BACHELOR OF ARTS WITH A MAJOR IN APPLIED SCIENCE AND TECHNOLOGY

The Bachelor of Arts major in applied science and technology is a broad-based, engineering-oriented program that includes significant exposure to the liberal arts. It is designed for students who intend to make their careers in fields allied to science and technology and/or continue their education toward professional careers in law, medicine, business, teaching, or the media.

The program can be enhanced with a second major in either the Columbian College of Arts and Sciences or the Elliott School of International Affairs. A second major in SEAS is also possible. A concentration in general business through the School of Business is available.

Visit the program website (http://www.emse.seas.gwu.edu/bachelor-arts-applied-science-technology) for additional informational.

REQUIREMENTS

Recommended program of study

First semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1111</td>
<td>General Chemistry I *</td>
</tr>
<tr>
<td>EMSE 1001</td>
<td>Introduction to Systems Engineering</td>
</tr>
<tr>
<td>SEAS 1001</td>
<td>Engineering Orientation</td>
</tr>
<tr>
<td>MATH 1231</td>
<td>Single-Variable Calculus I *</td>
</tr>
<tr>
<td>UW 1020</td>
<td>University Writing *</td>
</tr>
</tbody>
</table>

Humanities or social sciences elective **

Second semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CHEM 1112</td>
<td>General Chemistry II *</td>
</tr>
<tr>
<td>CSCI 1121</td>
<td>Introduction to C Programming</td>
</tr>
<tr>
<td>or CSCI 1112</td>
<td>Algorithms and Data Structures</td>
</tr>
<tr>
<td>MATH 1232</td>
<td>Single-Variable Calculus II *</td>
</tr>
</tbody>
</table>

Humanities or social sciences elective **

Arts elective ?

Third semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CSCI 1132</td>
<td>Data Structures and Software Design</td>
</tr>
<tr>
<td>or CSCI 1112</td>
<td>Algorithms and Data Structures</td>
</tr>
<tr>
<td>PHYS 1011</td>
<td>General Physics I *</td>
</tr>
</tbody>
</table>

or PHYS 1021 | University Physics I

Literature elective ?

Two unrestricted electives

Fourth semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>APSC 3115</td>
<td>Engineering Analysis III</td>
</tr>
<tr>
<td>EMSE 4410</td>
<td>Survey of Finance and Engineering Economics</td>
</tr>
<tr>
<td>PHYS 1012</td>
<td>General Physics II *</td>
</tr>
<tr>
<td>or PHYS 1022</td>
<td>University Physics II</td>
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</tbody>
</table>

Literature elective ?

Unrestricted elective

Fifth semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BISC 1111</td>
<td>Introductory Biology: Cells and Molecules</td>
</tr>
<tr>
<td>EMSE 3850</td>
<td>Quantitative Models in Systems Engineering</td>
</tr>
<tr>
<td>COMM 1040</td>
<td>Public Communication *</td>
</tr>
<tr>
<td>or COMM 1041</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>or COMM 1042</td>
<td>Business and Professional Speaking</td>
</tr>
<tr>
<td>MAE 1004</td>
<td>Engineering Drawing and Computer Graphics</td>
</tr>
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</table>

Allied minor elective

Sixth semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BISC 1112</td>
<td>Introductory Biology: The Biology of Organisms</td>
</tr>
<tr>
<td>ISTM 4121</td>
<td>Database Design and Applications</td>
</tr>
</tbody>
</table>

Two allied minor electives

Humanities or social sciences elective **

Seventh semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MAE 3192</td>
<td>Manufacturing Processes and Systems</td>
</tr>
<tr>
<td>EMSE 3740</td>
<td>Systems Thinking and Policy Modeling I</td>
</tr>
<tr>
<td>EMSE 6005</td>
<td>Organizational Behavior for the Engineering Manager</td>
</tr>
</tbody>
</table>

Allied minor elective

SEAS elective
Eighth semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>CE 4330</td>
<td>Contracts and Specifications</td>
</tr>
</tbody>
</table>

Allied minor elective

Humanities or social sciences elective **

Three unrestricted electives

Electives

Students choose electives in specified categories from lists of courses available from the advisor. Allied minor electives are selected, with the approval of the advisor, to form a coherent and meaningful program of 15 credits. Popular selections include biology, communication, computer science, design, economics, engineering, environmental studies, finance, international business, management, mathematics, medical preparation, psychology, statistics, and operations research.

*Course satisfies the university general education requirement in math, science, and writing.

**At least two social and behavioral sciences courses must be selected from the University General Education Requirement list (http://bulletin.gwu.edu/university-regulations/general-education); the remaining course must be selected from either the University General Education Requirement list or the SEAS General Education Requirement list (http://www.seas.gwu.edu/sites/www.seas.gwu.edu/files/downloads/HSS%20Form%20Fall%202015%20Admits%201_.pdf). At least one humanities course must be selected from the University General Education Requirement list; the remaining courses must be selected from either the University General Education Requirement list or the SEAS General Education Requirement list.