MS in Industrial Engineering

In order to be admitted in the MSIE program, applicants must:

1. Possess an undergraduate degree in engineering, science, business or other related discipline;
2. Have satisfactorily completed: MATH 243 and IME 255;
3. Have a minimum GPA of 3.000, on a 4.000 scale. (Students with a lower GPA may be considered only for probationary or nondegree admission. In addition,
4. Applicants whose native language is not English must submit official, acceptable scores for either the TOEFL, the Academic Module of the IELTS examination, or the PTE-Academic test. Please visit the Graduate School website (http://wichita.edu/gradschool) to check English proficiency requirements; and
5. Department prefers and strongly encourages the submission of GRE scores.

Program Requirements

Please note that:

- Some of the IME courses may require programming skills as a prerequisite.
- Some of the IME courses may require Linear Algebra or Calculus III as a prerequisite.
- A student must select a concentration. The concentrations in the ISME graduate program are:
  - Operations Research
  - Systems
  - Production and Supply Chain Analytics
  - Quality and Reliability
  - Manufacturing Engineering
  - Human Systems Engineering
- Course distribution:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IME 724</td>
<td>Statistical Methods for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>IME 777</td>
<td>IME Colloquium (one semester)</td>
<td>0</td>
</tr>
<tr>
<td>CESP 750D</td>
<td>Engineering Research Writing</td>
<td>1</td>
</tr>
</tbody>
</table>

Additional Courses

Minimum 15 credit hours distributed as follows: 1

Select one concentration area and take at least 9 credit hours from this concentration area
Select at least 3 credit hours from each of two other concentrations

Technical Electives

Select no more than 6 credit hours from other departments. (Must have written preapproval for non-IME courses by the graduate coordinator or department chair.)

Total Credit Hours

25

- The professional and scholarly integrity training requirement must be completed, preferably during the first semester of the program.

For a list of current courses in each concentration, please visit the ISME website (https://wichita.edu/academics/engineering/ime/).

Options

Thesis Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select a minimum of 24 credit hours of coursework</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Select a minimum of 6 credit hours of thesis</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

Directed Project Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select a minimum of 30 credit hours of coursework</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Select 3 credit hours of directed project</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours</td>
<td>33</td>
</tr>
</tbody>
</table>

All Coursework Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select a minimum of 33 hours of coursework and receive an external certification, or select a minimum of 36 hours of coursework</td>
<td>33-36</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours</td>
<td>33-36</td>
</tr>
</tbody>
</table>

Details of the 33-credit-hour All Coursework MSIE option with external certification:

Terminal activity for the all coursework option can be satisfied by receiving any of the following external certificates:

- Any of the following ASQ certifications:
  - Certified Quality Engineer-CQE
  - Reliability Engineer-CRE
  - Six Sigma Black Belt-CSSBB
  - Six Sigma Green Belt-CSSGB
  - Software Quality Engineer-CSQE
- Any of the following modules or certifications from APICS:
  - One module from the Certified Production and Inventory Management
    - Basics of Supply Chain Management
    - Master Planning of Resources
    - Detailed Scheduling and Planning
    - Execution and Control of Operations
    - Strategic Management of Resources
  - Certified Supply Chain Professional
- Any of the SME certifications:
  - Certified Manufacturing Engineering (CMfgE) Certification
  - Lean Certification
  - Six Sigma Certification

Students need approval of the graduate coordinator for any other professional certifications not listed above. Note that certification resulting from completing any training module/online class does not qualify as an external certification.