Courses by Area of Specialization

Course #	Title	Area of Specialization
681	Seminar	All Areas
684	Professional Internship	All Areas
685	Directed Studies	All Areas
689	Special Topics	All Areas
691	Research	All Areas
607	Advanced Analog Circuit Design Techniques	Analog & Mixed Signals
610	Data Converters	Analog & Mixed Signals
620	Network Theory	Analog & Mixed Signals
622	Active Network Synthesis	Analog & Mixed Signals
625	Millimeter-Wave Integrated Circuits	Analog & Mixed Signals
650	High Frequency GaAs/SiGe Analog IC Design	Analog & Mixed Signals
665	Integrated CMOS RF Circuits and Systems	Analog & Mixed Signals
698	Analog To Digital Converters	Analog & Mixed Signals
720	High-Speed Links and Circuits and Systems	Analog & Mixed Signals
617	Advanced Signal Processing for Medical Imaging	Biomedical Imaging & Genomic Signal Processing
634	Morphological Methods in Image and Signal Processing	Biomedical Imaging & Genomic Signal Processing
648	Principles of Magnetic Resonance Imaging	Biomedical Imaging & Genomic Signal Processing
660	BioMems and Lab-on-a-Chip	Biomedical Imaging & Genomic Signal Processing
669	Engineering Applications in Genomics	Biomedical Imaging & Genomic Signal Processing
760	Introduction to Probabilistic Graphical Models	Biomedical Imaging & Genomic Signal Processing
761	Biosensors lab	Biomedical Imaging & Genomic Signal Processing
762	Ultrasound Imaging	Biomedical Imaging & Genomic Signal Processing
763	Magnetic Resonance Engineering	Biomedical Imaging & Genomic Signal Processing
602	Computer Communication and Networking	Computer Engineering & Systems
618	Resilient Computer Systems	Computer Engineering & Systems
619	Internet Protocols and Modeling	Computer Engineering & Systems
621	Mobile Wireless Networks	Computer Engineering & Systems
623	Parallel Geometric Computing	Computer Engineering & Systems
624	IC Design Tools	Computer Engineering & Systems
627	Multimedia Systems and Networks	Computer Engineering & Systems

651	Microprogrammed Controls of Digital Systems	Computer Engineering & Systems
652	Switching Theory	Computer Engineering & Systems
653	Compute Arithmetic Unit Design	Computer Engineering & Systems
654	Very Large Scale Integrated Systems Design	Computer Engineering & Systems
659	Parallel/Distributed Numerical Algorithms	Computer Engineering & Systems
670	Fiber Optic Networks	Computer Engineering & Systems
676	Advanced Computer Architecture	Computer Engineering & Systems
680	Testing and Diagnosis of Digital Systems	Computer Engineering & Systems
687	VLSI Physical Design Automation	Computer Engineering & Systems
699	Advances in VLSI Logic Synthesis	Computer Engineering & Systems
750	Design and Analysis of Communication Networks	Computer Engineering & Systems
751	Computational Methods for Integrated System Design	Computer Engineering & Systems
752	Advances in VLSI Circuit Design	Computer Engineering & Systems
753	Theory and Applications of Network Coding	Computer Engineernig & Systems
754	Optimization for Electrical and Computer Engineering Applications	Computer Engineering & Systems
755	Stochastic Systems	Computer Engineering & Systems
605	Linear Control Systems	Control Systems
606	Nonlinear Control Systems	Control Systems
608	Modern Control	Control Systems
609	Adaptive Control	Control Systems
628	Linear System Theory	Control Systems
633	Optimum Control Systems	Control Systems
611	General Theory of Electromechanical Motion Devices	Electric Power and Power Electronics
612	Computer Aided Design of Electromechanical Motion Devices	Electric Power and Power Electronics
613	Rectifier and Inverter Circuits	Electric Power and Power Electronics
614	Power Systems State Estimation	Electric Power and Power Electronics
615	Methods of Electric Power Systems Analysis	Electric Power and Power Electronics
616	Power System Electromagnetic Transients	Electric Power and Power Electronics
630	Analysis of Power Electronic Systems	Electric Power and Power Electronics
632	Motor Drive Dynamics	Electric Power and Power Electronics
643	Electric Power System Reliability	Electric Power and Power Electronics
666	Power System Faults and Protective Relaying	Electric Power and Power Electronics
667	Power System Stability	Electric Power and Power Electronics
668	High Voltage Direct Current (HVDC) Transmission	Electric Power and Power Electronics

677	Control of Electric Power Systems	Electric Power and Power Electronics
679	Computer Relays for Electric Power Systems	Electric Power and Power Electronics
686	Electric and Hybrid Vehicles	Electric Power and Power Electronics
710	Switching Power Supplies	Electric Power and Power Electronics
711	Sustainable Energy and Vehicle Engineering	Electric Power and Power Electronics
712	Power Electronics for Photovoltaci Energy Systems	Electric Power and Power Electronics
715	Physical and Economical Operations of Sustainable Energy Systems	Electric Power and Power Electronics
626	Antenna Theory and Technique	Electromagnetics & Microwaves
635	Electromagnetic Theory	Electromagnetics & Microwaves
636	Phase Arrays	Electromagnetics & Microwaves
637	Numerical Methods in Electromagnetics	Electromagnetics & Microwaves
638	Antennas and Propagation	Electromagnetics & Microwaves
639	Microwave Circuits	Electromagnetics & Microwaves
641	Microwave Solid State Integrated Circuits	Electromagnetics & Microwaves
730	CMOS RFIC Engineering	Electromagnetics & Microwaves
735	Electromagnetic Field Theory	Electromagnetics & Microwaves
631	Fiber Optic Devices	Device Science and Nanotechnology
640	Thin Film Science and Technology	Device Science and Nanotechnology
656	Physical Electronics	Device Science and Nanotechnology
657	Quantum Electronics	Device Science and Nanotechnology
658	Low-Noise Electronic Design	Device Science and Nanotechnology
664	Nanotechnology Fabrication	Device Science and Nanotechnology
671	Solid State Devices	Device Science and Nanotechnology
672	Semiconductor Lasers and Photodetectors	Device Science and Nanotechnology
777	Photonics: Fiber and Integrated Optics	Device Science and Nanotechnology
673	Fundamentals of Microelectronics	Information Science and Systems
674	Introduction to Quantum Computing	Information Science and Systems
675	Integrated Optoelectronics	Information Science and Systems
678	Statistical Optics	Information Science and Systems
688	IC MEMS and Sensor Fabrication	Information Science and Systems
694	Nanobiotechnology	Information Science and Systems
696	Erbium-Dipped Amplifier:Technology and Applications	Information Science and Systems
770	Organic Semiconductor	Information Science and Systems
771	Fluctuations & Noise Electronics	Information Science and Systems

772	Introduction to Microelectromechanical Devices and Systems	Information Science and Systems
773	Introduction to Nanophotonics	Information Science and Systems
601	Linear Network Analysis	Information Science and Systems
603	Time Frequency Analysis and Multirate Signal Processing	Information Science and Systems
604	Channel Coding for Communications Systems	Information Science and Systems
629	Convex Optimization for Electrical Engineering	Information Science and Systems
642	Digital Image Processing	Information Science and Systems
644	Discrete-Time Systems	Information Science and Systems
645	Pattern Recognition by Neural Networks	Information Science and Systems
646	Statistical Communication Theory	Information Science and Systems
647	Information Theory	Information Science and Systems
649	Pattern Recognition	Information Science and Systems
655	Advanced Topic in Channel Coding	Information Science and Systems
661	Modulation Theory	Information Science and Systems
662	Estimation and Detection Theory	Information Science and Systems
663	Data Compression with Applications to Speech & Video	Information Science and Systems
682	Spread Spectrum and CDMA	Information Science and Systems
683	Wireless Communication Systems	Information Science and Systems