

Integrated Manufacturing Systems Engineering (MR)

Degree Requirements

Students may choose from the degree tracks below to complete coursework within a focus area.

Degrees earned will be distributed as: "Master of Integrated Manufacturing Systems Engineering" without focus area specifications.

Code	Title	Hours	Counts towards
Core Courses		27	
Suggested areas of concentration are Manufacturing, Logistics/ Supply Chain, Mechatronics, and Advanced Manufacturing, but other concentrations are possible, subject to program approval. Students are pre-approved to take 500 and 700 level courses in College of Engineering (including Computer Science), Math, Statistics, TE, MBA, and BUS.			
Project Course		6	
IMS 675	Manufacturing Systems Engineering Project		
Total Hours		33	

Focus Area Categories

Manufacturing

Code	Title	Hours	Counts towards
Select one course from each area below:			
Area 1			
CSC 510	Software Engineering	3	
ISE 562	Simulation Modeling	3	
ISE 519	Database Applications in Industrial and Systems Engineering	3	
Area 2			
ISE 510	Applied Engineering Economy	3	
MIE 501	Strategic Management Foundations	3	

Area 3		
ISE 707	Real-Time Control of Automated Manufacturing	3
ISE 515	Manufacturing Process Engineering	3
ISE 716	Automated Systems Engineering	3

Area 4		
ISE 552	Design and Control of Production and Service Systems	3
ISE 723	Production Planning, Scheduling and Inventory Control	3

Area 5		
TE 533	Lean Six Sigma Quality	3
EGR 590	Special Topics in Engineering	1-6

Logistics / Supply Chain

Code	Title	Hours	Counts towards
Select one course from each area below:			
Area 1			
CSC 510	Software Engineering	3	
ISE 562	Simulation Modeling	3	
ISE 519	Database Applications in Industrial and Systems Engineering	3	
Area 2			
ISE 510	Applied Engineering Economy	3	
MIE 501	Strategic Management Foundations	3	
Area 3			
MBA 541	Supply Management	3	
MBA 542	Supply Chain Logistics	3	
Area 4			
ISE 552	Design and Control of Production and Service Systems	3	

ISE 723	Production Planning, Scheduling and Inventory Control	3
Area 5		
MBA 549	Supply Chain Management Practicum	3
ISE 754	Logistics Engineering	3

Mechatronics

Code	Title	Hours	Counts towards
Select one course from each area below:			
Area 1			
ECE 556	Mechatronics	3	
MAE 536	Micro/Nano Electromechanical Systems	3	
Area 2			
MAE 531	Engineering Design Optimization	3	
MAE/ECE 535	Design of Electromechanical Systems	3	
Area 3			
ECE 511	Analog Electronics	3	
ECE 555	Autonomous Robot Systems	3	
Area 4			
CSC/ECE 517	Object-Oriented Design and Development	3	
ECE 561	Embedded System Analysis and Optimization	3	
ISE 519	Database Applications in Industrial and Systems Engineering	3	
Area 5			
ECE 516	System Control Engineering	3	
ISE 707	Real-Time Control of Automated Manufacturing	3	
ISE 716	Automated Systems Engineering	3	

Advanced Manufacturing

Code	Title	Hours	Counts towards
Select one course from each area below:			
Area 1			
ISE 589	Special Topics In Industrial Engineering	1-6	
Area 2			
ISE 510	Applied Engineering Economy	3	
MIE 501	Strategic Management Foundations	3	
Area 3			
MAE 545	Metrology For Precision Manufacturing	3	
MSE 500	Modern Concepts in Materials Science	3	
Area 4			
ECE 555	Autonomous Robot Systems	3	
ISE 589	Special Topics In Industrial Engineering	1-6	
MAE 535	Design of Electromechanical Systems	3	
Area 5			
ISE 589	Special Topics In Industrial Engineering	1-6	
MAE 531	Engineering Design Optimization	3	

Full Professors

Roger L. Barker

Michael D. Boyette

Marianne Bradford

Gregory D. Buckner

Yuang Sung Ai Chen

Mo-Yuen Chow

Timothy Gladstone Clapp

Elizabeth Carol Dickey

Yahya Fathi

Tushar K. Ghosh

Robert B. Handfield
 Ola Lars Anders Harrysson
 Thom Joel Hodgson
 Julie Simmons Ivy
 Warren J. Jasper
 Jeffrey Allen Joines
 Russell E. King
 James Woodrow Leach
 Yuan-Shin Lee
 Trevor J. Little
 Ning Lu
 Louis A. Martin
 Michael A. Rappa
 William John Rasdorf
 Jon Paul Rust
 Abdel-fattah Mohamed Seyam

Associate Professors

Jacob James Adams
 Dennis R. Bahler
 Pamela Banks-Lee
 Kristin Anne Barletta
 Ramon R. Collazo
 Jingyan Dong
 George Lawrence Hodge
 Hsiao-Ying Shadow Huang
 Michael G. Kay
 Karlyn Mitchell
 Daniel Erique Saloni
 Donald P. Warsing

Assistant Professor

Timothy Joseph Horn

Practice/Research/Teaching Professors

Marianne Bradford
 Semra Sebnem Ahiska King
 Billy L. Edge
 Steven D. Jackson
 David Lee Lubkeman
 Brandon Mark McConnell
 Henry Lee Nuttle
 Tania Milkova Paskova
 Claude Lewis Reynolds Jr.
 Javad Taheri

Emeritus Faculty

Roy E. Carawan
 Stephen N. Chapman
 Charles Thomas Culbreth Jr.
 Perry L. Grady
 Thom Joel Hodgson
 Thomas Johnson
 Stephen Dean Roberts
 Ezat Sanii
 William A. Smith Jr.
 James Reed Wilson
 Richard Allen Wysk
 Robert E. Young
 Carl Frank Zorowski

Adjunct Faculty

Brian Denton
 Mihail Devetsikiotis
 Tania Milkova Paskova
 Amy Diane Wilson