TECH MASTER OF BUSINESS ADMINISTRATION

Home Department: School of Management

Program Advisor/Contact:

School of Management
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Program Overview

Kettering University's Technical Master of Business Administration (TECH MBA) provides graduates of STEM undergraduate degree programs with a stimulating on-campus educational experience that is at the intersection of contemporary business and cutting edge technical fields. The STEM-designated program prepares graduates who can be ambidextrous with business and technology in leading organizations both as technology experts and digital value creators while competing in an economy characterized by disruptive innovations and digital reinvention & reconfiguration.

The seated 40-credit TECH MBA programs contain seven (28 credits hours) core business courses with an additional three graduate elective courses (12 credits hours) in a specific **technical** Emphasis area among the options listed below:

- Artificial Intelligence
- Advanced Mobility
- Advanced Manufacturing
- Data Analytics and Big Data
- Materials Science and Engineering
- New Energy and Sustainability
- Systems Engineering
- Logistics & Supply Chain Management

The TECH MBA Core in combination with the chosen STEM Emphasis will expose students to the application of technology in addressing management issues and problems.

Students may select a management internship course (MGMT-693) as part of the core program and may start the program in any term. Elective course selections in technical emphasis areas must be approved by the Department Head of the department where the course is offered, the Advisor in the School of Management, and the Dean of the Graduate School.

TECH MBA PROGRAM GOALS

Students should:

1. demonstrate the personal, interpersonal, and teamwork skills required to lead and manage technology integration in organizations effectively and ethically. (Personal Effectiveness)
2. be able to identify, evaluate, and choose among alternative technical solutions to global organizational problems. (Cognitive Reasoning)
3. be able to evaluate the effects of technology on organizational development. (Technological Mindset)
4. be able to explain the importance of an entrepreneurial mindset in managing organizational talent, resources, and innovation in a complex global economy. (Value Creation in a Global Economy)
5. demonstrate knowledge, skills, and abilities in core disciplines, focusing on identifying, solving, and managing technical issues to create value. (Core Domain Knowledge)

Prerequisites

A foundational level of knowledge in critical areas is required prior to beginning the TECH Master of Business Administration program. This foundation helps to ensure that students are prepared to fully engage and succeed in the coursework associated with graduate programs in management. Students must have an undergraduate course in each of the following areas, complete MGMT-510 Foundations of Business, or test out of individual prerequisite courses through self-directed study.

Areas of prerequisite knowledge:

Economics, Managerial Accounting, Statistics, Management, Marketing

Required Courses

Code	Title	Credit Hours
ACCT-639	Managerial Accounting	4
FINC-619	Financial Management	4
MGMT-629	Management Science	4
MGMT-639	Managing People & Organization	4
or BUSN-689	Organizational Behavior	
MRKT-679	Marketing Management	4
MGMT-665	Strategic Management	4
Choose One		4
BUSN-659	International Business	
MGMT-679	Leadership	
MGMT-619	Project Management	
MGMT-693	Internship in Management	
Total Credit Hours		**28**

Technical Emphasis Areas

Code	Title	Credit Hours
Data Analytics & Big Data		**12**
Choose Three		
COMM-601	Communicating about Data	4
CS-601	Programming Methods for Data Science	4
CS-641	Foundations of Data Science	4
CS-651	Cloud Computing: Architecture & Applications	4
CS-661	Database Systems	4
CS-665	Information Retrieval and Data Mining	4
CS-682	Machine Learning	4
MGMT-623	Data Analytics	4
MGMT-624	Data Visualization	4
MGMT-625	Digital Strategy and Competitive Advantage	4
MATH-627	Probability and Stochastic Modeling	4

Artificial Intelligence		**12**
CS-601	Programming Methods for Data Science	4
Choose Two of the Following:		
CS-665	Information Retrieval and Data Mining	4
CS-681	Artificial Intelligence	4
CS-682	Machine Learning	4
Advanced Mobility		**12**
Choose Three		
CE-642	Mobile Robotics	4
CE-652	Artificial Intelligence for Autonomous Driving	4
CE-654	Computer Vision for Autonomous Driving	4
ECE-610	Modeling of Dynamic Systems	4
ECE-630	Digital Signal Processing Techniques for Automotive Engineering	4
ECE-632	Automotive Control Systems	4
ECE-642	Machine Drives for Electric Vehicles	4
New Energy & Sustainability		**12**
MECH-426	Fuel Cell Science and Engineering	4
MECH-427	Energy and the Environment	4
MECH-428	Bio and Renewable Energy	4
Material Science & Engineering		**12**
MECH-416	Introduction to Finite Element Analysis with Structural Applications	4
MECH-482	Mechanics and Design Simulation of Fiber-Reinforced Composite Materials	4
MECH-610	Mechanics of Materials I: Linear Elasticity	4
Advanced Manufacturing		**12**
Choose Three		
IME-601	IME Principles for Mobility Systems	4
IME-603	Numerical Control Machining	4
IME-608	Industrial Robotics	4
IME-622	Simulation	4
IME-662	Ergonomics	4
IME-663	Safety & Human Factors	4
IME-665	Human-Computer Interaction and Interface Design	4
Systems Engineering		**12**
CS-601	Programming Methods for Data Science	4
ECE-610	Modeling of Dynamic Systems	4
IME-601	IME Principles for Mobility Systems	4
Logistics/Supply Chain Management		**12**
Choose Three		
IME-652	Production System Design	4
IME-653	Supply Chain Design	4
IME-654	Enterprise Resource Planning	4
IME-676	Lean Six Sigma	4
MGMT-669	Supply Chain Management	4