

## Course Requirements and Registration Priorities School of Engineering, Fall 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 600	MSc Thesis in Chemical Engineering	15	30							
3	MCHE 613	Physical Chemistry of Oil & Gas	1.5	3							
4	MCHE 614	Applied Chemical Engineering Thermodynamics	1.5	3							
5	MCHE 615	Advanced Unit Operations	1.5	3							
6	MCHE 616	Advanced Chemical Reactor Engineering	1.5	3	ECHE 481 Chemical Reaction Engineering (1985) (D and above)						
7	MCHE 618	Plant Economics and Planning	1.5	3							
8	MCHE 619	Safety Engineering and Loss Prevention	1.5	3							
<b>Chemical and Materials Engineering</b>											
9	ECHE 126	Introduction to Chemical Engineering	3	6							
10	ECHE 222	Chemistry I	3	6							
11	ECHE 319	Chemical Engineering Thermodynamics	3	6							
12	ECHE 333	Separation Processes-I	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above)						
13	ECHE 369	Transport Phenomena-II	3	6							
14	ECHE 385	Research Practice	3	6							
15	ECHE 418	Capstone project 1	3	6	ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)						
16	ECHE 419	Advanced Process Simulation	3	6	ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)						

17	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)						
18	ECHE 482	Computational Methods in Chemical Engineering-II	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above) AND ECHE 333 Separation Processes-I (1271) (D and above) AND ECHE 383 Separation Processes II (1982) (D and above) AND ECHE 481 Chemical Reaction Engineering (1985) (D and above) AND ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)						
19	ECHE 484	Multiphase Systems	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above) AND ECHE 270 Transport Phenomena-I (735) (D and above)						
<b>Civil Engineering</b>											
20	MCE 600	MSc Thesis in Civil Engineering	15	30							
21	MCE 601	Sustainable Development	3	6							
22	MCE 604	Advanced Project Management	3	6							
23	MCE 606	Environmental Impacts and Assessments	3	6							
24	MSC 615	Advanced Statistics and Probability	3	6							
25	MSC 616	Research Methods	3	6							
<b>Civil and Environmental Engineering</b>											
26	ECE 215	Surveying	3	6							
27	ECE 216	Civil Engineering CAD	3	6							
28	ECE 217	Structural Analysis I	3	6	BENG 117 Engineering Mechanics (740) (D and above)						
29	ECE 302	Civil Engineering Materials	3	6	BENG 221 Engineering Materials (47) (D and above)						
30	ECE 307	Engineering Geology and Rock Mechanics	3	6							
31	ECE 318	Structural Design - Concrete	3	6	ECE 479 Structural Analysis II (2460) (C- and above)						

32	ECE 401	Capstone Project 1	3	6							
33	ECE 404	Construction Technologies and Processes	3	6	BENG 148 Engineering Practice (1073) (D and above) AND ECE 302 Civil Engineering Materials (1040) (D and above)						
34	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (1953) (D and above) OR ECE 218 Environmental Chemistry (3296) (D and above)						
35	ECE 416	Highway Engineering	3	6	ECE 302 Civil Engineering Materials (1040) (D and above)						
36	ECE 473	Environmental Systems	3	6							
37	EMEM 507	Project Management	3	6							
38	EMEM 523	Supply Chain Management	3	6							
39	EMEM 527	Globalization and Engineering	3	6							
40	EMEM 533	Engineering Management and Engineering Economy	3	6							
41	EMEM 537	Engineering Decision Tools	3	6							
42	EMEM 538	Knowledge and Innovation Management	3	6							
43	EMEM 539	Big Data and Information Management	3	6							
44	EMEM 542	Production and Service Operations Management	3	6							
<b>Electrical and Computer Engineering</b>											
45	EEE 212	Signals and Systems	3	6	BENG 225 Engineering Mathematics II (48) (D and above)						
46	EEE 238	Digital Signal and Image Processing	3	6							
47	EEE 250	Microelectronic Devices and Circuits	3	6	BENG 114 Introduction to Electrical Systems (1076) (D and above)						
48	EEE 251	Electronic Engineering Design Principles	3	6	BENG 114 Introduction to Electrical Systems (1076) (D and above)						
49	EEE 342	Electromagnetics	3	6							
50	EEE 345	Power Electronics	3	6							
51	EEE 382	Antennas and Propagation	3	6							

52	EEE 384	Digital Integrated Circuits Design	3	6	EEE 250 Microelectronic Devices and Circuits (3152) (C- and above)						
53	EEE 435	Digital Communications	3	6							
54	EEE 437	Capstone Project 1	3	6							
55	EEE 448	Power Transmission and Distribution plants	3	6							
56	EEE 450	RF and Microwave Circuit Design	3	6							
57	EEE 451	High Voltage Engineering	3	6							
58	EEE 452	Power Systems Protection	3	6							
59	EEE 482	Mobile Communications	3	6	EEE 239 Communication systems (534) (C- and above)						
<b>Electrical and Electronic Engineering</b>											
60	MEE 600	MSc Thesis in Electrical and Electronics Engineering	15	30							
61	MEE 607	Statistical Signal Processing	3	6							
62	MEE 608	Special Topics in Circuits Theory	3	6							
63	MEE 622	Modern Control Theory	3	6							
64	MEE 623	Random Processes	3	6							
<b>Mechanical Engineering</b>											
65	MME 600	Master Thesis in Mechanical Engineering	15	30							
66	MME 604	Engineering Mathematics	3	6							
67	MME 605	Numerical Techniques for Engineers	3	6							
68	MME 606	Advanced Control Systems	3	6							
<b>Mechanical and Aerospace Engineering</b>											
69	EME 253	Computer Aided Engineering	3	6							
70	EME 254	Mechanics of Materials	3	6							
71	EME 262	Machine Dynamics I	3	6							
72	EME 354	Advanced Control Systems	3	6	BENG 219 Control Systems (728) (D and above)						

73	EME 358	Heat Transfer	3	6	BENG 226 Engineering Thermodynamics (1553) (D and above) AND EME 275 Fluid Mechanics I (1988) (D and above)						
74	EME 361	Machine Design	3	6							
75	EME 410	Aerodynamics	3	6	EME 357 Fluid Mechanics II (1280) (D and above)						
76	EME 412	Heating, Ventilating and Air Conditioning	3	6							
77	EME 413	Computer Aided Geometric Design	3	6	EME 253 Computer Aided Engineering (1050) (C- and above)						
78	EME 451	Capstone Project 1	3	6							
79	EME 463	Machine Dynamics II	3	6							
80	EME 467	Vehicle Propulsion Systems	3	6							
81	EME 486	Oscillation of Mechanical Systems	3	6							
82	MAE 457	Feasibility Analysis of Clean Energy Technologies	3	6							
<b>School of Engineering</b>											
83	BENG 117	Engineering Mechanics	3	6							
84	BENG 124	Engineering Mathematics I	3	6							
85	BENG 145	Occupal and Environment Health and Safety	3	6							
86	BENG 146	Programming for Engineers	3	6							
87	BENG 215	Sensors and Actuators	3	6							
88	BENG 221	Engineering Materials	3	6							
89	BENG 228	Engineering Mathematics III	3	6	BENG 124 Engineering Mathematics I (101) (D and above) AND BENG 225 Engineering Mathematics II (48) (D and above)						
90	BENG 304	Internship	2	4							
91	BENG 308	Internship	4	8							
92	BENG 312	Internship	6	12							

93	BENG 405	Project Management	3	6							
94	DENG 782	Research Methods and Ethics	3	6							
95	DENG 784	Doctoral Proposal I	0	6							
96	DENG 794	Dissertation Research	12	24	DENG 785 PhD Proposal Oral Defence (2604) (P)						