PRACTICAL SKILLS YOU CAN PUT TO WORK

ONLINE MASTER OF INDUSTRIAL ENGINEERING
AS TECHNOLOGY EVOLVES, SO WILL THE PROCESSES USED TO MANUFACTURE EVERYTHING FROM CONSUMER PRODUCTS TO REFINED MATERIALS. ENGINEERS WHO CAN EXPERTLY NAVIGATE THE COMPLEX SPACE OF PRODUCTION, OPTIMIZING AUTOMATED PROCESSES AND MAXIMIZING EFFICIENCY, CAN GAIN A SIGNIFICANT COMPETITIVE EDGE IN AN INDUSTRY THAT’S SEEN A RECENT RESURGENCE: MANUFACTURING.

LEARN FROM LEADERS IN INDUSTRIAL ENGINEERING

Pursuing graduate-level education is an excellent way to prepare yourself for the evolving world and explore new opportunities in your career. The Department of Systems and Industrial Engineering (SIE) is committed to helping professionals like you develop the skills needed to pursue leadership roles in manufacturing and production control. Each of the expert faculty members that direct our online programs are accomplished leaders in research, delivering high-quality coursework that’s flexible, practical, and immediately relevant to the real world.

The online Master of Science in Industrial Engineering can help you develop the skills you need to optimize manufacturing operations and supervise high-tech production processes. As a student, you’ll be able to choose a complete set of electives to develop the specific skills you’re seeking, exploring only the areas that interest you most. The program can provide you with an in-depth exploration of technical skills, like traffic modeling, automation, and Computer-integrated Manufacturing (CIM).

Additionally, the curriculum delves into business fundamentals like cost estimation and financial modeling that can help engineering leaders keep any production line running at optimal performance. In the contemporary manufacturing climate, these skills are considered immensely valuable at all stages of the product lifecycle.
Complete a Practical, Flexible Curriculum

The requirements for the online Master of Science in Industrial Engineering can be completed in several different ways, allowing you to choose a course of study that best supports your professional goals. Only 9 of the units of credit included in the 30-33 unit curriculum are required. The rest are flexible and can be completed through a faculty-guided thesis, a practical project, and/or through electives offered by the Department of Systems and Industrial Engineering and Engineering Management.

Below you'll find a more detailed breakdown of the degree requirements:

The following 3-unit classes are required courses in the program:

- SIE 530 Engineering Statistics
- One course from 56X or 58X
- SIE 540 Survey of Optimization
  OR
- SIE 545 Fundamentals of Optimization

Students then select from one of the following 3 options:

**OPTION 1: PROJECT**

Either a 3- or 6-unit Project may be selected with approval of the faculty advisor. The project option requires a written report and an oral presentation. The report is prepared under the guidance of the major professor and is reviewed by members of the examining committee prior to the oral presentation. The 3-member examining committee consists of the major professor and at least two other members of the faculty selected on the basis of the student's coursework and field of interest. Students will either defend their master's report on campus, or will have to arrange for a teleconference defense.

The remaining elective credits for a total of 30 credit hours will be selected with the approval of an advisor and the Graduate Study Committee.

**OPTION 2: THESIS**

This option requires 24 units of regular course work, followed by 6 units of thesis research (SIE 910). This option is perfect if you're looking to work directly with a faculty member to create an original thesis. Thesis work is an excellent complement to course work and constitutes a valuable opportunity to develop an appreciation for and understanding of advanced engineering research. You will only be permitted to select the thesis option with an outstanding academic record.

Your thesis will be prepared under the guidance of the major professor and reviewed by members of the examining committee prior to the oral presentation, which will take place on-campus or via teleconference. The examining committee will consist of the major professor and at least two other members of the faculty selected based on your chosen area of interest. Other members of the department may also choose to examine the thesis.

The remaining elective units for a total of 30 units will be selected with the approval of an advisor and the Graduate Study Committee.

**OPTION 3: COURSEWORK**

A total of 33 units are required for this option. At least 1 3-unit course must be completed at the 600 level with a grade of "B" or above. The remaining elective credits will be selected with the approval of an advisor and the Graduate Study Committee.

Any remaining units required to meet the 30 (or 33) unit threshold will consist of electives chosen from our course catalog and approved by the Department. Not all of our 600-level courses are offered online each semester. Please check with the department and your faculty advisor before registering.

Here are some of the practical, intensive, elective courses that you can choose from to build your academic plan:

- SIE 606 Advanced Quality Engineering (3)
- SIE 608 Advanced Reliability Engineering (3)
- SIE 631 Distributed Multi-Paradigm Simulation Systems (3)
- SIE 640 Large-Scale Optimization (3)
- SIE 644 Integer and Combinatorial Optimization (3)
- SIE 645 Nonlinear Optimization
- SIE 649 Topics of Optimization (3)
- SIE 654 Advanced Concepts in Systems Engineering (3)
- SIE 678 Transportation Systems (3)
Ideal candidates for the online graduate programs in engineering offered by the University of Arizona will meet the following admissions standards:

- Minimum 3.0 GPA in previous academic coursework
- Graduated from an accredited engineering bachelor’s program or have earned a degree in a related discipline
- Some courses may also require that students have completed specific prerequisites

**GPA Exceptions – Non-degree-seeking Status**

If you do not meet the minimum 3.0 GPA requirement with your undergraduate coursework, you may be admitted to the Graduate College as a Non-degree student. After completing 12 semester units of non-degree graded 500-level or higher coursework with a minimum grade-point average of 3.0, you will be eligible to apply to a degree program.

To apply for any of the University of Arizona’s online programs in engineering, please follow the process below:

1. Complete the online application*, which can be found at: https://apply.grad.arizona.edu/users/login

2. Upload other required materials through the online application process:
   - Unofficial transcripts from all universities/colleges attended
   - An updated resume or CV
   - A brief statement of intent
   - 3 letters of recommendation
   - International students must also meet English proficiency requirements. This can be done by submitting TOEFL, IELTS, or Pearson PTE Academic results

3. If admitted, send official academic transcripts to:

   Graduate College
   The University of Arizona
   Administration 322
   PO Box 210066
   Tucson, AZ 85721-0066

   Express mail (for FedEx, DHL, etc):
   Graduate College
   The University of Arizona
   1401 E University Blvd, #322
   Tucson, AZ 85721
   Phone: 520-621-3471
   Fax: 520-621-4101

* Please note that GRE scores are not required.

* The process requires the payment of a $95.00 application fee for international applications, $85.00 for domestic applications, and $45.00 for domestic, non-degree seeking applicants.
Master of Science in Industrial Engineering

We're proud to offer these programs at a competitive tuition cost to professionals around the world. For more information about fees and tuition costs, please visit online.engineering.arizona.edu/tuition.

We encourage all students to explore the many funding options available, whether through federal or private loans. Grants and scholarships may also be available. Please visit financialaid.arizona.edu for more information.

Since its founding in 1885, the University of Arizona has stood as a national leader in practical education that helps students achieve incredible things. Our mission is to graduate students who are sought after by employers and prepared to embark on engaging, fulfilling careers.

Equipped with skills, knowledge, experience, and the entrepreneurial spirit they gain at the UA, our students become highly skilled members of society who lead with determination, innovate without limits and benefit our state, our nation, and the world in boundless ways.

The learning materials provided through our online platform are diverse, dynamic, and engaging. Every piece of learning content is shaped by expert faculty and based on our proven on-campus programs. In fact, as an online student, you'll have access to lectures and presentations that were recorded live during a relevant on-campus class session, allowing you to attend class without ever stepping foot in a classroom.

If you have any further questions or would like to begin the application process, please contact an Admissions Counselor:

Phone: (888) 658-2042
Email: onlineengineering@email.arizona.edu

Or visit: online.engineering.arizona.edu