

Sensors, Instrumentation, and Micro/Nanotechnology

Upper Level Engineering Courses (ULEs)

510.316	Biomaterials I (3)
520.216	Introduction to VLSI (3) **
520.345	Electrical and Computer Engineering Laboratory (3)
520.349	Microprocessor Laboratory (3)
520.353	Control Systems (3)
520.372	Programmable Device Laboratory (3)
520.401	Basic Communication (3)
520.407	Introduction to the Physics of Electronic Devices (3)
520.410	Fiber Optics and Devices (3)
520.413	Introduction to Photonics (3)
520.424	FPGA Synthesis Laboratory (3)
520.425	FPGA Projects Laboratory (3)
520.432	Medical Imaging Systems (3)
520.435	Digital Signal Processing (4)
520.447	Introduction to Information Theory and Coding (3)
520.450	Advanced Microprocessor Laboratory (3)
520.454	Control Systems Design (3)
520.465	Digital Communications (3)
520.484	Optoelectronics Lab (3)
520.491	CAD of Digital VLSI Systems (3)
520.492	Mixed-Signal VLSI Systems (3)
520.493	Analog Integrated Circuits (3)
520.496/7	VLSI Design and Prototyping Workshop (3)
530.420	Robot Actuators and Sensors (3)

530.421	Mechatronics (3)
530.487	Introduction to Microelectromechanical Systems (MEMS) (3)
530.646	Introduction to Robotics (3)
540.440	Micro and Nanotechnology (3)
580.425	Ionic Channels in Excitable Membranes (3)
580.440	Cellular and Tissue Engineering (3)
580.451/2	Cellular and Tissue Engineering Laboratory (2)
580.470	Biomedical Instrumentation I: Molecular and Cellular (3)
580.471	Principles of the Design of Biomedical Instrumentation II: Physiological and Clinical (4)
580.472	Medical Imaging Systems (3)
580.475	Quantummechanical Basics of Nuclear Magnetic Resonance (3)
580.495	Microfabrication Laboratory (4)
580.496	Micro/Nanoscience and Biotechnology (3)
580.571	Honors Instrumentation (2)
580.610	Computational Functional Genomics (2)
580.616	Introduction to Linear Dynamical Systems (3)
580.672	Biosensing and BioMEMS (3)
600.445	Computer-Integrated Surgery I (4)
600.446	Computer-Integrated Surgery II (3)

Other Focus Area Courses (non-ULE)

520.213	Circuits (4)
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520.214	Signals and Systems (4)
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