

**Department: Mechanical and Industrial Engineering**  
**Program: M.S. in Industrial Engineering**

Skill Set	Professional Application	<b>Delivery of Skill Set</b> Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
Ability to apply Industrial Engineering fundamentals	Production control, Inventory control, Process analysis, Facility planning, and Statistical analysis	IEEN 5321 (I, R) IEEN 5335 (I, R) IEEN 5314 (I)
Strong grounding in engineering fundamentals	Basic design, Strength of materials, Thermodynamics, Electrical theory, Applied physics, and Manufacturing	IEEN 5330 (I) IEEN 5331 (I) IEEN 5332 (I)
Communication and inter-personal skills	Success in working with cross-functional team skills, Ability to work well with others, Ability to communicate ideas through technical writing, Ability to present ideas to diverse audiences, Ability to establish a rapport with a variety of people, from shop personnel to senior management.	IEEN 5305 (I, R) IEEN 5306 (I, R) IEEN 5334 (I)
Project management skills	Ability to develop objectives, scope, work plan, and schedule, Quality control and assurance, and Time management skills	IEEN 5327 (I, R) IEEN 5314 (I) IEEN 5334 (I)
Analytical skills	Computer simulation skills, Standard data development and conducting time studies, and Cost analysis, return on investment, and cost estimating skills for analyzing alternative solutions	IEEN 5322 (I, R) IEEN 5329 (I, R)
Computing skills	MS Office: Word, Excel, Access, PowerPoint, and MS Project, Statistical software, Electronic layout/drafting skills, like AutoCAD, and Simulation software and electronic comparison analysis	IEEN 5313 (I) IEEN 5312 (I) IEEN 5331 (I) IEEN 5306 (I, R) IEEN 5322 (I)