

**Course Requirements and Registration Priorities
School of Engineering, Spring 2018**

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SEDS											
Chemical Engineering											
1	MCHE 601	Pipeline Engineering & Flow Assurance	3	6							
2	MCHE 602	Process Engineering and Simulation	3	6	MCHE 615 Advanced Unit Operations (3145) (D and above)						
3	MCHE 603	Crude Oil Processing	3	6							
4	MCHE 604	Natural Gas Processing	3	6							
5	MCHE 605	Petroleum Refining Water/Wastewater Use and Management	3	6							
Chemical and Materials Engineering											
6	CHME 421	Tissue Engineering	3	6							
7	ECHE 210	Foundations of Unit Operations	3	6							
8	ECHE 221	Engineering Fluid Mechanics	3	6							
9	ECHE 270	Transport Phenomena-I	3	6							
10	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)					
11	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)						
12	ECHE 386	Chemical Plant Design and Optimization	3	6							
13	ECHE 387	Chemical Reaction Engineering 2	3	6							
14	ECHE 388	Process Dynamics and Control	3	6							

15	ECHE 420	Polymer Processing and Rheology	3	6							
16	ECHE 478	Electrochemical Engineering and Corrosion Protection	3	6	ECHE 222 Chemistry I (731) (D and above)						
17	ECHE 479	Capstone Project II	9	18	ECHE 418 Capstone project 1 (1278) (D and above)						
18	ECHE 483	Chemistry II	3	6	ECHE 222 Chemistry I (731) (D and above)						
Civil Engineering											
19	MCE 609	Contaminated Site Management and Soil Treatment Technologies	3	6							
20	MCE 610	Sustainable Transportation Systems	3	6							
21	MCE 611	Sustainable Infrastructure Systems	3	6							
22	MCE 612	Resilient Structural and Geotechnical Systems	3	6							
Civil and Environmental Engineering											
23	ECE 210	Soil Mechanics	3	6							
24	ECE 218	Environmental Chemistry	3	6							
25	ECE 219	Hydraulics	3	6							
26	ECE 306	Geotechnical Design	3	6	ECE 210 Soil Mechanics (862) (D and above)						
27	ECE 319	Structural Design - Steel	3	6							
28	ECE 320	Engineering Hydrology	3	6							
29	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (1953) (D and above) OR ECE 218 Environmental Chemistry (3296) (D and above)						
30	ECE 420	Modern Information Technology in Construction	3	6							
31	ECE 421	Behaviour and Design of Structural System	3	6	(ECE 318 Structural Design - Concrete (3709) (D and above) OR ECE 314 Structural Engineering Applications I (1042) (D and above)) AND (ECE 319 Structural Design - Steel (4038) (D and above) OR ECE 315 Structural Engineering Applications II (1041) (D and above))						

32	ECE 422	Prestressed Concrete Design	3	6							
33	ECE 423	Structure and Properties of Concrete Materials	3	6							
34	ECE 472	Water and Wastewater Treatment Processes	3	6	ECE 218 Environmental Chemistry (3296) (D and above)						
35	ECE 478	Capstone Project II	9	18	ECE 401 Capstone Project 1 (1270) (D and above)						
36	ECE 479	Structural Analysis II	3	6	ECE 217 Structural Analysis I (3156) (D and above)						
37	EMEM 510	Managerial Accounting	2	4							
38	EMEM 511	Business Strategy	2	4							
39	EMEM 512	Leading Change	2	4							
40	EMEM 513	Entrepreneurship	2	4							
41	EMEM 514	Finance	2	4							
42	EMEM 516	Management of Organizations	2	4							
43	EMEM 517	Marketing	2	4							
44	EMEM 529	Capstone Project	8	16							
45	EMEM 535	Managing Product and Service Development	3	6							
46	EMEM 543	Quality and Lean Management	3	6							
47	EMEM 545	Business Communication	2	4							
Electrical and Computer Engineering											
48	EEE 210	Software Engineering	3	6	BENG 146 Programming for Engineers (2234) (D and above)						
49	EEE 211	Computer Systems Architecture	3	6	ECHE 126 Introduction to Chemical Engineering (33) (D and above)						
50	EEE 239	Communication systems	3	6							
51	EEE 340	Data Communications	3	6							
52	EEE 341	Digital Electronic System Design	3	6							

53	EEE 343	Embedded Microcontrollers	3	6							
54	EEE 379	Power Systems Analysis	3	6							
55	EEE 381	Electrical Machines and Drives	3	6							
56	EEE 411	Special Topics in Signal Processing	3	6							
57	EEE 480	Capstone Project II	9	18							
58	EEE 484	Electric Power Generation	3	6							
59	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)						
60	EEE 486	Photonics for Engineering	3	6	EEE 342 Electromagnetics (533) (D and above)						
61	EEE 487	Intelligent Algorithms for Power Systems	3	6							
62	EEE 488	Numerical Optimization Techniques and Computer Applications	3	6							
63	EEE 489	Analog Circuit Design	3	6							
Electrical and Electronic Engineering											
64	MEE 601	Industrial and Commercial Power System	3	6							
65	MEE 602	Advanced Power Electronics	3	6							
66	MEE 609	Internet of Things	3	6							
67	MEE 615	Wireless Communications	3	6							
68	MEE 618	Optical Communication	3	6							
69	MEE 620	RF and Microwave Communications Systems	3	6							
70	MEE 624	Pattern Recognition	3	6							
71	MEE 627	Switched Capacitor Converters (Special Topics in Power Engineering)	3	6							
72	MEE 629	System Design for Wireless	3	6							
Mechanical Engineering											

73	MME 622	Advanced Design and Manufacturing	3	6							
74	MME 623	Design and Manufacturing with Environmental Concern	3	6							
75	MME 624	Design Optimization	3	6							
76	MME 625	Advanced Computer Aided Engineering	3	6							
77	MME 626	Advanced Manufacturing Processes and Strategies	3	6							
Mechanical and Aerospace Engineering											
78	EME 275	Fluid Mechanics I	3	6							
79	EME 300	Research Project	3	6							
80	EME 352	Computational Fluid Dynamics	3	6							
81	EME 357	Fluid Mechanics II	3	6							
82	EME 377	Mechanical Systems Design	3	6	EME 361 Machine Design (1051) (D and above)						
83	EME 414	Fire Engineering	3	6	BENG 226 Engineering Thermodynamics (1553) (D and above)						
84	EME 415	Flight Mechanics	3	6							
85	EME 464	Materials and Manufacturing I	3	6							
86	EME 476	Materials and Manufacturing II	3	6							
87	EME 477	Capstone Project II	9	18							
88	EME 479	Particulate Technology	3	6							
89	EME 480	Industrial Automation	3	6							
90	EME 488	Structural Mechanics	3	6							
School of Engineering											
91	BENG 114	Introduction to Electrical Systems	3	6							
92	BENG 147	Mechanics of Fluids and Thermodynamics	3	6	BENG 124 Engineering Mathematics I (101) (D and above)						
93	BENG 148	Engineering Practice	3	6							

94	BENG 201	Engineering Economy	3	6							
95	BENG 219	Control Systems	3	6							
96	BENG 225	Engineering Mathematics II	3	6							
97	BENG 226	Engineering Thermodynamics	3	6							
98	BENG 304	Internship	2	4							
99	DENG 785	PhD Proposal Oral Defence	0	0							
100	DENG 787	Doctoral Proposal II	3	6	DENG 784 Doctoral Proposal I (1774) (P)	DENG 785 PhD Proposal Oral Defence (2604) (P)					
101	DENG 794	Dissertation Research	12	24	DENG 785 PhD Proposal Oral Defence (2604) (P)						
102	DENG 796	Thesis Completion	0	0							
103	DENG 797	Oral Defence of PhD Dissertation	0	0	DENG 785 PhD Proposal Oral Defence (2604) (P) AND DENG 789 Doctoral Seminar I (4598) (P) AND DENG 790 Doctoral Seminar II (4599) (P)						