INDUSTRIAL ENGINEERING

Learning Outcomes

Master of Engineering (M.Eng.)

1. **KNOW:** Students will be able to describe how core principles and methods from selected sub-fields of Industrial Engineering apply to their profession.
2. **APPLY/CREATE:** Students will adapt and apply industrial engineering methods and techniques to effectively solve problems in the workplace.
3. **COMMUNICATE:** Students will proficiently articulate and concisely convey findings, analysis, and insights from industrial engineering projects in widely accessible language.
4. **THINK:** Students will be able to analyze workplace data to prepare a problem solution using common methods and techniques in Industrial Engineering.
5. **PROFESSIONAL PRACTICE:** Students will apply best practices and ethical standards for the industrial engineering profession.

Master of Science (M.S.)

1. **KNOW:** Students will be able to apply advanced core principles and methods from selected sub-fields of Industrial Engineering to a research problem.
2. **APPLY/CREATE:** Students will apply analytical skills gained through coursework to solve a research problem in industrial engineering.
3. **COMMUNICATE:** Students will adeptly articulate and succinctly present, both orally and in written form, research approaches and processes.
4. **THINK:** Students will survey methods and techniques in industrial engineering to design an effective problem-solving method.
5. **PROFESSIONAL PRACTICE:** Students will apply best practices and ethical standards in conducting research in industrial engineering.

Doctor of Philosophy (Ph.D.)

1. **KNOW:** Students will be able to identify appropriate resources to summarize what is known, contextualize their research, and identify gaps in knowledge.
2. **APPLY/CREATE:** Students will survey content from coursework and apply methods to solve research questions.
3. **APPLY/CREATE:** Students will develop a research question and propose a solution process to a committee of faculty.
4. **COMMUNICATE:** Students will adeptly articulate an original research question and succinctly present, both orally and in written form, their approach, analyses, findings, and conclusions.
5. **THINK:** Students will review and analyze existing research in industrial engineering to formulate a research problem and to create an effective methodology to address the problem.
6. **PROFESSIONAL PRACTICE:** Students will apply best practices and ethical standards to advance research in the industrial engineering profession.