

# MINOR IN MANUFACTURING

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The manufacturing minor is for mechanical engineering students who seek a career in manufacturing. Students will learn about design for manufacturing, manufacturing processes and robotics systems. This minor will prepare students to solve manufacturing problems and improve current manufacturing processes. Students will be able to apply appropriate theories and methods to analyze and design manufacturing technologies and systems within realistic constraints (e.g., economic, manufacturability, sustainability, environmental) and communicate effectively about manufacturing engineering problem solutions, technologies and system designs.

Code	Title	Credits
<b>Required Courses</b>		
MER 250	Computer Aided Design	3
MER 340	Manufacturing/Machine Component Design	3
MER 490	Engineering Professional Experience	0-1
<b>Select One of the Following Tracks</b>		
<b>1. Mechatronics/Robotics</b>		
Required Courses		
MER 475	Mechatronics	3
IER 370	Industrial Robotics (MER 375)	3
Select one of the following courses		1-3
IER 220	Production Systems (MER 225)	
IER 230	Lean Systems Engineering (MER 235)	
IER 240	Physical Human Factors and the Workplace (MER 245)	
IER 360	Operations Planning and Control	
IER 375	Statistical Process Control	
<b>2. Production and Process Improvement</b>		
Take three of the following courses		7-9
IER 220	Production Systems (MER 225)	
IER 230	Lean Systems Engineering (MER 235)	
IER 240	Physical Human Factors and the Workplace (MER 245)	
IER 360	Operations Planning and Control	
IER 370	Industrial Robotics (MER 375)	
IER 375	Statistical Process Control	
<b>3. Six Sigma</b>		
Take the following two courses		
IER 492	Six Sigma - Black Belt Project Exp I	3
IER 497	Six Sigma - Black Belt Project Experience II	3
Take one of the following courses		1-3
IER 220	Production Systems (MER 225)	
IER 230	Lean Systems Engineering (MER 235)	
IER 240	Physical Human Factors and the Workplace (MER 245)	

IER 360	Operations Planning and Control
IER 375	Statistical Process Control