Certificate of Undergraduate Study (CUGS)
The Internet of Things

Program Information

The Certificate of Undergraduate Study (CUGS) in The Internet of Things is designed to offer students the opportunity of a specialized study to provide students with experience in key courses of this discipline at the undergraduate level.

Certificate of Undergraduate Study in The Internet of Things 15 s.h.

While this CUGS available to all majors it is targeted towards technical majors/minors and may require additional coursework prerequisites before being able to be completed.

General Knowledge (take one of the following)	Prerequisites	S/H.
CS 06440 Cloud Computing and the Internet of Things	CST 09210 Introduction to NW / Data Comm CS 04222 Data Structures and Algorithms	3
ECE 09475 Introduction to IoT		3
Lower Stack (take one of the following)		
CS 06420 Embedded Systems Programming	CS 04390 Operating Systems CS 06310 Principles of Digital Computers ECE 09241 Introduction to Digital Systems	3
ECE 09342 Introduction to Embedded Systems	ECE 09243 Computer Architecture ECE 09311 Electronics I	3
Upper Stack (take the following course)		
CS 06447 / ECE 09476 Introduction to IoT Upper Stack	CS 06440 Cloud Computing and the Internet of Things *or* ECE 09475 Introduction to IoT	3
Elective Coursework (take any two of the following)		
CS 02421 Big Data Tools and Techniques		3
CS 04430 Database Systems: Theory and Programming		3
CS 04440 Data Warehousing		3
CS 06415 Wireless Networks, Protocols and Apps *or* ECE 09432 Wireless Communications		3
CS 06417 Principles of Network Security		3
CS 07480 Introduction to Data Mining		3
ECE 09455 Machine Learning		3
ECE 09495 Emerging Topics in Computations Intelligence, Machine Learning, and Data Mining		3