



# Engineering and Technology Management

## Curriculum

The MSETM curriculum permits students to build a strong degree that directly prepares them for the future. The degree consists of 32 credit hours. Coursework is divided into two categories: Required and Elective.

The Required courses include an introductory course (1 hour), a decision analysis course (3 hours) and the capstone series (4 hours). Our introductory course, ETM 5111, offered every spring and fall semester, should be taken immediately after the student is admitted to the program. The decision analysis course, ETM 5143, will be critical in preparing the student for the final ETM Capstone and can be taken any time prior to ETM 5133. The Capstone series ETM 5511 and ETM 5133, are taken sequentially. Ideally, a student would enroll in ETM 5511 near the midpoint of the program. This preparation course will assist the student in defining a proper project for the Capstone. The ETM program culminates in the delivery of the final Capstone project in ETM 5133, taken near the end of the program.

The remaining 24 credit hours will be chosen from the Electives list and should include a minimum of 3 one-credit-hour courses.

REQUIRED	8 credit hours	Credit hour value	Offered		
			Fall	Spring	Summer
ETM 5111	Introduction to Strategy, Technology and Integration	1	x	x	
ETM 5511	Capstone Preparation	1	x	x	x
ETM 5133	Capstone to Strategy, Technology and Integration	3	x	x	
ETM 5143	Strategic Decision Analysis for Engineering and Tech. Managers	3		x	
<b>ELECTIVES</b>	<b>24 credit hours</b>				
<b>One-credit-hour electives (Minimum of 3 hours/multiples of 3)</b>					
ETM 5221	Engineering Teaming	1		x	
ETM 5241	Strategic Project Management	1	x		
ETM 5291	Failure Mode and Effects Analysis in Design	1		x	
ETM 5341	Leadership Strategies	1	x		
ETM 5351	Planning Technical Projects	1	x		
ETM 5371	Ethics for Practicing Engineers	1		x	
ETM 5391	New Product Introduction and Commercialization	1			x
ETM 5411	Engineering Economic Analysis	1		x	
ETM 5461	Intellectual Property, Patent Law and Trade	1	x		
ETM 5481	Sustainable Enterprise Strategies	1	x		
ETM 5531	Contract Law in Engineering and Technology	1			x
<b>Three-credit-hour electives (Remaining 21 hours)</b>					
ETM 5153	Foundations of Engineering Management	3			x
ETM 5163	Business Innovation and Technology	3	x		
ETM 5253	Problem Solving and Decision Making	3		x	
ETM 5283	Strategic Planning	3	x		
ETM 5943	Lean Sigma Implementation	3	x		
IEM 5413	Managing the Engineering and Technical Function	3		x	
IEM 5603	Project Management	3	x		x
IEM 5743	Information Systems and Technology	3		x	
IEM 5763	Supply Chain Strategy	3		x	
IEM 5813	Performance Measurement Systems	3	x		
MGMT 5113	Management and Organization Theory	3	x	x	
MGMT 5533	Leadership Challenges	3	x	x	x
MKTG 5133	Marketing Management	3	x	x	x
SOC 5813	Organizational Change, Myths and Realities	3	x		

## Certificate Options

MSETM students may choose to pursue any one of the following certificates to complete their degree. Separate admission to certificate programs is required when indicated. Certificate programs require separate admission by the graduate college. The student's official transcript will designate the completion of a certificate program and the student is awarded an official OSU certificate.

### Engineering and Technology Management Certificate

**Minimum 12 hours** – Admission requirements for the ETM certificate are identical to MSETM requirements but a separate application must be submitted to be eligible for it to appear on the student's transcript.

ETM 5111 Introduction to Strategy, Technology, and Integration (1 credit hour)

ETM 5143 Strategic Decision Analysis for Engineering and Technology Managers (3 credit hours)

8 additional hours of ETM coursework (courses with an ETM prefix only)

### Information Assurance Certificate

**Minimum 15 hours** – Requires admission to certificate program

Brings total required hours to 35. Contact Sarah Chabinak for more information [sarah.chabinak@okstate.edu](mailto:sarah.chabinak@okstate.edu)

MSIS 5213 Information Assurance Management

MSIS 5773 The Upper Layers of Telecommunications Systems

MSIS 5233 Applied Information Systems Security

MSIS 5243 Information Technology Forensics

MSIS 5253 Advanced System Certification and Accreditation

MSIS 5273 Legal & Ethical Issues in Information Assurance

### Business Sustainability Certificate

**Minimum 12 Hours** – Requires admission to certificate program.

<http://spears.okstate.edu/sustainability/>

MGMT 5023 Sustainable Enterprises (Required)

MGMT 5083 Business and Social Responsibility (Required)

MGMT 5031 Leading Organizational Change

MGMT 5051 Creating Ethical Work Places

MGMT 5061 Managing Confrontations

MGMT 5073 Ethical Leadership and Organizations

MGMT 5093 Business and Non-Profit Organizations

MGMT 5533 Leadership Challenges

MGMT 5563 Crisis in Organizations

EEE 5213 Entrepreneurship in Science and Technology

EEE 5403 Social Entrepreneurship

EEE 5603 Supporting Emerging Enterprises

## Transfer Credit

Up to nine hours of qualified coursework may be considered for transfer into the program if taken for graduate credit, from an accredited institution in which a "B" or better is earned. This may include credit hours earned through qualified military training or at another university while enrolled in the MSETM program. An official transcript will be required for consideration.