

**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>SEng</b>											
<b>Chemical Engineering</b>											
1	ECHE 126	Introduction to Chemical Engineering	3	6							
2	ECHE 222	Chemistry I	3	6							
3	ECHE 319	Chemical Engineering Thermodynamics	3	6							
4	ECHE 333	Separation Processes-I	3	6	ECHE 319 Chemical Engineering Thermodynamics (D and above)						
5	ECHE 369	Transport Phenomena-II	3	6							
6	ECHE 385	Research Practice	3	6							
7	ECHE 418	Capstone project 1	3	6	ECHE 323 Computational methods in Chemical Engineering-I (D and above)						
8	ECHE 419	Advanced Process Simulation	3	6	ECHE 323 Computational methods in Chemical Engineering-I (D and above)	ECHE 482 Computational Methods in Chemical Engineering-II (D and above)					
9	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)						
10	ECHE 482	Computational Methods in Chemical Engineering-II	3	6	ECHE 319 Chemical Engineering Thermodynamics (D and above) AND ECHE 333 Separation Processes-I (D and above) AND ECHE 383 Separation Processes II (D and above) AND ECHE 481 Chemical Reaction Engineering (D and above) AND ECHE 323 Computational methods in Chemical Engineering-I (D and above)						

11	ECHE 484	Multi-Phase Flows	3	6	ECHE 319 Chemical Engineering Thermodynamics (D and above) AND ECHE 270 Transport Phenomena-I (D and above)						
12	MCHE 600	MSc Thesis in Chemical Engineering	15	30							
13	MCHE 613	Physical Chemistry of Oil & Gas	1.5	3							
14	MCHE 614	Applied Chemical Engineering Thermodynamics	1.5	3							
15	MCHE 615	Advanced Unit Operations	1.5	3							
16	MCHE 616	Advanced Chemical Reactor Engineering	1.5	3	ECHE 481 Chemical Reaction Engineering (D and above)						
17	MCHE 618	Plant Economics and Planning	1.5	3							
18	MCHE 619	Safety Engineering and Loss Prevention	1.5	3							
<b>Civil Engineering</b>											
19	ECE 215	Surveying	3	6							
20	ECE 216	Civil Engineering CAD	3	6							
21	ECE 217	Structural Analysis I	3	6	BENG 117 Engineering Mechanics (D and above)						
22	ECE 302	Civil Engineering Materials	3	6	BENG 221 Engineering Materials (D and above)						
23	ECE 307	Engineering Geology and Rock Mechanics	3	6							
24	ECE 318	Structural Design - Concrete	3	6	ECE 479 Structural Analysis II (C- and above)						
25	ECE 401	Capstone Project 1	3	6							
26	ECE 404	Construction Technologies and Processes	3	6	BENG 148 Engineering Practice (D and above) AND ECE 302 Civil Engineering Materials (D and above)						
27	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (D and above) OR ECE 218 Environmental Chemistry (D and above)						
28	ECE 416	Highway Engineering	3	6	ECE 302 Civil Engineering Materials (D and above)						
29	ECE 473	Environmental Systems	3	6							
30	EMEM 507	Project Management	3	6							
31	EMEM 523	Supply Chain Management	3	6							

32	EMEM 527	Globalization and Engineering	3	6						
33	EMEM 533	Engineering Management and Engineering Economy	3	6						
34	EMEM 537	Engineering Decision Tools	3	6						
35	EMEM 538	Knowledge and Innovation Management	3	6						
36	EMEM 539	Big Data and Information Management	3	6						
37	EMEM 542	Production and Service Operations Management	3	6						
38	MCE 600	MSc Thesis in Civil Engineering	15	30						
39	MCE 601	Sustainable Development	3	6						
40	MCE 604	Advanced Project Management	3	6						
41	MCE 606	Environmental Impacts and Assessments	3	6						
42	MSC 615	Advanced Statistics and Probability	3	6						
43	MSC 616	Research Methods	3	6						
<b>Electrical and Electronic Engineering</b>										
44	EEE 212	Signals and Systems	3	6	BENG 225 Engineering Mathematics II (D and above)					
45	EEE 238	Digital Signal and Image Processing	3	6						
46	EEE 250	Microelectronic Devices and Circuits	3	6	BENG 114 Introduction to Electrical Systems (D and above)					
47	EEE 251	Electronic Engineering Design Principles	3	6	BENG 114 Introduction to Electrical Systems (D and above)					
48	EEE 342	Electromagnetics	3	6						
49	EEE 345	Power Electronics	3	6						
50	EEE 382	Antennas and Propagation	3	6						
51	EEE 384	Digital Integrated Circuits Design	3	6	EEE 250 Microelectronic Devices and Circuits (C- and above)					
52	EEE 435	Digital Communications	3	6						
53	EEE 437	Capstone Project 1	3	6						
54	EEE 448	Power Transmission and Distribution plants	3	6						
55	EEE 450	RF and Microwave Circuit Design	3	6						
56	EEE 451	High Voltage Engineering	3	6						
57	EEE 452	Power Systems Protection	3	6						

58	EEE 482	Mobile Communications	3	6	EEE 239 Communication systems (C- and above)						
59	MEE 600	MSc Thesis in Electrical and Electronics Engineering	15	30							
60	MEE 607	Statistical Signal Processing	3	6							
61	MEE 608	Special Topics in Circuits Theory	3	6							
62	MEE 622	Modern Control Theory	3	6							
63	MEE 623	Random Processes	3	6							
<b>Mechanical Engineering</b>											
64	EME 253	Computer Aided Engineering	3	6							
65	EME 254	Mechanics of Materials	3	6							
66	EME 262	Machine Dynamics I	3	6							
67	EME 354	Advanced Control Systems	3	6	BENG 219 Control Systems (D and above)						
68	EME 358	Heat Transfer	3	6	BENG 226 Engineering Thermodynamics (D and above) AND EME 275 Fluid Mechanics I (D and above)						
69	EME 361	Machine Design	3	6							
70	EME 410	Aerodynamics	3	6	EME 357 Fluid Mechanics 2 (D and above)						
71	EME 412	Heating, Ventilating, and Air Conditioning	3	6							
72	EME 413	Computer Aided Geometric Design	3	6	EME 253 Computer Aided Engineering (C- and above)						
73	EME 451	Capstone project 1	3	6							
74	EME 456	Feasibility Analysis of Clean Energy Technologies	3	6							
75	EME 463	Machine Dynamics II	3	6							
76	EME 467	Vehicle Propulsion Systems	3	6		EME 456 Feasibility Analysis of Clean Energy Technologies (C- and above)					
77	EME 486	Oscillations of mechanical systems	3	6							
78	MME 600	MSc Thesis in Mechanical Engineering	15	30							
79	MME 604	Engineering Mathematics	3	6							
80	MME 605	Numerical Techniques for Engineers	3	6							
81	MME 606	Advanced Control Systems	3	6							
<b>School of Engineering</b>											
82	BENG 117	Engineering Mechanics	3	6							

83	BENG 124	Engineering Mathematics I	3	6							
84	BENG 145	Occupal & Environment Health and Safety	3	6							
85	BENG 146	Programming for Engineers	3	6							
86	BENG 215	Sensors and Actuators	3	6							
87	BENG 221	Engineering Materials	3	6							
88	BENG 228	Engineering Mathematics III	3	6	BENG 124 Engineering Mathematics I (D and above) AND BENG 225 Engineering Mathematics II (D and above)						
89	BENG 304	Internship	2	4							
90	BENG 308	Internship	4	8							
91	BENG 312	Internship	6	12							
92	BENG 405	Project Management	3	6							
93	DENG 782	Personal and Professional Skills Development	3	6							
94	DENG 783	Statistics	3	6							
95	DENG 794	Dissertation Research	12	24	DENG 785 PhD proposal oral defence (C- and above)						