ENERGY SYSTEMS ENGINEERING
UNDERGRADUATE MAJOR
( BS, HBS )

Available only at OSU-Cascades.

At Oregon State University, the Energy Systems Engineering degree program combines engineering fundamentals with energy-focused technical courses and business management classes. This multidisciplinary curriculum provides students with a strong foundation in the core principles of mechanical, electrical and industrial engineering.

Program Educational Objectives—Energy Systems Engineering

Note: The Bachelor of Science and Honors Bachelor of Science degrees in Energy Systems Engineering are accredited by the Engineering Accreditation Commission of ABET, http://www.ABET.org (http://www.abet.org/), which requires stated program educational objectives and student outcomes to support these.

OSU Energy Systems Engineering graduates receive an innovative education, and within 3 to 5 years of graduation will have:

1. Created value to organizations through the analysis, evaluation, and improvement of engineered systems and processes using appropriate systems engineering methods and tools.
2. Communicated effectively across disciplines and cultures to manage and/or lead activities in support of organizational goals and objectives.
3. Innovated systems and processes, in response to organizational challenges, though the application of structured and unstructured systems engineering methodologies, including engineering design and problem-solving.

Major Code: 293

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>WR 121</td>
<td>*ENGLISH COMPOSITION</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>*PUBLIC SPEAKING</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 114</td>
<td>*ARGUMENT AND CRITICAL DISCOURSE</td>
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**Skills**

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<thead>
<tr>
<th>HHS 231</th>
<th>*LIFETIME FITNESS FOR HEALTH</th>
<th>2</th>
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<tr>
<td>HHS 241</td>
<td>*LIFETIME FITNESS (or any PAC course)</td>
<td>1-2</td>
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Energy Systems Engineering Undergraduate Major (BS, HBS)

| Restricted Technical Electives (no more than 3 credits from 200-level courses) | 7 |
| Total Credits                                                                | 180-182 |

* Baccalaureate Core Course (BCC)
^ Writing Intensive Course (WIC)

Major Code: 293