

# INDUSTRIAL AUTOMATION AND ROBOTICS CERTIFICATE

Degree: Certificate

Major: Industrial Automation and Robotics

Code	Title	Hours
<b>Foundational Courses</b>		
Select two of the following:		6
ELEN 2320	Fund Instrumentation & Control	
MEEN 3300	Design of Mechanism	
INEN 4396	Automated System Engineering	
CHEN 4331	Process Control I	
<b>Elective Courses</b>		
Select two courses from one of the disciplines below <sup>1</sup>		6
<b>Total Hours</b>		<b>12</b>

<sup>1</sup> Approved upper-division special topics related to automation and robotics can be used as electives in this certificate.

## Disciplines

### CAD/CAM/CIMS

Code	Title	Hours
INEN 4345	Computer Integrated Manufacturing	3
CVEN 2370	Intro to CAD and Surveying	3
CHEN 4332	Process Control II	3
MEEN 3350	Computer-Aided Engineering	3

### Robotics

Code	Title	Hours
ENGR 4301	Special Topics	3
or INEN 5358	Intro Robotics	
ELEN 2320	Fund Instrumentation & Control	3

### Instrumentation and Control

Code	Title	Hours
ELEN 4317	PLC Programming	3
ELEN 4336	Instrumentation & Automation Systems	3
ELEN 2320	Fund Instrumentation & Control	3

### Automation

Code	Title	Hours
MEEN 4313	Thermal Systems Design	3
CVEN 5311	Advanced Structural Dynamics	3
CMGT 2420	Construction Graphics Communication	4
CMGT 4310	Construction Planning and Scheduling	3
CMGT 4420	Construction Cost Estimating and Analysis	4