

**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
<b>SEng</b>											
<b>Chemical Engineering</b>											
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 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)					
5	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)						
6	ECHE 386	Chemical Plant Design and Optimization	3	6							
7	ECHE 387	Chemical Reaction Engineering 2	3	6							
8	ECHE 388	Process Dynamics and Control	3	6							
9	ECHE 420	Polymer Processing and Rheology	3	6							
10	ECHE 421	Tissue Engineering	3	6							
11	ECHE 478	Electrochemical Engineering and Corrosion Protection	3	6	ECHE 222 Chemistry I (D and above)						
12	ECHE 479	Capstone Project II	9	18	ECHE 418 Capstone project 1 (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							
<b>Civil Engineering</b>											
19	ECE 210	Soil Mechanics	3	6							
20	ECE 218	Environmental Chemistry	3	6							

21	ECE 219	Hydraulics	3	6							
22	ECE 306	Geotechnical Design	3	6	ECE 210 Soil Mechanics (D and above)						
23	ECE 319	Structural Design - Steel	3	6							
24	ECE 320	Engineering Hydrology	3	6							
25	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (D and above) OR ECE 218 Environmental Chemistry (D and above)						
26	ECE 420	Modern Information Technology in Construction	3	6							
27	ECE 421	Behaviour and Design of Structural System	3	6	ECE 314 Structural Engineering Applications I (D and above) AND ECE 315 Structural Engineering Applications II (D and above)						
28	ECE 422	Prestressed Concrete Design	3	6							
29	ECE 423	Structure and Properties of Concrete Materials	3	6							
30	ECE 472	Water and Wastewater Treatment Processes	3	6	ECE 218 Environmental Chemistry (D and above)						
31	ECE 478	Capstone Project II	9	18	ECE 401 Capstone Project 1 (D and above)						
32	ECE 479	Structural Analysis II	3	6	ECE 217 Structural Analysis I (D and above)						
33	EMEM 510	Managerial Accounting	2	4							
34	EMEM 511	Business Strategy	2	4							
35	EMEM 512	Leading Change	2	4							
36	EMEM 513	Entrepreneurship	2	4							
37	EMEM 514	Finance	2	4							
38	EMEM 516	Management of Organizations	2	4							
39	EMEM 517	Marketing	2	4							
40	EMEM 529	Capstone Project	7.5	15							
41	EMEM 535	Managing Product and Service Development	3	6							
42	EMEM 543	Quality and Lean Management	3	6							

43	EMEM 545	Business Communication	2	4							
44	MCE 609	Contaminated Site Management and Soil Treatment Technologies	3	6							
45	MCE 610	Sustainable Transportation Systems	3	6							
46	MCE 611	Sustainable Infrastructure Systems	3	6							
47	MCE 612	Resilient Structural and Geotechnical Systems	3	6							
<b>Electrical and Electronic Engineering</b>											
48	EEE 210	Software Engineering	3	6	BENG 146 Programming for Engineers (D and above)						
49	EEE 211	Computer Systems Architecture	3	6	EEE 341 Digital Electronic System Design (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 Analysis 2	3	6							
60	EEE 486	Photonics for Engineering	3	6	EEE 342 Electromagnetics (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	EEE 379 Power Systems Analysis (D and above)						
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	EME 275	Fluid Mechanics I	3	6							
74	EME 300	Research Project	3	6							
75	EME 352	Computational Fluid Dynamics	3	6							
76	EME 357	Fluid Mechanics 2	3	6							
77	EME 377	Mechanical Systems Design	3	6	EME 361 Machine Design (D and above)						
78	EME 414	Fire Engineering	3	6	BENG 226 Engineering Thermodynamics (D and above)						
79	EME 415	Flight Mechanics	3	6							
80	EME 464	Materials and Manufacturing 1	3	6							
81	EME 476	Materials and Manufacturing II	3	6							
82	EME 477	Capstone Project II	9	18							
83	EME 479	Particulate Technology	3	6							
84	EME 480	Industrial Automation	3	6							
85	EME 488	Structural Mechanics	3	6							
86	MME 622	Advanced Design and Manufacturing	3	6							
87	MME 623	Design and Manufacturing with Environmental Concern	3	6							
88	MME 624	Design Optimization	3	6							
89	MME 625	Advanced Computer Aided Engineering	3	6							
90	MME 626	Advanced Manufacturing Processes and Strategies	3	6							

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91	BENG 114	Introduction to Electrical Systems	3	6							
92	BENG 147	Introduction to Fluid Mechanics and Thermodynamics	3	6	BENG 124 Engineering Mathematics I (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							