

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
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
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
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
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
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

Lecturers

Subramanian Pazhani

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