INTERNET OF THINGS MINOR

The Internet of Things minor (MIOT) provides students with familiarity and experience developing systems for the Internet of Things (IoT) applications. IoT connects things in the physical world to the computer world using sensors and actuators controlled by computer nodes on the edge of the computer network. The edge nodes process sensor information, communicate to other edge nodes and gateway computers and communicate over internet protocols to cloud servers. IoT systems with knowledge of physical state can monitor, aggregate data, perform analytics and machine learning, and control actuators in complex and empowering ways. Students in the IoT minor will explore and develop systems using computer programming and physical edge modules. The developed systems span nodes of embedded processors connected to sensors and actuators, communication between nodes and the cloud, and cloud servers for storage and analytics.

Course	Title	Credits
One Computer Programming Course		**4**
Select one of the following courses:		
COMP1000	COMPUTER SCIENCE I	4
ELEC3150	OBJECT ORIENTED PROGRAMMING FOR ENGINEERS	4
Two Core Internet of Things Courses		**8**
ELEC3025	INTERNET OF THINGS	4
ELEC3650	EMBEDDED SENSOR NETWORK	4
Two Electives Courses		**7-8**
Select two courses from the following		
ELEC3550	COMPUTER NETWORKS FOR ENGINEERS	4
ELEC4025	HARDWARE SECURITY	3
ELEC4300	ENGINEERING COMMUNICATION SYSTEMS	4
COMM4305	WEB ANALYTICS & MEDIA RESEARCH	4
COMP2500	SECURITY PRINCIPLES	4
COMP2650	DATABASES	4
COMP4650	WEB DEVELOPMENT	4
BMED4800	MEDICAL INFORMATICS & TELEMEDICINE	4
MATH4050	MACHINE LEARNING	4
MATH4100	INDUSTRIAL PROBLEMS IN APPLIED MATHEMATICS	4
Total Credits		**19-20**