

**Course Requirements and Registration Priorities**  
**School of Engineering and Digital Sciences, Spring 2020**

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
<b>SEDS</b>											
<b>Chemical Engineering/Mechanical Engineering</b>											
1	MBME 600	Research Seminar	3	6				Biomedical Engineering	SEDS		
2	MBME 607	Advanced Tissue Engineering	3	6				Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering	SEDS	GSB, GSE, GSPP, SMG, SSH, SoM	
3	MBME 700	Strategies for Controlled Topical Delivery of Drugs	3	6				Biomedical Engineering	SEDS		
4	MBME 705	Infectious Diseases and Antimicrobial Strategies	3	6				Biomedical Engineering	SEDS		
5	MBME 708	Biomedical Imaging	3	6				Biomedical Engineering	SEDS		
<b>Chemical and Materials Engineering</b>											
6	CHME 202	Fluid Mechanics	3	6				2 year UG SEDS Chemical Engineering, 2 year UG SEDS Chemical and Materials Engineering	SEDS		
7	CHME 203	Organic and Polymer Chemistry	3	6	CHME 222 Inorganic and Analytical Chemistry (5039) (D and above)			2 year UG SEDS Chemical Engineering, 2 year UG SEDS Chemical and Materials Engineering	SEDS		
8	CHME 454	Transport Phenomena and Operations	3	6				4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering	SEDS		
9	DCHME 700	Thesis Research	0	0				Science, Engineering and Technology			
10	DCHME 701	Current Research Literature	4	8				Science, Engineering and Technology			
11	DCHME 715	Air Quality, Toxicity and Health	4	8				Science, Engineering and Technology			
12	DCHME 751	Advanced Safety, Reliability and Risk Engineering in Process Industries	4	8				Science, Engineering and Technology			
13	DCHME 752	Polymer Melt Fluid Mechanics and Processing	4	8				Science, Engineering and Technology			
14	DCHME 763	Advanced Heat and Mass Transfer	4	8				Science, Engineering and Technology			

15	ECHE 323	Computational methods in Chemical Engineering-I	3	6	ECHE 333 Separation Processes-I (1271) (D and above)	ECHE 481 Chemical Reaction Engineering (1985) (D and above)		Registration by School Admin only			
16	ECHE 383	Separation Processes II	3	6	ECHE 126 Introduction to Chemical Engineering (33) (D and above) AND ECHE 225 Heat and Mass Transfer Operations (541) (D and above)			Registration by School Admin only			
17	ECHE 386	Chemical Plant Design and Optimization	3	6				Registration by School Admin only			
18	ECHE 387	Chemical Reaction Engineering 2	3	6				Registration by School Admin only			
19	ECHE 388	Process Dynamics and Control	3	6				Registration by School Admin only			
20	ECHE 420	Polymer Processing and Rheology	3	6				4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering	SEDS		
21	ECHE 421	Tissue Engineering	3	6				4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering	SEDS	SMG, SSH, SoM	
22	ECHE 479	Capstone Project II	9	18	ECHE 418 Capstone project 1 (1278) (D and above)			Registration by School Admin only			
23	ECHE 485	Introduction to Biochemical Engineering	3	6				4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering	SEDS		
24	MCHME 600	Research Seminar	3	6				Chemical Engineering, Chemical and Materials Engineering	SEDS		
25	MCHME 602	MSc Thesis II	12	24				Chemical Engineering, Chemical and Materials Engineering	SEDS		
26	MCHME 606	Advanced Heat and Mass Transfer	3	6				Chemical Engineering, Chemical and Materials Engineering	SEDS		
27	MCHME 701	Advanced Chemical Thermodynamics	3	6				Chemical Engineering, Chemical and Materials Engineering	SEDS		
28	MCHME 704	Advanced Safety, Reliability and Risk Engineering in Process Industries	3	6				Chemical Engineering, Chemical and Materials Engineering	SEDS		

29	MCHME 707	Polymer Melt Fluid Mechanics and Processing	3	6				Chemical Engineering, Chemical and Materials Engineering	SEDS		
30	MCHME 709	Food Engineering and Processing	3	6				Chemical Engineering, Chemical and Materials Engineering	SEDS		
31	MCHME 715	Air Quality, Toxicity and Health	3	6				Chemical Engineering, Chemical and Materials Engineering	SEDS		
<b>Civil Engineering</b>											
32	CEE 202	Environmental Engineering	3	6	CEE 201 Environmental Chemistry (4999) (D and above)			2 year UG SEDS Civil Engineering, 2 year UG SEDS Civil and Environmental Engineering	SEDS		
33	CEE 203	Structural Analysis	3	6	MAE 200 Structural Mechanics I (5010) (D and above) OR CEE 200 Structural Mechanics I (5005) (D and above)			2 year UG SEDS Civil Engineering, 2 year UG SEDS Civil and Environmental Engineering	SEDS		
34	DCEE 700	Thesis Research	0	0				Science, Engineering and Technology			
35	DCEE 701	Current Research Literature	4	8				Science, Engineering and Technology			
36	DCEE 759	Geotechnical Earthquake Engineering	4	8				Science, Engineering and Technology			
37	DCEE 762	Advanced Project Management	4	8				Science, Engineering and Technology			
38	DCEE 766	Advanced Pavement Design, Analysis, and Rehabilitation	4	8				Science, Engineering and Technology			
39	DCEE 767	Advanced Concrete Design	4	8				Science, Engineering and Technology			
40	DCEE 769	Sustainable Development	4	8				Science, Engineering and Technology			
41	ECE 306	Geotechnical Design	3	6	ECE 210 Soil Mechanics (862) (D and above)			Registration by School Admin only			
42	ECE 319	Structural Design - Steel	3	6				Registration by School Admin only			
43	ECE 320	Engineering Hydrology	3	6				Registration by School Admin only			
44	ECE 420	Modern Information Technology in Construction	3	6				3 year UG SEDS Civil Engineering, 3 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering	SEDS		

45	ECE 422	Prestressed Concrete Design	3	6				3 year UG SEDS Civil Engineering, 3 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering	SEDS		
46	ECE 427	Individual Research Projects in Civil Engineering (II)	3	6	ECE 481 Individual Research Projects in Civil Engineering (4484) (D and above)			3 year UG SEDS Civil Engineering, 3 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering	SEDS		
47	ECE 428	Introduction to Finite Element Methods	3	6				3 year UG SEDS Civil Engineering, 3 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering	SEDS		
48	ECE 472	Water and Wastewater Treatment Processes	3	6	ECE 218 Environmental Chemistry (3296) (D and above)			Registration by School Admin only			
49	ECE 473	Environmental Systems	3	6				3 year UG SEDS Civil Engineering, 3 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering	SEDS		
50	ECE 478	Capstone Project II	9	18	ECE 401 Capstone Project 1 (1270) (D and above)			Registration by School Admin only			
51	EMEM 510	Managerial Accounting	2	4				1 year Gr SEDS Engineering Management			
52	EMEM 511	Business Strategy	2	4				1 year Gr SEDS Engineering Management			
53	EMEM 513	Entrepreneurship	2	4				1 year Gr SEDS Engineering Management			
54	EMEM 514	Finance	2	4				1 year Gr SEDS Engineering Management			
55	EMEM 516	Management of Organizations	2	4				1 year Gr SEDS Engineering Management			
56	EMEM 517	Marketing	2	4				1 year Gr SEDS Engineering Management			
57	EMEM 527	Globalization and Engineering	3	6				Engineering Management			
58	EMEM 529	Capstone Project	8	16				Engineering Management			

59	EMEM 535	Managing Product and Service Development	3	6				Engineering Management			
60	EMEM 545	Business Communication	2	4				1 year Gr SEDS Engineering Management			
61	EMEM 548	Understanding and Predicting Consumer Behavior	2	4							
62	MCEE 600	Research Seminar	3	6				Civil Engineering, Civil and Environmental Engineering	SEDS		
63	MCEE 602	MSc Thesis II	12	24				Civil Engineering, Civil and Environmental Engineering	SEDS		
64	MCEE 606	Advanced Project Management	3	6				Civil Engineering, Civil and Environmental Engineering	SEDS		
65	MCEE 707	Geotechnical Earthquake Engineering	3	6				Civil Engineering, Civil and Environmental Engineering	SEDS		
66	MCEE 712	Advanced Pavement Design, Analysis, and Rehabilitation	3	6				Civil Engineering, Civil and Environmental Engineering	SEDS		
67	MCEE 713	Advanced Concrete Design	3	6				Civil Engineering, Civil and Environmental Engineering	SEDS		
68	MCEE 714	Advanced Wastewater Treatment	3	6				Civil Engineering, Civil and Environmental Engineering	SEDS		
69	MCEE 715	Sustainable Development	3	6				Civil Engineering, Civil and Environmental Engineering	SEDS		
70	MSC 600	Research methods and ethics	3	6				SEDS			
<b>Civil and Environmental Engineering</b>											
71	MAE 205	Material and Manufacturing I	3	6				2 year UG SEDS Mechanical Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	SEDS		
72	MAE 206	Engineering Dynamics I	3	6				2 year UG SEDS Mechanical Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	SEDS		
<b>Computer Science</b>											
73	CSCI 101	Introduction to Computational Sciences	3	6				SSH			
74	CSCI 111	Web Programming & Problem Solving	3	6			CSCI 100 Computation and Problem Solving (1078) (C- and above)	SSH			
75	CSCI 115	Programming Fundamentals	4	8			CSCI 151 Programming for Scientists and Engineers (192) (C- and above)	Biological Sciences, Chemistry	SSH		

76	CSCI 151	Programming for Scientists and Engineers	4	8			ROBT 102 Programming for robotics and physics (188) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above)	Computer Science	Mathematics, Physics, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
77	CSCI 152	Performance and Data Structures	4	8	CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 261 Object Oriented Programming with Java I (171) (C- and above) OR ROBT 102 Programming for robotics and physics (188) (C- and above)			Computer Science, Mathematics, Physics, Robotics and Mechatronics	SSH	SEDS, SMG, SoM	
78	CSCI 245	System Analysis and Design	3	6	CSCI 341 Database Systems (195) (C- and above)			Computer Science	SEDS	SMG, SSH, SoM	
79	CSCI 270	Algorithms	3	6	CSCI 152 Performance and Data Structures (489) (C- and above) AND MATH 251 Discrete Mathematics (85) (C- and above)			Computer Science	SEDS	SMG, SSH, SoM	
80	CSCI 272	Formal Languages	3	6	CSCI 152 Performance and Data Structures (489) (C and above) AND MATH 251 Discrete Mathematics (85) (C- and above)			Computer Science	SEDS	SMG, SSH, SoM	
81	CSCI 307	Research Methods	3	6				3 year UG SEDS Computer Science			
82	CSCI 330	Mobile Computing	3	6	CSCI 332 Operating Systems (490) (C- and above)			Computer Science	SEDS	SMG, SSH, SoM	
83	CSCI 332	Operating Systems	3	6	CSCI 231 Computer Systems and Organization (194) (C- and above)			Computer Science	SEDS	SMG, SSH, SoM	
84	CSCI 333	Computer Networks	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science	SEDS	SMG, SSH, SoM	

85	CSCI 399A	Internship II - A	1	2				Registration by School Admin only			
86	CSCI 409	Senior Project II	3	6	CSCI 408 Senior Project I (1481) (C- and above)			4 year UG SEDS Computer Science			
87	CSCI 447	Machine Learning: Theory and Practice	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above)			Computer Science	SEDS	SMG, SSH, SoM	
88	CSCI 462	Open Source Software	3	6	CSCI 361 Software Engineering (640) (C- and above)			Computer Science	SEDS	SMG, SSH, SoM	
89	CSCI 502	Hardware Software Co-Design	3	6	CSCI 501 Software Principles and Practice (2408) (C- and above)			Computer Science	SEDS		
90	CSCI 545	Big Data Analytics	3	6				Data Science	SEDS	GSB, GSE, GSPP, SMG, SSH, SoM	
91	CSCI 547	Algorithmic Trading	3	6				Computer Science	SEDS		
92	CSCI 581	Acquisition and Analysis of Biomedical Data	3	6				Computer Science	SEDS		
93	CSCI 591	Advanced Artificial Intelligence	3	6	CSCI 501 Software Principles and Practice (2408) (C- and above)			Computer Science	SEDS		
94	CSCI 700	Thesis Research	0	0				Science, Engineering and Technology			
95	CSCI 702	Advanced Hardware/Software Co-Design	4	8				Science, Engineering and Technology			
96	CSCI 722	Current Research Literature	4	8				Science, Engineering and Technology			
97	CSCI 745	Advanced Big Data Analytics	4	8				Science, Engineering and Technology			
98	CSCI 747	Advanced Algorithmic Trading	4	8				Science, Engineering and Technology			
99	CSCI 791	Advanced Artificial Reasoning and Problem solving	4	8				Science, Engineering and Technology			
100	DS 502	Probability and Statistics for Data Science	3	6				Data Science			
101	DS 504	Data Mining and Decision Support	3	6				Data Science	SEDS	GSB, GSE, GSPP, SMG, SSH, SoM	
102	DS 704	Advanced Data Mining and Decision Support	4	8				Science, Engineering and Technology			

**Electrical and Computer Engineering**

103	DELCE 700	Thesis Research	0	0				Science, Engineering and Technology			
104	DELCE 701	Current Research Literature	4	8				Science, Engineering and Technology			
105	DELCE 755	Advanced Electromagnetics	4	8				Science, Engineering and Technology			
106	DELCE 759	Advanced Pattern Recognition and Machine Learning	4	8				Science, Engineering and Technology			
107	DELCE 760	Advanced System Modelling and Control	4	8				Science, Engineering and Technology			
108	ELCE 201	Circuit Theory	3	6	ELCE 200 Introduction to Electrical Circuits (4991) (D and above)			2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Electronic Engineering	SEDS		
109	ELCE 204	Solid State Devices	3	6	ENG 103 Engineering Materials 2 (4818) (C- and above)			2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Electronic Engineering	SEDS		
110	MECE 600	Research Seminar	3	6				Electrical and Computer Engineering, Electrical and Electronic Engineering	SEDS		
111	MECE 602	Master Thesis II	12	24				Electrical and Computer Engineering, Electrical and Electronic Engineering	SEDS		
112	MECE 700	Industrial and Commercial Power System	3	6				Electrical and Computer Engineering, Electrical and Electronic Engineering	SEDS		
113	MECE 702	Advanced Power Electronics	3	6				Electrical and Computer Engineering, Electrical and Electronic Engineering	SEDS		
114	MECE 717	Pattern Recognition and Machine Learning	3	6				Electrical and Computer Engineering, Electrical and Electronic Engineering	SEDS		
115	MECE 719	Advanced Electromagnetics	3	6				Electrical and Computer Engineering, Electrical and Electronic Engineering	SEDS		
116	MECE 724	System Modelling and Control	3	6	MSC 602 Advanced Applied Mathematics (4499) (C- and above)			Electrical and Computer Engineering, Electrical and Electronic Engineering	SEDS		
<b>Electrical and Electronic Engineering</b>											
117	EEE 239	Communication systems	3	6				Registration by School Admin only			
118	EEE 343	Embedded Microcontrollers	3	6				Registration by School Admin only			
119	EEE 379	Power Systems Analysis	3	6				Registration by School Admin only			



120	EEE 381	Electrical Machines and Drives	3	6				Registration by School Admin only			
121	EEE 480	Capstone Project II	9	18				Registration by School Admin only			
122	EEE 484	Electric Power Generation	3	6				4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Electronic Engineering	SEDS		
123	EEE 485	Power System Operation and Control	3	6	EEE 379 Power Systems Analysis (1956) (D and above) OR EEE 452 Power Systems Protection (2652) (D and above)			4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Electronic Engineering	SEDS		
124	EEE 486	Photonics for Engineering	3	6	EEE 342 Electromagnetics (533) (D and above)			4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Electronic Engineering	SEDS		
125	EEE 488	Numerical Optimization Techniques and Computer Applications	3	6				4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Electronic Engineering	SEDS		
126	EEE 489	Analog Circuit Design	3	6				Registration by School Admin only			
127	EEE 495	Fundamentals of Biomedical Engineering and Biophysics	3	6				4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Electronic Engineering	SEDS		
<b>Mechanical Engineering</b>											
128	EME 300	Research Project	3	6				Registration by School Admin only			
129	EME 352	Computational Fluid Dynamics	3	6				Registration by School Admin only			
130	EME 357	Fluid Mechanics 2	3	6				Registration by School Admin only			
131	EME 377	Mechanical Systems Design	3	6	EME 361 Machine Design (1051) (D and above)			Registration by School Admin only			
132	EME 413	Computer Aided Geometric Design	3	6	EME 253 Computer Aided Engineering (1050) (C- and above)			Registration by School Admin only			
133	EME 414	Fire Engineering	3	6	BENG 226 Engineering Thermodynamics (1553) (D and above)			4 year UG SEDS Mechanical Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering	SEDS		
134	EME 415	Flight Mechanics	3	6				4 year UG SEDS Mechanical Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering	SEDS		

135	EME 476	Materials and Manufacturing II	3	6				Registration by School Admin only			
136	EME 477	Capstone Project II	9	18				Registration by School Admin only			
137	EME 489	Advanced Engineering Mathematics	3	6	BENG 228 Engineering Mathematics III (3154) (D and above)			4 year UG SEDS Mechanical Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering	SEDS		
<b>Mechanical and Aerospace Engineering</b>											
138	DMAE 700	Thesis Research	0	0				Science, Engineering and Technology			
139	DMAE 702	Current Research Literature	4	8				Science, Engineering and Technology			
140	DMAE 703	Numerical Techniques for Engineers	4	8	MATH 476 Numerical Methods for Partial Differential Equations (1829) (C- and above) OR MATH 451 Advanced Numerical Methods (2105) (C- and above) OR BENG 234 Numerical Methods (737) (C- and above) OR MATH 351 Numerical Methods with Applications (1166) (C- and above)			Science, Engineering and Technology			
141	DMAE 756	Design and Manufacturing with Environmental Concern	4	8				Science, Engineering and Technology			
142	DMAE 757	Design Optimization	4	8				Science, Engineering and Technology			
143	DMAE 769	Advanced Computational Fluid Dynamics (CFD) and Heat Transfer in Mechanical Engineering	4	8				Science, Engineering and Technology			
144	ENG 101	Programming for Engineers	3	6				SEDS, SMG			
145	ENG 102	Engineering Materials I	3	6				1 year UG SEDS Civil Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Mechanical Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering	Civil Engineering, Civil and Environmental Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS	

146	ENG 103	Engineering Materials 2	3	6				1 year UG SEDS Chemical Engineering, 1 year UG SEDS Chemical and Materials Engineering, 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SEDS Electrical and Electronic Engineering	Chemical Engineering, Chemical and Materials Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering	SEDS	
147	ENG 201	Applied Statistics	3	6	MATH 162 Calculus II (170) (C and above)			2 year UG SEDS Chemical Engineering, 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Electronic Engineering, 2 year UG SEDS Mechanical Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	2 year UG SEDS Civil Engineering, 2 year UG SEDS Civil and Environmental Engineering	SEDS	
148	ENG 202	Numerical Methods in Engineering	3	6	ENG 200 Engineering Mathematics III (Differential Equations & Linear Algebra) (5009) (D and above)			2 year UG SEDS Chemical Engineering, 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Electronic Engineering, 2 year UG SEDS Mechanical Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	2 year UG SEDS Civil Engineering, 2 year UG SEDS Civil and Environmental Engineering	SEDS	
149	MMAE 600	Research Seminar	3	6				Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		
150	MMAE 602	MSc Thesis II	12	24				Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		
151	MMAE 604	Advanced Computational Fluid Dynamics (CFD) and Heat Transfer in Mechanical Engineering	3	6				Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		
152	MMAE 700	Advanced Statistics and Probability	3	6				Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		
153	MMAE 701	Numerical Techniques for Engineers	3	6				Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		
154	MMAE 703	Advanced Engineering Design and Manufacturing	3	6				Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		

155	MMAE 704	Design and Manufacturing with Environmental Concern	3	6				Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		
156	MMAE 705	Design Optimization	3	6				Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		
157	MMAE 716	Digital Transformation Concepts	3	6				Engineering Management, Mechanical Engineering, Mechanical and Aerospace Engineering	SEDS		
<b>Other</b>											
158	TEST 001	TEST	3	6							
<b>Robotics and Mechatronics</b>											
159	ROBT 202	System Dynamics and Modeling	3	6	MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above))			Robotics and Mechatronics	SEDS		
160	ROBT 204	Electrical and Electronic Circuits II with Lab	4	8	ROBT 203 Electrical and Electronic Circuits I with Lab (62) (C- and above)			Robotics and Mechatronics	SEDS		
161	ROBT 206	Microcontrollers with Lab	4	8	CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR ROBT 102 Programming for robotics and physics (188) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above)			Computer Science, Robotics and Mechatronics	SEDS		
162	ROBT 304	Electromechanical Systems with lab	4	8	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above)			Robotics and Mechatronics	SEDS		
163	ROBT 310	Image Processing	3	6	MATH 162 Calculus II (170) (C- and above) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			Robotics and Mechatronics	SEDS		

164	ROBT 312	Robotics I: Kinematics and Dynamics	3	6	ROBT 201 Mechanics: Statics and Dynamics (475) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above)			Robotics and Mechatronics	SEDS		
165	ROBT 402	Robotic/Mechatronic System Design	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above) AND ROBT 206 Microcontrollers with Lab (476) (C- and above) AND ROBT 302 Mechanical Design II with Machining Laboratory (1170) (C- and above)			Robotics and Mechatronics	SEDS		
166	ROBT 407	Machine Learning with Applications	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above) AND CSCI 152 Performance and Data Structures (489) (C and above)			Robotics and Mechatronics	SEDS		
167	ROBT 491	Graduation Project	3	6				Robotics and Mechatronics	SEDS		
168	ROBT 502	Robot Perception & Vision	3	6	ROBT 501 Robot Manipulation and Mobility (2263) (C- and above)			Computer Science, Robotics	SEDS		
169	ROBT 700	Thesis Research	0	0				Science, Engineering and Technology			
170	ROBT 702	Advanced Robot Perception and Vision	4	8				Science, Engineering and Technology			
171	ROBT 722	Current Research Literature	4	8				Science, Engineering and Technology			
<b>School of Engineering</b>											
172	DENG 789	Doctoral Seminar I	3	6	DENG 785 PhD proposal oral defence (2604) (C- and above)			SEDS			
173	DENG 790	Doctoral Seminar II	3	6	DENG 789 Doctoral Seminar I (4598) (C- and above)			Science, Engineering and Technology			
174	DENG 791	Doctoral Seminar III	3	6	DENG 790 Doctoral Seminar II (4599) (C- and above)						

175	DENG 792	Doctoral Seminar IV	3	6	DENG 791 Doctoral Seminar III (4600) (C- and above)			Science, Engineering and Technology			
176	DENG 794	Dissertation Research	12	24	DENG 785 PhD proposal oral defence (2604) (C- and above)			Science, Engineering and Technology			
177	DENG 796	Thesis Completion	0	0				Science, Engineering and Technology			
178	DENG 797	Oral Defence of PhD Dissertation	0	0	DENG 785 PhD proposal oral defence (2604) (C- and above) AND DENG 789 Doctoral Seminar I (4598) (C- and above) AND DENG 790 Doctoral Seminar II (4599) (C- and above)			Science, Engineering and Technology			