

Technology Management (TECH)

TECH 1000

Experiential Credit Portfolio Development and Assessment

2:2:0 Fall, Spring

For those entering the AAS Degree in Technology. Helps students develop their professional portfolio including experience, certifications, licenses, etc. Involves creating required documentation and presentation by the student and assessment of the portfolio by a committee of appropriate faculty and technology professionals to determine experiential credit granting equivalences in courses TECH 110R. Inculcates the value of continuous learning and the process of Learning how to Learn.

TECH 1010

Understanding Technology

3:3:0 Fall, Spring, Summer

Covers the principal technologies that are important and prevalent today and their associated science principles. Explores how technology applies to, affects, and interacts with various fields, environments and workplaces. Develops an appreciation for how technology evolves and what possible new and exciting technologies are on the horizon

TECH 1050

Manufacturing Processes and Systems

3:2:3 Fall

Covers a wide variety of manufacturing processes, including: casting, welding, sheet metal forming, machining, composites fabrication, injection molding, extrusion, thermoforming, rotational molding, and electronics fabrication. Covers understanding of manufacturing systems and all the components required to work together, including: the production system, ERP software system, quality system, business structure, supply chain, and delivery.

TECH 110R

Technical Experiential Credit

1 to 8:0:3 to 24

* Prerequisite(s): TECH 1000

Allows students to obtain technical experiential credit through an approved portfolio. Portfolio is developed and approved in TECH 1000. May be repeated for a maximum of 15 credits toward graduation.

TECH 200G

Technology and Human Life

3:3:0 Fall, Spring, Summer

Acquaints students with the major technologies affecting our culture and the global community, such as biotechnology, nanotechnology, information technology, and military technology. Places special emphasis on the moral, social, economic, legal, and political consequences of these technologies. Covers summary descriptions of various technologies, some of the major issues associated with them, and the underlying philosophical foundations of our encounters with them. May be delivered online.

TECH 2010

Supervision in Technology

3:3:0 Fall, Summer

Addresses employee motivation and the impact of the workplace environment (both physical and intangible). Presents various techniques of leadership and management (addressing different motivational theories and contemporary research on worker motivation). Teaches how to build and work in effective teams to inspire good performance and use conflict and negotiation effectively. Practices good communication skills both written and oral. Teaches how to understand the organizational structure, how to manage and assess performance, and how to be aware of opportunities and challenges when managing employees in a technological environment, including strategies for training and evaluation. May include hybrid or online delivery.

TECH 2050

Introduction to Quality Management

3:3:0 Spring

* Prerequisite(s) or Corequisite(s): EDGT 1600 or STAT 1040 or STAT 1045

Introduces quality management. Includes ISO 9000, application of Lean Six Sigma, continuous process/product improvement, basic statistical methods, performance measurements, cost of poor quality, employee empowerment, and global quality initiatives. Acquaints students with the requirements for relevant professional certifications for career enhancement.

TECH 281R

Internship in Technology

1 to 3:0:5 to 15 On Sufficient Demand

* Prerequisite(s): Department Approval

Obtains work experience for lower-division students in their technical field. Provides supervised, practical, and professional experience. Demonstrates accountability regularly with a School of Technology and Computing coordinator. May be repeated for a maximum of 3 credits toward graduation. May be graded credit/no credit.

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TECH 290R

Current Topics in Technology

3:3:0 On Sufficient Demand

Demonstrates current developments in technology fields and how they apply to business and industry processes. Prepares students to use contemporary technologies in their professions. May be repeated for a maximum of nine credits toward graduation. May be delivered hybrid.

TECH 297R

Independent Study

1 to 3:0:3 to 9 On Sufficient Demand

* Prerequisite(s): Department approval

Requires individual initiative and responsibility. For qualified students who wish to undertake an independent project or directed study related to an area of technology or manufacturing. The topic must be approved by the instructor and the Department Chair. May be repeated for a maximum of 4 credits toward graduation.

TECH 3000

Introduction to Technology Management

3:3:0 Fall, Spring, Summer

* Prerequisite(s): ENGL 1010, Sophomore

Standing, and University Advanced Standing

Addresses the special characteristics of managing and leading technology dependent organizations. Covers the leading influential technologies, technology's impact on organizational structure and the policy process, strategic technological planning, futures studies, leadership, global aspects of technology management, performance assessment, technology life cycles and financing, and some of the major ethical implications of managing technology dependent organizations.

TECH 3010

Creativity Innovation and Change Management

3:3:0 Fall, Spring, Summer

* Prerequisite(s): ENGL 1010, Sophomore

Standing, and University Advanced Standing

Focuses on principles of creativity and innovation as they apply to technological enterprises. Covers theoretical and practical concepts of both creativity and innovation. Studies both concept and practice of structured methods of creative problem solving. Examines "Appreciative Inquiry" as an alternative management of change technique. Examines inventors and the invention process, including the patent process. Uses lecture, discussion, group projects, case studies, class activities, presentations, videos and guest lecturers.

TECH 301R

Technology Lecture Series

1:1:0 Fall, Spring

* Prerequisite(s): (ENGL 2010 or ENGL 2020)

and University Advanced Standing

Presents lectures from external speakers in various technology related subjects. Requires a written reaction paper for most of the lectures. May be repeated for a maximum of 2 credits toward graduation.

Technology Management

TECH 3400

Project Management

3:3:0 Fall, Spring, Summer

* Prerequisite(s): University Advanced

Standing

* Prerequisite(s) or Corequisite(s): Computer Literacy

Teaches the fundamental principles, processes, and techniques of project management. Includes a systems approach to planning, scheduling, and controlling projects. Focuses on effective processes for managing projects across multiple disciplines/industries and varying management structures. Introduces project management tools that can be used to guide and manage individual and multiple projects. May be delivered hybrid and/or online.

TECH 3700

Materials Management

3:3:0 Fall, Spring, Summer

* Prerequisite(s): TECH 3000 and (ENGL 2010 or ENGL 2020) and University Advanced Standing

Involves a comprehensive approach to purchasing, raw and finished goods inventories, and determining and managing capacity and workers. Includes Just-in-time, Kanban, scheduling and emerging technologies. Assists in preparing students for national certifications.

TECH 3850

Quality Management in Technology

3:3:0 Fall, Spring, Summer

* Prerequisite(s): [(TECH 3000 and (STAT 1040 or STAT 1045) or advisor approval] and University Advanced Standing

Involves a comprehensive approach to Quality Management related to technical professions. Covers Lean and Six Sigma approaches, continuous improvement/Kaizen, Voice of the Customer (VOC), Statistical Process Control (SPC), cost of poor quality, leadership, employee empowerment, teamwork, change management, and quality standards. Assists in preparing students for the relevant professional certifications for career enhancement.

TECH 4000

Reliability Engineering and Safety

3:3:0 Fall, Spring, Summer

* Prerequisite(s): TECH 3000 and (ENGL 2010 or ENGL 2020) and University Advanced Standing

Studies interrelated aspects of reliability, safety, other important risk factors, environmental concerns, and ergonomic considerations in a technological enterprise. Presents a mixture of academic study, investigation of numerous actual cases, surveys of local businesses, and discussion of current events in these areas. Studies requirements of governmental agencies. Studies communication and community interaction techniques to prevent and mitigate human error.

TECH 405G

Global Ethical and Professional Issues in Technology

3:3:0 Fall, Spring, Summer

* Prerequisite(s): PHIL 2050 and University

Advanced Standing

* Prerequisite(s) or Corequisite(s): TECH 4420 or CMGT 3040

Examines professional and ethical issues that arise within technological organizations with a global perspective. Studies the impact of conflicting loyalties, as well as the roles of multi-culturalism and globalization. Includes review of current ethical theories and existing professional codes of conduct. Includes lecture, readings, case studies, and other media. May be delivered online.

TECH 4200

Technology Marketing and Customer Relationship Management

3:3:0 Fall, Spring, Summer

* Prerequisite(s): TECH 3000 and University Advanced Standing

Examines customer relationship management (CRM) and its application in marketing, sales, and service. It will include the use of Microsoft Dynamics CRM as well as a number of online resources. Students will learn CRM to align business process with customer-centric strategies, such as identification, acquisition, growth and retention of desired customers. Emphasis is given on conceptual knowledge, real-world projects, and hands-on learning using Microsoft Dynamics CRM software. May be delivered online.

TECH 4400

Advanced Project Management

3:3:0 Fall, Spring

* Prerequisite(s): {[ACC 3000 or (ACC 2010 and ACC 2020) or ACC 2030] and STAT 1040 or STAT 1045 or advisor approval} and University Advanced Standing

* Prerequisite(s) or Corequisite(s): TECH 3400

Presents advanced tools and techniques which build on the concepts presented in introductory project management class. Covers principles for managing multiple projects. Studies best practices for project management. Introduces the activities of Program Management, Project Portfolio Management and Strategic Project Leadership and Management. Analyzes basic cost justification techniques for making economic decisions in technical organizations. May be delivered online.

TECH 4420

Organization Information Technologies

3:3:0 Fall, Spring, Summer

* Prerequisite(s): TECH 3000, Computer Literacy, University Advanced Standing, and (ACC 3000 or ACC 2010)

Introduces how information, and the management of that information, can affect the structure and operations of organizations. Covers Technical and organizational foundations of information systems along with contemporary approaches to building, managing and protecting information systems including hands-on work with a modern Enterprise Resource Planning (ERP) system. Emphasizes how information technology affects decision-making. Uses Excel as a decision support tool. Examines the ethical and legal issues raised by the capabilities of information technology. May be delivered online. Lab access fee of \$35 for computers applies.

TECH 481R

Internship

1 to 3:0:5 to 15 On Sufficient Demand

* Prerequisite(s): TECH 3400, Technology Management Department Chair Approval, and University Advanced Standing

Provides opportunities to apply classroom theory while students work as employees in a job that relates to their careers. May be repeated for a maximum of 9 credits toward graduation. May be graded credit/no credit.

TECH 489R

Undergraduate Research in Technology Management

1 to 3:0:5 to 15 On Sufficient Demand

* Prerequisite(s): Department approval and University Advanced Standing

Provides the opportunity to conduct research under the mentorship of a faculty member. Practices the theoretical knowledge gained in prior major courses. Requires the creation of a significant intellectual or creative product that is characteristic of the Technology Management discipline and worthy of communication to a broader audience. May be repeated for a maximum of 3 credits toward graduation.

TECH 490R

Current Topics in Technology Management

3:3:0 On Sufficient Demand

* Prerequisite(s): (Senior Status or Instructor Approval) and University Advanced Standing

Designed to show developments in business and industry professions in the short- and mid-term future. Acquaints students with the newest technological developments in their fields. Prepares students for the changes that various technologies will bring their professions. May be repeated for a maximum of 9 credits toward graduation.

TECH 4910

Senior Capstone Project

3:3:0 **Fall, Spring, Summer**

* Prerequisite(s): TECH 3400, TECH 3850,
Senior Status, and University Advanced
Standing

For senior Technology Management majors. Provides a leadership transition from academic to applied/real-life work experience. Includes student, company liaison, and coordinator evaluation, on-site work visits, written assignments and oral presentations. Offers experience in establishing and accomplishing team objectives that improve their ability to add real value in their future employment.

TECH 497R

Independent Study

1 to 3:0:3 to 9 **On Sufficient Demand**

* Prerequisite(s): Technology Management
Department Chair Approval and University
Advanced Standing

Offers independent study as directed in reading or individual projects at the discretion and approval of the department chair. May be repeated for a maximum of 4 credits toward graduation.