

**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
SEng											
Chemical Engineering											
1	ECHE 210	Foundations of Unit Operations	3	6							
2	ECHE 221	Engineering Fluid Mechanics	3	6							
3	ECHE 270	Transport Phenomena-I	3	6							
4	ECHE 319	Chemical Engineering Thermodynamics	3	6							
5	ECHE 323	Computational methods in Chemical Engineering-I	3	6	ECHE 333 Separation Processes-I (D and above)	ECHE 481 Chemical Reaction Engineering (D and above)					
6	ECHE 327	Micro and Nanotechnology	3	6							
7	ECHE 328	Mineral Processing	3	6							
8	ECHE 383	Separation Processes II	3	6	ECHE 126 Introduction to Chemical Engineering (D and above) AND ECHE 225 Heat and Mass Transfer Operations (D and above)						
9	ECHE 384	Interdisciplinary Design Project	3	6							
10	ECHE 478	Electrochemical Engineering and Corrosion Protection	3	6	ECHE 222 Chemistry I (D and above)						
11	ECHE 479	Capstone Project II	9	18	ECHE 418 Capstone project 1 (D and above)						
12	ECHE 481	Chemical Reaction Engineering	3	6	ECHE 126 Introduction to Chemical Engineering (D and above) AND BENG 124 Engineering Mathematics I (D and above) AND BENG 225 Engineering Mathematics II (D and above)						
13	ECHE 483	Chemistry II	3	6	ECHE 222 Chemistry I (D and above)						
14	MCHE 601	Pipeline Engineering & Flow Assurance	3	6							
15	MCHE 602	Process Engineering and Simulation	3	6	MCHE 615 Advanced Unit Operations (D and above)						
16	MCHE 603	Crude Oil Processing	3	6							
17	MCHE 604	Natural Gas Processing	3	6							

18	MCHE 605	Petroleum Refining Water/Wastewater Use and Management	3	6							
Civil Engineering											
19	ECE 210	Soil Mechanics	3	6							
20	ECE 218	Environmental Chemistry	3	6							
21	ECE 219	Hydraulics	3	6							
22	ECE 302	Civil Engineering Materials	3	6	BENG 221 Engineering Materials (D and above)						
23	ECE 306	Geotechnical Design	3	6	ECE 210 Soil Mechanics (D and above)						
24	ECE 315	Structural Engineering Applications II	3	6	ECE 213 Structural Engineering Analysis (D and above) OR ECE 217 Structural Analysis I (D and above)						
25	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (D and above) OR ECE 218 Environmental Chemistry (D and above)						
26	ECE 478	Capstone Project II	9	18	ECE 401 Capstone Project 1 (D and above)						
27	ECE 479	Structural Analysis II	3	6	ECE 217 Structural Analysis I (D and above)						
28	EMEM 510	Managerial Accounting	2	4							
29	EMEM 511	Business Strategy	2	4							
30	EMEM 512	Leading Change	2	4							
31	EMEM 513	Entrepreneurship	2	4							
32	EMEM 514	Finance	2	4							
33	EMEM 516	Management of Organizations	2	4							
34	EMEM 517	Marketing	2	4							
35	EMEM 527	Globalization and Engineering	3	6							
36	EMEM 529	Capstone Project	8	16							
37	EMEM 544	Lean Production	1.5	3							
38	EMEM 545	Business Communication	2	4							
39	MCE 610	Sustainable Transportation Systems	3	6							

40	MCE 611	Sustainable Infrastructure Systems	3	6						
41	MCE 612	Resilient Structural and Geotechnical Systems	3	6						
42	MCE 613	Numerical Method in Geotechnical Engineering	3	6						
43	MCE 615	Applications of Geomatics in Civil Engineering	3	6						
Electrical and Electronic Engineering										
44	EEE 210	Software Engineering	3	6	BENG 146 Programming for Engineers (D and above)					
45	EEE 211	Computer Systems Architecture	3	6	ECHE 126 Introduction to Chemical Engineering (D and above)					
46	EEE 212	Signals and Systems	3	6	BENG 225 Engineering Mathematics II (D and above)					
47	EEE 239	Communication systems	3	6						
48	EEE 340	Data Communications	3	6						
49	EEE 341	Digital Electronic System Design	3	6						
50	EEE 379	Power Systems Analysis	3	6						
51	EEE 380	Integrated Circuits Design	3	6						
52	EEE 381	Electrical Machines and Drives	3	6						
53	EEE 410	Nonlinear Circuits and Systems	3	6	EEE 380 Integrated Circuits Design (D and above)					
54	EEE 411	Special Topics in Signal Processing	3	6						
55	EEE 480	Capstone Project II	9	18						
56	MEE 601	Industrial and Commercial Power System	3	6						
57	MEE 602	Advanced Power Electronics	3	6						
58	MEE 603	Special Topics in Power Engineering	3	6						
59	MEE 609	Internet of Things	3	6						
60	MEE 615	Wireless Communications	3	6						
61	MEE 618	Optical Communication	3	6						
62	MEE 619	Photonics Technology	3	6						
63	MEE 620	RF and Microwave Communications Systems	3	6						
Mechanical Engineering										
64	EME 262	Machine Dynamics I	3	6						
65	EME 275	Fluid Mechanics I	3	6						
66	EME 354	Advanced Control Systems	3	6	BENG 219 Control Systems (D and above)					
67	EME 377	Mechanical Systems Design	3	6	EME 361 Machine Design (D and above)					

68	EME 410	Aerodynamics	3	6	EME 357 Fluid Mechanics 2 (D and above)						
69	EME 411	Air Conditioning and Fire Engineering	3	6	BENG 226 Engineering Thermodynamics (D and above)						
70	EME 463	Machine Dynamics II	3	6							
71	EME 464	Materials and Manufacturing 1	3	6							
72	EME 476	Materials and Manufacturing II	3	6							
73	EME 477	Capstone Project II	9	18							
74	EME 480	Industrial Automation	3	6							
75	MME 622	Advanced Design and Manufacturing	3	6							
76	MME 623	Design and Manufacturing with Environmental Concern	3	6							
77	MME 624	Design Optimization	3	6							
78	MME 625	Advanced Computer Aided Engineering	3	6							
79	MME 626	Advanced Manufacturing Processes and Strategies	3	6							
School of Engineering											
80	BENG 114	Introduction to Electrical Systems	3	6							
81	BENG 147	Introduction to Fluid Mechanics and Thermodynamics	3	6	BENG 124 Engineering Mathematics I (D and above)						
82	BENG 148	Engineering Practice	3	6							
83	BENG 201	Engineering Economy	3	6							
84	BENG 225	Engineering Mathematics II	3	6							
85	BENG 226	Engineering Thermodynamics	3	6							
86	BENG 343	Interdisciplinary Design Project	3	6							
87	DENG 783	Statistics	3	6							
88	DENG 794	Dissertation Research	12	24	DENG 785 PhD proposal oral defence (C- and above)						