MS Thesis Research, and MAE 6999 MS Thesis Research. Visit the program website (http://www.mae.seas.gwu.edu/programs-degrees) for additional information.