SERVICE ENTERPRISE ENGINEERING, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Description

Service sector represents over 80% of the economy and represents over 70% of jobs in the U.S. Service enterprises constitute a wide range in terms of labor intensity, information intensity, and prevailing productivity. Examples of service enterprises include hospitals, retailers, banks, financial institutions, and airlines. This minor is designed for students interested in learning about applying industrial engineering techniques to service enterprises. Students completing this minor will gain an understanding of applying industrial engineering and operations research tools for modeling, analysis, design and control of service enterprises.

In addition to the stated courses for the minor, students in IE pursuing this minor may require HPA 301 or HDFS 129. Students in HPA, HDFS and any other major will require MATH 220 as a prerequisite for IE 405. IE 405 and IE 322 (or an equivalent course in probability and statistics) are prerequisites for IE 460.

What is Service Enterprise Engineering?

Service Enterprise Engineering is the study, design, and implementation of new systems that improve the processes and efficiencies of the service sector, in which 80 percent of the U.S. workforce is employed. The minor answers a critical need for operational expertise in health care and human service fields. Students completing this minor will gain an understanding of applying industrial engineering and operations research tools for modeling, analysis, design and control of service enterprises.

You Might Like This Program If...

Most applicable for those students in industrial engineering, health policy administration, and human development and family studies, this minor gives students the ability to apply industrial engineering techniques to processes in hospitals, nonprofits, retailers, banks, financial institutions, airlines, and more.

Program Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Requirements for the Minor</td>
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</tbody>
</table>

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Prescribed Courses: Require a grade of C or better</td>
<td></td>
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<tr>
<td></td>
<td>IE 460 Service Systems Engineering</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>IE 478 Retail Services Engineering</td>
<td>3</td>
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</tbody>
</table>

Additional Courses: Require a grade of C or better

Select 6 credits from Engineering Cluster: 6

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>IE 302</td>
<td>Engineering Economy</td>
</tr>
<tr>
<td>IE 322</td>
<td>Probabilistic Models in Industrial Engineering</td>
</tr>
<tr>
<td>IE 323</td>
<td>Statistical Methods in Industrial Engineering</td>
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<tr>
<td>IE 330</td>
<td>Engineering Analytics</td>
</tr>
<tr>
<td>IE 402</td>
<td>Advanced Engineering Economy</td>
</tr>
<tr>
<td>IE 405</td>
<td>Deterministic Models in Operations Research or MATH 484 Linear Programs and Related Problems</td>
</tr>
<tr>
<td>IE 424</td>
<td>Process Quality Engineering</td>
</tr>
<tr>
<td>IE 467</td>
<td>Facility Layout and Location</td>
</tr>
<tr>
<td>IE 468</td>
<td>Optimization Modeling and Methods</td>
</tr>
<tr>
<td>IE 480</td>
<td>Capstone Design Project</td>
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Select 6 credits from the Service Cluster: 6

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>HPA 332</td>
<td>Health Systems Management</td>
</tr>
<tr>
<td>HPA 433</td>
<td>Administration of Hospital and Health Service Systems</td>
</tr>
<tr>
<td>HPA 442</td>
<td>Long-Term Care Management</td>
</tr>
<tr>
<td>HPA 475</td>
<td>Health Care Quality</td>
</tr>
<tr>
<td>HDFS 311</td>
<td>Human Development and Family Studies Interventions</td>
</tr>
<tr>
<td>HDFS 455</td>
<td>Development and Administration of Human Services Programs</td>
</tr>
</tbody>
</table>

Academic Advising

The objectives of the university’s academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of-class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee’s unit of enrollment will provide each advisee with a primary academic adviser, the information need to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy)

University Park

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Career Paths

Over 60 percent of graduating industrial engineering students have started their careers in the service sector. Industries that have hired include consulting, retailing, supply chain, logistics, distribution, transportation, government, entertainment, financial analyst, revenue management, and health care services.
Contact

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http://www.ime.psu.edu/index.aspx