

# INDUSTRIAL ENGINEERING TECHNOLOGY (IET)

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IET 101: Manufacturing Materials, Processes, and Laboratory

3 Credits

Mechanical properties of materials; primary processing methods used in manufacturing; ferrous and nonferrous metals; important plastic plus ceramic materials; dimensional verification and measurements; mechanical properties evaluation; laboratory methods; statistical interpretation of data.

IET 101H: Manufacturing Materials, Processes, and Laboratory

3 Credits

Mechanical properties of materials; primary processing methods used in manufacturing; ferrous and nonferrous metals; important plastic plus ceramic materials; dimensional verification and measurements; mechanical properties evaluation; laboratory methods; statistical interpretation of data.

Honors

IET 109: Inspection and Quality Control

3 Credits

Inspection methods and procedures and their application to control and acceptance sampling based on statistical methods.

**Prerequisite:** MATH 082

IET 215: Production Design

2 Credits

The study of manufacturing processes for the purpose of part creation and/or part feature creation using both current and advanced technologies.

**Prerequisite:** IET 101 or MET 105

IET 216: Production Design Laboratory

2 Credits

Laboratory methods in production design including conventional and advanced manufacturing processes, computer applications, and automation/robotics.

**Prerequisite:** or concurrent: IET 215

IET 297: Special Topics

1-9 Credits/Maximum of 9

Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

IET 308: Statistical Quality Control

3 Credits

Fundamentals of probability and statistics, introduction to quality control fundamentals, control charts, acceptance sampling.

IET 311: Elements of Metallurgy

3 Credits

Introduction to metallurgical concepts, metallurgical testing, phase diagram studies, heat treating concepts, ferrous and nonferrous systems.

**Prerequisite:** ET 322

IET 321: Manufacturing Processes

3 Credits

Manufacturing processes for producing metal, plastic, and ceramic items. Primary emphasis is placed on machine tool processes.

IET 333: Engineering Economics for Technologists

2 Credits

Fundamentals of engineering economics; equivalence and rate of return analysis; replacement models; depreciation and tax considerations; and economic decision making for technologists.

**Prerequisite:** MATH 022 and MATH 026 or MATH 040 or MATH 041

IET 402: Production Management

3 Credits

Principles and practices of managing the manufacturing operations of companies. Topics include management structure, physical plant, quality control, work sampling.

**Prerequisite:** IET 321