Become the engineer who confidently leads the transformation of big data into informed, high-impact actions.

**What You Learn**

- Understand and apply appropriate data analysis tools and methods to drive improvements to products and processes, research, design, testing, and operations.
- Apply best methods and practices for the capture, storage, cleaning, querying, analysis, and visualization of data.
- Evaluate and implement the most effective computing technology, modeling techniques, and analysis methods for your engineering projects.
- Sharpen your ability to effectively lead change efforts by improving your skills in project management, team leadership, and professional communications.

**Where and How You Learn**

**Where**
Online; you may start in the fall, spring or summer semester of any year.

**How**
Complete 15-credit core curriculum in data analytics and 15 elective credits that span either additional data science courses or other online engineering and professional development courses.

Classes meet online once a week; each class is recorded, so you can participate regardless of your travel schedule or location.

**Apply Now!**
Visit [go.wisc.edu/MEDA](go.wisc.edu/MEDA)

**At a Glance**

- **Delivery:** Online
- **Credits:** 30 graduate credits
- **Time Frame:** 2 to 3 years
- **Tuition:** Resident and non-resident: $1,300 per credit

**Typical Curriculum**

- Industrial Data Analytics
- Machine Learning
- Computing Concepts
- Design Optimization
- Data Visualization
- Applied Temporal Data Analytics
- Technical Project Management
- Engineering courses in Leadership, Manufacturing, Polymer Engineering, and Sustainable Systems

**Questions?**

For more information on admission requirements, how to apply, tuition and financial aid or other questions, contact:

Justin Bush
608-262-0468
justinkyle.bush@wisc.edu

I selected the MEDA program as a way to supplement my engineering background in a world inundated with data. The program has delivered by providing new skills, directly improving the value of my work.

John Kroening,
Oshkosh Corp.
## Sample Plan of Study

<table>
<thead>
<tr>
<th>Class Number</th>
<th>Class Name</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st FA</td>
<td>EPD 416 Engineering Applications of Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ME 459 Computing Concepts for Applications in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>1st SP</td>
<td>ISyE 524 Introduction to Optimization</td>
<td>3</td>
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<tr>
<td></td>
<td>Choose an Elective</td>
<td></td>
</tr>
<tr>
<td>1st SU</td>
<td>ISyE 512 Inspection, Quality Control, and Reliability</td>
<td>3</td>
</tr>
<tr>
<td>2nd FA</td>
<td>ECE 532 Matrix Methods in Machine Learning</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ISyE 602 Interactive Data Visualization</td>
<td>3</td>
</tr>
<tr>
<td>2nd SP</td>
<td>ISyE 412 Foundations of Industrial Data Analytics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ISyE 603 Applied Temporal Data Analytics for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>3rd FA</td>
<td>EPD 612 Technical Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Listed courses and schedule are subject to change.

**Choose from a Broad Selection of Elective Courses in Four Concentrations**

Add electives from one or more concentrations to reach degree requirements of 30 credits. You develop your custom plan of study in consultation with the program director.

**Leadership**
- Engineering Economics and Management ........................................ 3 cr.
- Technical Project Management ....................................................... 3 cr.
- Fostering and Leading Innovation ................................................. 3 cr.

**Manufacturing**
- Production Systems Engineering ................................................... 3 cr.
- Quality Engineering and Quality Management .................................... 3 cr.
- Design and Analysis of Manufacturing Systems .................................. 3 cr.

**Sustainable Systems**
- Core Competencies of Sustainability ............................................... 3 cr.
- Special Topics: Distributed Renewable Systems Design ................. 3 cr.
- Sustainable Approaches to System Improvement .............................. 4 cr.

**Polymers**
- Engineering Design with Polymers ................................................. 3 cr.
- Polymer Characterization ................................................................ 3 cr.
- Polymer Coatings ........................................................................... 3 cr.
- Plastics Recycling and Sustainability ............................................ 3 cr.

**Professional Development Electives**
- Connected Learning Essentials ...................................................... 1 cr.
- Presentations for Professionals ..................................................... 1 cr.
- Marketing for Non-Marketing Professionals .................................... 1 cr.
- Organizational Communication and Problem Solving...................... 1 cr.
- Change Management ........................................................................ 1 cr.
- Leading Teams ............................................................................... 1 cr.
- Creating Breakthrough Innovations ............................................... 1 cr.
- Ethics for Professionals ............................................................... 1 cr.
- Effective Negotiation Strategies ................................................... 1 cr.

Positively challenging. Advanced topics with direct professional applications.

Omar Saleh, WEC Energy Group