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MASTER OF SCIENCE DEGREE  
IN  
INDUSTRIAL TECHNOLOGY

STUDENT INFORMATION PACKET

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**INDUSTRIAL TECHNOLOGY**  
MASTER of SCIENCE DEGREE

The Master of Science Degree in Industrial Technology has been planned for those individuals who are interested in careers in manufacturing management. Courses in the program have been designed to cause the student to examine principles, concepts, attitudes and methods for dealing with many of the challenges which will confront manufacturing now and in the future. The program will be of value to those who are currently employed in manufacturing and have professional growth aspirations. It will also be of value to those who have recently completed undergraduate study and want additional preparation prior to embarking on their career. The following 30-hour program of studies is prescribed:

**Core Courses** (18 semester hours)

INT 706	Total Quality Control
INT 801	Manufacturing Value Analysis
INT 802	Productivity Assessment and Analysis
INT 804	Project Management
INT 805	Industrial Operation Research
TEC 830	Creative Problem Solving

**Synthesis Experience** (6 semester hours)

INT 820	Industrial Technology Proposal
INT 821	Industrial Technology Project
Or	
INT 822	Industrial Internship

**Supporting Work** (6 semester hours) – Select From:

ACC 820	Survey of Accounting
CIS 826	Information Systems Applications
FIN 851	Seminar in Investments
GBU 850	Legal, Ethical and Social Environment of Business
MGT 821	Survey of Management
MKT 850	Survey of Marketing
QMB 850	Business Forecasting
STA 700	Applied Statistical Inference

Or other graduate level electives, approved by advisor

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# Master of Science Degree in INDUSTRIAL TECHNOLOGY

## CURRICULUM

### Core Courses (18 Hours)

INT 706 - Total Quality Control. (3 semester hours) Prerequisite: INT 202. A study of total quality control as it relates to the integration of all functions and processes within an organization in order to achieve continuous improvement of the quality of goods and services.

INT 801 - Manufacturing Value Analysis. (3 semester hours) Prerequisite: ECO 230. An introduction to topics necessary for making effective manufacturing economic decisions. Quantitative methods and computer applications will be used to formulate decisions relating to manufacturing operations.

INT 802 - Productivity Assessment and Analysis. (3 semester hours) Prerequisite: Departmental approval. A study of industrial productivity, its assessment, measurement, analysis and improvements with emphasis on human productivity and machine material and process productivity.

INT 804 - Project Management. (3 semester hours) Prerequisite: Departmental approval. Elements of managing projects including the use of modern project management software. Primary emphasis will be the organizing of the class as a project team to work on actual projects in local manufacturing plants.

INT 805 - Industrial Operation Research. (3 semester hours) Prerequisite: Departmental approval. Concepts and applications of analytical models in industrial decision-making. Includes general concepts of models and situations, mathematical programming game theory and sequential network logic in determining optional industrial strategies.

TEC 830 - Creative Problem Solving. (3 semester hours) A review and analysis of basic and applied research in the development of creative behavior with emphasis on its application to industrial teaching and industrial problem solving. Student will be expected to complete a term project showing their creative abilities.

### Synthesis Experience (6 Hours)

INT 820 - Industrial Technology Proposal. (3 semester hours) Prerequisite: Departmental approval. An individually developed proposal related to a project typically encountered by a manager in a technical environment. The project proposal is to be approved by the student's graduate advisor.

INT 821 – Industrial Technology Project. (3 semester hours) Prerequisite: INT 820 or departmental approval. An individually developed project related to the solution of a typical problem encountered by a manager in a technical environment. The problem is to be approved by the student's graduate committee and the results presented in open forum.

Or

INT 822 – Industrial Internship. (3-6 semester hours) Prerequisite: Departmental approval. Planned and supervised experience in industry in which the student will have the opportunity to observe and

participate in manufacturing management activities. The experience must be for at least one semester and the plan of activities should be approved by the student's graduate committee.

**Supporting Work (6 Hours) Selected from:**

ACC 820 – Survey of Accounting. (3 semester hours) Designed for students who have completed a non-business degree and now wish to acquire a background in accounting and/or business.

CIS 826 – Information Systems Applications. (3 semester hours) Computer literacy, management information systems, and computer applications in business using word processing, spreadsheets, presentation and database software tools. Tools are demonstrated using problems in accounting, finance, marketing, management, and production.

FIN 851 – Seminar in Investments. (3 semester hours) Readings on traditional and current issues emphasizing valuation, selection, and portfolio management of securities.

GBU 850 – Legal, Ethical and Social Environment of Business. (3 semester hours) Examines what the responsible business-person must know about the Common Law, the regulatory environment, standards of ethical conduct, and the social responsibilities of the modern enterprise.

MGT 821 – Survey of Management. (3 semester hours) The functions of planning, organizing, leading and controlling the organization. Includes an introduction to concepts of organization behavior and organization theory as applied to the domestic/ international business environments.

MKT 825 – Survey of Marketing. (3 semester hours) Survey of marketing concepts. Major marketing institutions, the marketing mix, and environmental forces are examined. International and societal approaches weighted significantly. Case studies and outside reading reports are used to extend and demonstrate concepts.

QMB 850 – Business Forecasting. (3 semester hours) Prerequisite: QMB 200 or equivalent with a grade of “B” or better. This course discusses the role of forecasting for decision making utilizing statistical software packages in the estimation of multiple regression and time series methods of business forecasting.

STA 700 – Applied Statistical Inference. (3 semester hours) Designed for students in all areas. A general background in statistical methods including normal distribution, point and interval estimation, hypothesis testing, regression, analysis of variance, and software packages. Credit will not be awarded to students who have credit for ECO 320 or ECO 848 or EPY 843 or QMB 300 or PSY 301 or STA 271 or STA 320 or STA 521 or STA 721. Credit does not apply toward the M.S. degree requirements.

Or other graduate level electives, approved by advisor.

# Master of Science/Industrial Technology Program

## Course Planning

Many of the courses for the Industrial Technology program have been developed as "EKU Internet assisted courses" providing graduate-level technology courses delivered on the internet. Materials distributed during these courses are made available on the internet using "Blackboard" software that serves as the educational information interchange medium. This easy-to-use software allows class lessons to be printed and reviewed prior to online sessions. Online time for the class is typically one evening per week. EKU Internet assisted courses are intended primarily for industrial supervisors and others in our programs at locations distant from EKU's campus. The organization of courses allows the instruction to be offered primarily through the internet, typically with three scheduled meetings on-campus: (1) Orientation at the beginning of the semester; (2) Mid-term; and (3) end of semester. Some courses vary from this format. The flexibility offered by the internet has been an effective method to utilize as we perfect alternative delivery of instruction.

The tentative graduate course delivery for the Industrial Technology program is as follows:

- 1) INT 706 - Total Quality Control (online spring semesters)
- 2) INT 801 - Manufacturing Value Analysis (on campus fall semesters)
- 3) INT 802 - Productivity Assessment and Analysis (online fall semesters)
- 4) INT 804 - Project Management (announced semesters)
- 5) INT 805 - Industrial Operation Research (online spring semesters)
- 6) INT 820 - Industrial Technology Proposal (Independent Study Course)
- 7) INT 821 - Industrial Technology Project (Independent Study Course) Or INT 822-Industrial Internship (Independent Study Course)
- 8) TEC 830 - Creative Problem Solving (online spring semesters)
- 9) Supporting Courses (6 hours): Select from ACC 820, CIS 826, FIN 851, GBU 850, MGT 821, MKT 850, QMB 850, STA 700 or other authorized Graduate elective courses to support the program technically. Watch for courses available on the internet.

This 30-hour program can be taken by internet, independent research, internship, and supporting course locations.

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# Planning Sheet

Program: Industrial Technology

You can use this sheet to plan your program coursework.

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**To Register:** [WWW.EKU.EDU](http://WWW.EKU.EDU) - "Registration"

Class Schedule and Section # (5 digit) – "Course Schedule Book"

RAC # - Call Steve Fardo (859-622-1184 or Sandy Taylor 859-622-1180)

**Tuition Waiver:** Be sure to fax a copy to Sandy Taylor **after** you register (859-622-2357)