

**Course Requirements and Registration Priorities  
School of Engineering, Spring 2017**

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
<b>SMG</b>											
<b>School of Mining and Geosciences</b>											
1	SMG 710	Research Methods and Statistics	3	6							
<b>SEDS</b>											
<b>Chemical Engineering</b>											
2	MCHE 601	Pipeline Engineering & Flow Assurance	3	6							
3	MCHE 602	Process Engineering and Simulation	3	6	MCHE 615 Advanced Unit Operations (3145) (D and above)						
4	MCHE 603	Crude Oil Processing	3	6							
5	MCHE 604	Natural Gas Processing	3	6							
6	MCHE 605	Petroleum Refining Water/Wastewater Use and Management	3	6							
<b>Chemical and Materials Engineering</b>											
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 319	Chemical Engineering Thermodynamics	3	6							
11	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)					
12	ECHE 327	Micro and Nanotechnology	3	6							
13	ECHE 328	Mineral Processing	3	6							
14	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)						

15	ECHE 384	Interdisciplinary Design Project	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 481	Chemical Reaction Engineering	3	6	ECHE 126 Introduction to Chemical Engineering (33) (D and above) AND BENG 124 Engineering Mathematics I (101) (D and above) AND BENG 225 Engineering Mathematics II (48) (D and above)						
19	ECHE 483	Chemistry II	3	6	ECHE 222 Chemistry I (731) (D and above)						
<b>Civil Engineering</b>											
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							
23	MCE 613	Numerical Method in Geotechnical Engineering	3	6							
24	MCE 615	Applications of Geomatics in Civil Engineering	3	6							
<b>Civil and Environmental Engineering</b>											
25	ECE 210	Soil Mechanics	3	6							
26	ECE 218	Environmental Chemistry	3	6							
27	ECE 219	Hydraulics	3	6							
28	ECE 302	Civil Engineering Materials	3	6	BENG 221 Engineering Materials (47) (D and above)						
29	ECE 306	Geotechnical Design	3	6	ECE 210 Soil Mechanics (862) (D and above)						
30	ECE 315	Structural Engineering Applications II	3	6	ECE 213 Structural Engineering Analysis (863) (D and above) OR ECE 217 Structural Analysis I (3156) (D and above)						
31	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (1953) (D and above) OR ECE 218 Environmental Chemistry (3296) (D and above)						

32	ECE 478	Capstone Project II	9	18	ECE 401 Capstone Project 1 (1270) (D and above)						
33	ECE 479	Structural Analysis II	3	6	ECE 217 Structural Analysis I (3156) (D and above)						
34	EMEM 510	Managerial Accounting	2	4							
35	EMEM 511	Business Strategy	2	4							
36	EMEM 512	Leading Change	2	4							
37	EMEM 513	Entrepreneurship	2	4							
38	EMEM 514	Finance	2	4							
39	EMEM 516	Management of Organizations	2	4							
40	EMEM 517	Marketing	2	4							
41	EMEM 527	Globalization and Engineering	3	6							
42	EMEM 529	Capstone Project	8	16							
43	EMEM 544	Lean Production	1.5	3							
44	EMEM 545	Business Communication	2	4							
<b>Electrical and Computer Engineering</b>											
45	EEE 210	Software Engineering	3	6	BENG 146 Programming for Engineers (2234) (D and above)						
46	EEE 211	Computer Systems Architecture	3	6	ECHE 126 Introduction to Chemical Engineering (33) (D and above)						
47	EEE 212	Signals and Systems	3	6	BENG 225 Engineering Mathematics II (48) (D and above)						
48	EEE 239	Communication systems	3	6							
49	EEE 340	Data Communications	3	6							
50	EEE 341	Digital Electronic System Design	3	6							
51	EEE 379	Power Systems Analysis	3	6							
52	EEE 380	Integrated Circuits Design	3	6							

53	EEE 381	Electrical Machines and Drives	3	6							
54	EEE 410	Nonlinear Circuits and Systems	3	6	EEE 380 Integrated Circuits Design (1954) (D and above)						
55	EEE 411	Special Topics in Signal Processing	3	6							
56	EEE 480	Capstone Project II	9	18							
<b>Electrical and Electronic Engineering</b>											
57	MEE 601	Industrial and Commercial Power System	3	6							
58	MEE 602	Advanced Power Electronics	3	6							
59	MEE 603	Special Topics in Power Engineering	3	6							
60	MEE 609	Internet of Things	3	6							
61	MEE 615	Wireless Communications	3	6							
62	MEE 618	Optical Communication	3	6							
63	MEE 619	Photonics Technology	3	6							
64	MEE 620	RF and Microwave Communications Systems	3	6							
<b>Mechanical Engineering</b>											
65	MME 622	Advanced Design and Manufacturing	3	6							
66	MME 623	Design and Manufacturing with Environmental Concern	3	6							
67	MME 624	Design Optimization	3	6							
68	MME 625	Advanced Computer Aided Engineering	3	6							
69	MME 626	Advanced Manufacturing Processes and Strategies	3	6							
<b>Mechanical and Aerospace Engineering</b>											
70	EME 262	Machine Dynamics I	3	6							
71	EME 275	Fluid Mechanics I	3	6							
72	EME 354	Advanced Control Systems	3	6	BENG 219 Control Systems (728) (D and above)						
73	EME 377	Mechanical Systems Design	3	6	EME 361 Machine Design (1051) (D and above)						

74	EME 410	Aerodynamics	3	6	EME 357 Fluid Mechanics II (1280) (D and above)						
75	EME 411	Air Conditioning and Fire Engineering	3	6	BENG 226 Engineering Thermodynamics (1553) (D and above)						
76	EME 463	Machine Dynamics II	3	6							
77	EME 464	Materials and Manufacturing I	3	6							
78	EME 476	Materials and Manufacturing II	3	6							
79	EME 477	Capstone Project II	9	18							
80	EME 480	Industrial Automation	3	6							
<b>School of Engineering</b>											
81	BENG 114	Introduction to Electrical Systems	3	6							
82	BENG 147	Mechanics of Fluids and Thermodynamics	3	6	BENG 124 Engineering Mathematics I (101) (D and above)						
83	BENG 148	Engineering Practice	3	6							
84	BENG 201	Engineering Economy	3	6							
85	BENG 225	Engineering Mathematics II	3	6							
86	BENG 226	Engineering Thermodynamics	3	6							
87	BENG 343	Interdisciplinary Design Project	3	6							
88	DENG 784	Doctoral Proposal I	0	6							
89	DENG 785	PhD Proposal Oral Defence	0	0							
90	DENG 787	Doctoral Proposal II	3	6	DENG 784 Doctoral Proposal I (1774) (P)	DENG 785 PhD Proposal Oral Defence (2604) (P)					
91	DENG 794	Dissertation Research	12	24	DENG 785 PhD Proposal Oral Defence (2604) (P)						