# Engineering Management (MR): Advanced Manufacturing Concentration

## Degree Requirements

### Core Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards Required Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISE/OR 501</td>
<td>Introduction to Operations Research</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following courses: 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST 513</td>
<td>Statistics for Management and Social Sciences I</td>
</tr>
<tr>
<td>ST 515</td>
<td>Experimental Statistics for Engineers I</td>
</tr>
<tr>
<td>ST 516</td>
<td>Experimental Statistics For Engineers II</td>
</tr>
<tr>
<td>ST 517</td>
<td>Applied Statistical Methods I</td>
</tr>
<tr>
<td>ST 518</td>
<td>Applied Statistical Methods II</td>
</tr>
</tbody>
</table>

Select one of the following courses: 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM/EGR 501</td>
<td>Engineering Leadership and Strategic Change</td>
</tr>
<tr>
<td>COM 530</td>
<td>Interpersonal Communication in Science and Technology Organizations</td>
</tr>
<tr>
<td>COM 527</td>
<td>Seminar in Organizational Conflict Management</td>
</tr>
<tr>
<td>COM 556</td>
<td>Seminar In Organizational Communication</td>
</tr>
</tbody>
</table>

Select one of the following courses: 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM 530</td>
<td>Project Management</td>
</tr>
<tr>
<td>CE 561</td>
<td>Construction Project Management</td>
</tr>
</tbody>
</table>

### Concentration Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards Required Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 590</td>
<td>Special Topics in Engineering (Engineering Project Management)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 554</td>
<td>Project Management</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following courses: 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISE 510</td>
<td>Applied Engineering Economy</td>
</tr>
<tr>
<td>EGR 505</td>
<td>Managerial Finance for Engineers</td>
</tr>
<tr>
<td>CE 567</td>
<td>Risk and Financial Management in Construction</td>
</tr>
</tbody>
</table>

Select four of the following courses: 12

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISE 725</td>
<td>Foundations of Smart Manufacturing</td>
</tr>
<tr>
<td>ISE 555</td>
<td>Digital Manufacturing</td>
</tr>
<tr>
<td>ISE 515</td>
<td>Manufacturing Process Engineering</td>
</tr>
<tr>
<td>ISE 714</td>
<td>Product Manufacturing Engineering for the Medical Device Industry</td>
</tr>
<tr>
<td>ISE 716</td>
<td>Automated Systems Engineering</td>
</tr>
<tr>
<td>ISE 718</td>
<td>Micro/ Nano-Scale Fabrication and Manufacturing</td>
</tr>
<tr>
<td>MAE 517</td>
<td>Advanced Precision Manufacturing for Products, Systems and Processes</td>
</tr>
<tr>
<td>MAE 531</td>
<td>Engineering Design Optimization</td>
</tr>
<tr>
<td>MAE 545</td>
<td>Metrology For Precision Manufacturing</td>
</tr>
<tr>
<td>MSE 500</td>
<td>Modern Concepts in Materials Science</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>MSE 539</td>
<td>Advanced Materials</td>
</tr>
<tr>
<td>MSE 540</td>
<td>Processing of Metallic Materials</td>
</tr>
<tr>
<td>MSE 556</td>
<td>Composite Materials</td>
</tr>
<tr>
<td>MSE 580</td>
<td>Materials Forensics and Degradation</td>
</tr>
<tr>
<td>MSE 705</td>
<td>Mechanical Behavior Of Engineering Materials</td>
</tr>
<tr>
<td>MSE/MBA 576</td>
<td>Technology Entrepreneurship and Commercialization I</td>
</tr>
<tr>
<td>MSE/MBA 577</td>
<td>Technology Entrepreneurship and Commercialization II</td>
</tr>
<tr>
<td>ISE 748</td>
<td>Quality Engineering</td>
</tr>
<tr>
<td>MAE 526</td>
<td>Fundamentals of Product Design</td>
</tr>
<tr>
<td>EM 675</td>
<td>Engineering Management Masters Project</td>
</tr>
</tbody>
</table>

Take one of the following courses: 3

Total Hours: 30

### Faculty

**Director**
Brandon M. McConnell, *Interim Director*

**Full Professors**
Sebastian Heese, *Owens Distinguished Professor of Supply Chain Management*
John Baugh, *Professor*
Joseph DeCarolis, *Professor*
Jingyan Dong, *Professor*
Yahya Fathi, *Professor*
Ola Harrysson, *Edward P. Fitts Distinguished Professor*
Jessica Jameson, *Professor*
Edward Jaselskis, *E.I. Clancy Distinguished Professor*
Russell King, *Foscue Distinguished Professor*
Yuan-Shin Lee, *Professor*

**Associate Professors**
Karen Chen, *Associate Professor*
Adolfo R. Escobedo, *Associate Professor*
Michael Kay, *Associate Professor*
Tim Kraft, *Associate Professor of Operations and Supply Chain Management*
Osman Ozaltin, *Associate Professor of Personalized Medicine*
Daniel Saloni, *Associate Professor*
Jeffrey Stonebraker, *Associate Professor of Operations and Supply Chain Management*
Hong Wan, *Associate Professor*
Don Warsing, *Associate Professor of Operations and Supply Chain Management*

**Assistant Professors**
Xiaolei Fang, *Assistant Professor*
Leila Hajibabai, *Assistant Professor*

**Associate Research Professor**
Christopher D. Rock, *Associate Research Professor*

**Associate Teaching Professor**
Meagan Kittle Autry, *Associate Teaching Professor*
S. Sebnem Ahiska King, *Teaching Associate Professor*
Fred Livingston, *Associate Teaching Professor*
Kanton Reynolds, *Associate Teaching Professor*

**Teaching Assistant Professor**
Nur Ozaltin, *Teaching Assistant Professor*

**Professor of the Practice**
Doug Morton, *Professor of the Practice*
James Rispoli, *Professor of the Practice*

Michael Spano, *Professor of Practice*

---

**Emeritus Faculty**

Javad Taheri, *Associate Research Professor Emeritus*

---

**Associate and Adjunct Faculty**

Edwin Addison, *Adjunct Professor*

---

**Lecturers**

Steven DelGrosso, *Lecturer*

Dan Harris, *Lecturer*

Dan Kempton, *Adjunct Lecturer*

Robert Nunez, *Lecturer*