Engineering & Technology

Burchan Aydin (Department Head)
Location: AG/ET Building, Room 213-D, 903-886-5474
Engineering & Technology Web Site (http://www.tamuc.edu/IET/)

Program of Graduate Work

Master of Science in Technology Management

Graduate studies in Technology Management are designed to prepare graduates for career advancement and career enhancement in domestic and global technology-intensive businesses and industrial enterprises.

Graduates of the Master of Science in the Technology Management program at East Texas A&M University will:

1. evaluate and defend leadership and organizational strategies associated with technology-intensive enterprises,
2. summarize and explain organizational development and strategies common to technology-intensive enterprises,
3. formulate and assemble component ideas in order to successfully execute a project plan, and
4. analyze information in order to formulate effective solutions.

Admission

Admission to a graduate program is granted by the Dean of the Graduate School upon the recommendation of the department. Applicants must meet the following program requirements for admission in addition to meeting the general university requirements.

- Admission Requirements (https://www.tamuc.edu/programs/technology-management-ms/#tamuc-section-46042)

Successful completion of the Comprehensive Exam is required of all students.

Note: Individual departments may reserve the right to dismiss from their programs students who, in their judgment, would not meet the professional expectations of the field for which they are training.

Technology Management MS (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/science-engineering/engineering-technology/technology-management-ms/)

Technology Management Minor (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/science-engineering/engineering-technology/technology-management-minor/)

Organizational Planning Graduate Certificate (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/science-engineering/engineering-technology/organizational-planning-graduate-certificate/)

Technology Leadership Graduate Certificate (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/science-engineering/engineering-technology/technology-leadership-graduate-certificate/)

TMGT 510 - Strategic & Financial Planning in Technology Organizations
Hours: 3
Study of advanced strategic and financial planning techniques and methods that apply to contemporary technology-intensive organizations. Includes investigation of planning concepts and frameworks, methods for linking technology and business strategies, and comprehension of the nature of global competition, risk assessments, and business needs prioritization. Students will be required to do extensive reading, case study related research, and original writing assignments/projects. Prerequisites: TMGT 595 (or corequisite), or permission of Department Head.

TMGT 511 - Emerging Technologies
Hours: 3
Study of emerging technologies and the management, ethical, and societal challenges they pose to engineering and technology organizations. Emphasis on how managers assess emerging technologies, share organizational strategies, make investment decisions, and create organizational structures that can effectively compete in the global market. Extensive research and writing assignments are required. Prerequisites: TMGT 595 (or corequisite), or permission of Department Head.

TMGT 512 - Leadership in Engineering and Technology
Hours: 3
Advanced study of the leadership attributes, theories, and concepts found within the contemporary fields of engineering and commercial construction, and within technology-intensive enterprises. Student will be required to conduct extensive reading, research and writing during this course of study. Prerequisites: TMGT 595 (or corequisite), or permission of Department Head.

TMGT 512A - Leadership in Engineering and Technology
Hours: 3
(Same as TMGT 512) Advanced study of the leadership attributes, theories, and concepts found within the contemporary fields of engineering and commercial construction, and within technology-intensive enterprises. Student will be required to conduct extensive reading, research and writing during this course of study. Prerequisites: TMGT 595A (or corequisite), or permission of Department Head. Crosslisted with: TMGT 512.

TMGT 513 - Knowledge Management in Engineering & Technology Organizations
Hours: 3
Study of knowledge management and its organizational impact. Students will be required to conduct extensive research into how knowledge management affects the contemporary organization. Emphasis is placed on how organizational knowledge is captured, retained, accessed, and used to provide a competitive edge in the global environment.

TMGT 514 - Engineering and Technology Project Management
Hours: 3
Study of techniques and applications for managing projects with emphasis on project management planning, network scheduling, project graphics, and other related topics. Prerequisites: TMGT 595 (or corequisite), or permission of Department Head.

TMGT 515 - Project Management Tools & Techniques
Hours: 3
Advanced study of project management tools and techniques needed for technology managers; with an emphasis on four components of project management: (1) pricing and estimating, (2) cost analysis, (3) risk management, and (4) quality management. Students will conduct case studies and address technology management problems by utilizing project management tools and techniques during the course of study. Extensive research and writing assignments are also required. Prerequisites: TMGT 595 (or corequisite), or permission of Department Head.

TMGT 516 - Staff Development in Technology Organizations
Hours: 3
Study of advanced methods for staff development, management, and organizational development that apply to contemporary technology-intensive organizations. Includes investigation of techniques for hiring employees including diversity considerations, candidate locating and interviews, employee development, dispute handling, preparation for leadership, ethical practices, and team building. Students will be required to do extensive reading, case study related research, and original writing assignments/projects. Prerequisites: TMGT 595 (or corequisite), or permission of Department Head.

TMGT 517 - Vendor & Value Chain Management
Hours: 3
Study of advanced methods for the management of vendors and value chains that apply to contemporary technology-intensive organizations. Includes investigation of techniques for contract management, Request for Proposal (RFP) development, proposal review, mergers and acquisitions (M&A) due diligence activities, expectation communication and management, and special considerations for outsourced technology-related services. Students will be required to do extensive reading, case study related research, and original writing assignments/projects.

TMGT 589 - Independent Study
Hours: 1-3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

TMGT 590 - Technology Management Seminar
Hours: 3
Students will conduct an in-depth case study on a topic selected by the program faculty. Topics will vary each semester and will be selected from relevant and timely subjects/technologies.

TMGT 595 - Applied Research in Engineering & Technology
Hours: 3
Study of research methodologies, analysis and processes utilized in contemporary engineering and technology intensive disciplines.

TMGT 595A - Applied Research in Engineering & Technology
Hours: 3
(Same as TMGT 595) Study of research methodologies, analysis and processes utilized in contemporary engineering and technology intensive disciplines. Crosslisted with: TMGT 595.

TMGT 597 - Special Topics in Engineering & Technology
Hours: 0-3
Special Topics in Engineering & Technology. Organized class. May be repeated when topics vary.

TMGT 599 - Technology Management Practicum

Hours: 3

This capstone course experience serves as the opportunity for students to demonstrate and document their program learning experience and mastery of expected/required program of study competencies, goals, and learning outcomes within the Master of Science degree in Technology Management. Additionally, administered through this course will be the Master's Comprehensive Examination that will assess the student’s mastery of concepts taught in the required major core courses. This course is to be taken during the final semester of coursework in the TMGT program following the completion of all, or all but one, of the other core courses. Prerequisites: Must be core-complete or may be taken concurrently with one remaining core course.