MSECE Coursework Requirements

	Course Number	Course Title	Units
Required Courses	ENGR 844	Embedded Systems	3
	ENGR 845	Neural-Machine Interfaces	3
	ENGR 852	Advanced Digital Design	3
	ENGR 850	Digital Design Verification	3
Option A	ENGR 897	Research	3
	ENGR 898	Master's Thesis	3
Option B	ENGR 895	Applied Research Project	3
Electives	Engineering[1,3] and Non-Engineering[2]		12-15
Minimum Total			**30**
1. Engineering Electives	ENGR 415	Mechatronics & Lab	4
	ENGR 445	Analog IC Design	4
	ENGR 446/447	Control Systems & Lab	4
	ENGR 449	Communication Systems	3
	ENGR 451	Digital Signal Processing	4
	ENGR 453	Digital Integrated Circuit Design	4
	ENGR 454	Application Specific Integrated Circuit Design	4
	ENGR 456	Computer Systems	3
	ENGR 476	Computer Communications and Networks	3
	ENGR 478	Design with Microprocessors	4
	ENGR 491	Real-Time Digital Signal Processing	4
	ENGR 492	Hardware for Machine Learning	3
	ENGR 498	Advanced Design with Microcontrollers	4
	ENGR 800	Research Methodology (formally Engineering Communication)	3
	ENGR 801	Engineering Management	3
	ENGR 848	Digital VLSI Design	3
	ENGR 849	Advanced Analog IC Design	3
	ENGR 851	Advanced Microprocessor Architectures	3
	ENGR 853	Advanced Topics in Computer Communication and Networks	3
	ENGR 854	Wireless Data Communications Standards	3
	ENGR 855	Advanced Wireless Communication Technologies	3
	ENGR 856	Nanoscale Circuits and Systems	3
	ENGR 868	Advance Control System	3
	ENGR 869	Robotics	3
	ENGR 890	Graduate Seminar	3
	ENGR 897	Research	3
	ENGR 899	Independent Study	3

2.Non-Engineering Electives	Up to 6 units of 15 units of electives can be non-engineering. These units can be selected from Mathematics, Physics, Chemistry, Computer Science, Business, Accounting, or Information Systems with course numbers 400 or higher. Course outside of these areas will need approval of Engineering graduate program coordinator, including those taken at other Engineering schools.
3.Undergraduate Course Restrictions	a) Elective courses must not duplicate subjects used in satisfying the student's undergraduate degree requirement. b) The study plan can contain up to 9 units of courses with course number between 400 and 700.
4.Minimum admission Requirements	B.S. in Electrical or Computer Engineering from an ABET accredited program, or a B.S. in other engineering or science programs and the equivalent of the following courses: MATH: MATH 226, 227, 228, 245 PHYS: PHYS 230/232 ENGR: ENGR 205, 206, 213, 301, 305, 353, 356/357, 378, 478