Master of Science in Sensor Science and Technology: Non-Thesis option

Code	Title	Credit Hours
Required Courses:		**6**
SENS 545	Sensor Science and Technology	3
*SENS 546	Project in Sensor Science and Technology	3
Select a minimum of 12 credits from the following courses		**12**
CHEM 503	Survey of Analytical Methods	3
CHEM 472	Environmental Chemistry	3
CHEM 456	Computational Biochemistry and Drug Design	3
CHEM 538	Physical Biochemistry	3
FDSN 524	Foundation of Food Science and Technology	3
FDSN 501	Nutrition, Metabolism and Health	3
CS 584	Machine Learning	3
BME 525	Intro to Medical Devices, BioMEMS and Microfluidics	3
ECE 430	Fundamentals of Semiconductor Devices	3
Select one focus with a minimum of 9 credits from the following electives		**9**
	Focus 1: Sensing Modality (choose three courses)	
BIOL 504	Biochemistry	3
CHE 514	Process Analytical Technology	3
CHEM 509	Physical Methods of Characterization	3
CHEM 510	Electronics and Interfacing	3
CHEM 548	Electrochemical Methods	3
FDSN 505	Food Microbiology	3
FDSN 507	Food Analysis	3
	Focus 2: Sensor Materials (choose three courses)	
CHE 580	Biomaterials	3
CHEM 455	Advanced Organic Chemistry	3
CHEM 521	Structural Inorganic and Material Chemistry	3
CHEM 542	Polymer Characterization and Analysis	3
ECE 571	Nanodevices and Technology	3
MMAE 554	Elec. Mag. Optical Prop of Mtrl	3
	Focus 3: Smart Sensor Device (choose three courses)	
CS 577	Deep Learning	3
ECE 425	Analysis and Design of Integrated Circuits	3
ECE 571	Nanodevices and Technology	3
ITMD 513	Open-Source Programing	3
ITMT 593	Introduction to Smart Technologies/Embedded Systems	3

Additional requirements   **5**

*Select a minimum of 3 credit hours from the Program Electives		**3**
IPMM 500	Context/Introduction and Protecting IP	3
INTM 511	Industrial Leadership	3
SCI 511	Project Management	3
FDSN 420	US Food Safety Regulation Systems	3
Free electives		**2**

Minimum degree credits required: <u>**32**</u>

* For thesis option, SENS 546 and Program Electives can be replaced by BME 591, CHEM 591, CS 591, ECE 591, FDSN 591, or ITM 591.