

# Engineering Management Foundations (Certificate)

This certificate is for engineering, STEM, or technical students seeking or experiencing transitions into increasing levels of responsibility and/or management roles. The program provides students the principles and foundational concepts for the planning and operational management of industrial, engineering, and technical organizational pursuits. Students may qualify to have their credits transferred into the Master of Engineering Management (MEM) (<http://catalog.ncsu.edu/graduate/engineering/engineering-management/>) degree program.

The Engineering Management Foundations Certificate consists of four (4) graduate courses and is offered on campus or 100% online.

## More Information

[Engineering Management Program Website](#)

## Admissions Information

To apply to the program, you need to:

- Complete an online application form
- Submit transcripts of all academic work after high school
- Provide a written personal statement

Admission is competitive, and the GRE is not required. Your academic success plays a significant role in the admission process. However, completing a certificate program does not guarantee entry into a graduate degree program. You should have a STEM or another relevant bachelor's degree.

## Applicant Information

- **Delivery Method:** On-Campus, Online, Hybrid
- **Entrance Exam:** None
- **Interview Required:** None

## Application Deadlines

Please visit The Graduate School Application Deadlines (<https://grad.ncsu.edu/admissions/deadlines/>) page for more information.

### Plan Requirements

Code	Title	Hours	Counts towards
<b>Leadership &amp; Communication Course</b>		3	
Select one of the following courses:			
EM/EGR 501	Engineering Leadership and Strategic Change		
COM 530	Interpersonal Communication in Science and Technology Organizations		

COM 527 Seminar in Organizational Conflict Management

COM 556 Seminar In Organizational Communication

### Financial Competency Course 3

Select one of the following courses:

ISE 510 Applied Engineering Economy

EGR 505 Managerial Finance for Engineers

CE 567 Risk and Financial Management in Construction

### Project Management & Coordination Course 3

Select one of the following courses:

EM 530 Project Management

CE 561 Construction Project Management

EGR 590 Special Topics in Engineering (Engineering Project Management)

BUS 554 Project Management

### Student Choice 3

Complete three (3) credit hours from the following courses:

ISE/OR 501 Introduction to Operations Research

ISE 535 Python Programming for Industrial & Systems Engineers

ISE 537 Statistical Models for Systems Analytics in Industrial Engineering

MBA 545 Decision Making under Uncertainty

ST 515 Experimental Statistics for Engineers I

ST 513 Statistics for Management and Social Sciences I

ST 517	Applied Statistical Methods I
TE 533	Lean Six Sigma Quality
EGR 517	Facilities Engineering Systems
EGR 518	Environmental Compliance for Facilities Engineers
DSC 405	Data Wrangling and Web Scraping
DSC 406	Exploratory Data Analysis for Big Data
DSC 410	Data Internship Preparation for Social Impact
DSC 412	Exploring Machine Learning
DSC 495	Special Topics in Data Science
DSC 595	Graduate Special Topics in Data Science
Any 500-level course from the Master of Engineering Management (MEM) curriculum approved in conjunction with the academic committee	

**Total Hours****12**

## Faculty

### Director

Brandon M. McConnell, *Interim Director*

### Full Professors

Sebastian Heese, *Owens Distinguished Professor of Supply Chain Management*John Baugh, *Professor*Joseph DeCarolis, *Professor*Jingyan Dong, *Professor*Yahya Fathi, *Professor*Ola Harrysson, *Edward P. Fitts Distinguished Professor*Jessica Jameson, *Professor*Edward Jaselskis, *E.I. Clancy Distinguished Professor*Russell King, *Foscue Distinguished Professor*Yuan-Shin Lee, *Professor*Maria Mayorga, *Professor*Rohan Shirwaiker, *James T. Ryan Professor*Daowen Zhang, *Professor*

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## Associate Professors

Karen Chen, *Associate Professor*Adolfo R. Escobedo, *Associate Professor*Michael Kay, *Associate Professor*Tim Kraft, *Associate Professor of Operations and Supply Chain Management*Osman Ozaltin, *Associate Professor of Personalized Medicine*Daniel Saloni, *Associate Professor*Jeffrey Stonebraker, *Associate Professor of Operations and Supply Chain Management*Hong Wan, *Associate Professor*Don Warsing, *Associate Professor of Operations and Supply Chain Management*

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## Assistant Professors

Xiaolei Fang, *Assistant Professor*Leila Hajibabai, *Assistant Professor*

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## Associate Research Professor

Christopher D. Rock, *Associate Research Professor*

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## Associate Teaching Professor

Meagan Kittle Autry, *Associate Teaching Professor*S. Sebnem Ahiska King, *Teaching Associate Professor*Fred Livingston, *Associate Teaching Professor*Kanton Reynolds, *Associate Teaching Professor*

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## Teaching Assistant Professor

Nur Ozaltin, *Teaching Assistant Professor*

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## **Professor of the Practice**

Doug Morton, *Professor of the Practice*

James Rispoli, *Professor of the Practice*

Michael Spano, *Professor of Practice*

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## **Emeritus Faculty**

Javad Taheri, *Associate Research Professor Emeritus*

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## **Associate and Adjunct Faculty**

Edwin Addison, *Adjunct Professor*

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## **Lecturers**

Steven DelGrosso, *Lecturer*

Dan Harris, *Lecturer*

Dan Kempton, *Adjunct Lecturer*

Robert Nunez, *Lecturer*