M.S. IN INDUSTRIAL ENGINEERING

1. The Master of Science degree in Industrial Engineering includes the following areas of concentration:
   a. Engineering Management
   b. Ergonomics and Human Factors
   c. Health Care Systems
   d. Management of Technology
   e. Manufacturing Engineering
   f. Occupational Health and Safety
   g. Operations Research
   h. Productivity Engineering
   i. Quality

2. Students (other than University of Miami graduates) applying for graduate admission to the College should submit three letters of recommendation from individuals familiar with the applicant’s abilities and background. Students who hold a bachelor’s degree in a field other than Industrial Engineering may be admitted to the graduate program and to candidacy upon completion of appropriate undergraduate deficiency courses, in addition to the regular requirements for the graduate degree. A student’s overall program is planned by the student and the Graduate Advisor.

3. Requirements for the Master of Science Degree (both thesis and non-thesis option):
   a. An approved integrated program with a minimum of 30 credit hours with a 3.0 average or better on all credit hours attempted and no single grade below "C" at the University of Miami while a graduate student.
   b. At least 12 course credit hours must be at the 700 level.

   ![Course Table] (Table showing course codes, titles, and credit hours)

   **Thesis Option**
   - IEN 712: Design of Experiments 3
   - IEN 742: Linear Programming and Extensions 3
   - IEN 757: Ergonomics and Occupational Biomechanics 3
   - IEN 761: Engineering Cost Management 3
   - or IEN 763: Project Management Techniques 3
   - or IEN 764: Supply Chain Management 3
   - IEN 765: Advanced Production Systems 3
   - 4 Elective Courses 12
   - IEN 794: Master’s Project 3
   - Total Credit Hours 30

   **Non-Thesis Option**
   - IEN 712: Design of Experiments 3

   ![Course Table] (Table showing course codes, titles, and credit hours)

   **Thesis Option**
   - IEN 712: Design of Experiments 3
   - IEN 742: Linear Programming and Extensions 3
   - IEN 757: Ergonomics and Occupational Biomechanics 3
   - IEN 761: Engineering Cost Management 3
   - or IEN 763: Project Management Techniques 3
   - or IEN 764: Supply Chain Management 3
   - IEN 765: Advanced Production Systems 3
   - 4 Elective Courses 12
   - IEN 794: Master’s Project 3
   - Total Credit Hours 30

1. Note: All courses are 3 credit hours unless otherwise indicated.

Notes:
   - In addition to the above required courses, the student will have to take other graduate level elective courses to fulfill the degree requirements. A list of approved electives is maintained by the Graduate Advisor in the Department of Industrial Engineering. Substitution of courses is allowed, but must be approved by the Graduate Advisor and the Department Chairman.
   - 500-level courses are open to advanced undergraduates and to graduate students; 600-level courses are open only to graduate students.
   - 500-level and 600-level courses are also open to qualified graduate students majoring in other disciplines.

4. The Department of Industrial Engineering offers a 5-Year Bachelor of Science in Industrial Engineering and Master of Science in Industrial Engineering Program (BSIE/MSIE Program).
   a. This program is specifically designed for those students who want to pursue their graduate study as soon as they complete their undergraduate study in Industrial Engineering.
   b. The special conditions for this 5-Year BSIE/MSIE Program are as follows:
      - The student must declare his/her intent to participate before the end of their Junior year by submitting an official application to the department graduate committee for admission into the MSIE portion of the program. Exceptions to this rule must be approved by the department faculty.
      - A student wishing to withdraw from the 5-Year Program without the MSIE degree must complete all the requirements for the BSIE program, including the IEN 694 in order to get his/her BSIE degree.
      - To qualify for the MSIE degree, the student must meet all the pertinent Graduate School requirements, including an acceptable score on the GRE (Graduate Record Examination) and a minimum of 3.0 GPA.
      - The student is awarded both the BSIE and MSIE degrees at the end of the fifth year when all requirements are satisfied.
   c. More details can be found in the Undergraduate bulletin (http://bulletin.miami.edu/undergraduate-academic-programs/engineering/industrial-engineering).