

**Course Requirements and Registration Priorities
School of Engineering, Fall 2018**

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SEDS											
Chemical Engineering											
1	MCHE 600	MSc Thesis in Chemical Engineering	15	30							
Chemical and Materials Engineering											
2	ECHE 126	Introduction to Chemical Engineering	3	6							
3	ECHE 222	Chemistry I	3	6							
4	ECHE 319	Chemical Engineering Thermodynamics	3	6							
5	ECHE 333	Separation Processes-I	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above)						
6	ECHE 369	Transport Phenomena-II	3	6							
7	ECHE 385	Research Practice	3	6							
8	ECHE 418	Capstone project 1	3	6	ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)						
9	ECHE 478	Electrochemical Engineering and Corrosion Protection	3	6	ECHE 222 Chemistry I (731) (D and above)			4 year UG SEng Chemical Engineering			
10	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)						
11	ECHE 484	Multi-Phase Flows	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above) AND ECHE 270 Transport Phenomena-I (735) (D and above)			4 year UG SEng Chemical Engineering			
12	ECHE 486	Chemical Process Safety	3	6							

13	ECHE 487	Soft Matter, Foods and Colloids	3	6				4 year UG SEng Chemical Engineering			
14	ECHE 488	Atmospheric Chemistry and Physics	3	6				4 year UG SEng Chemical Engineering			
15	MCHME 603	Advanced Materials Processing	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
16	MCHME 604	Advanced Materials Characterization Methods	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
17	MCHME 605	Advanced Chemical Reaction Engineering	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
Civil Engineering											
18	ECE 215	Surveying	3	6							
19	ECE 216	Civil Engineering CAD	3	6							
20	ECE 217	Structural Analysis I	3	6	BENG 117 Engineering Mechanics (740) (D and above)						
21	ECE 302	Civil Engineering Materials	3	6	BENG 221 Engineering Materials (47) (D and above)						
22	ECE 303	Construction Management and Practice	3	6	BENG 148 Engineering Practice (1073) (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 (2460) (C- and above)						
25	ECE 401	Capstone Project 1	3	6							
26	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)						
27	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (1953) (D and above) OR ECE 218 Environmental Chemistry (3296) (D and above)						
28	ECE 416	Highway Engineering	3	6	ECE 302 Civil Engineering Materials (1040) (D and above)						

29	ECE 421	Behaviour and Design of Structural System	3	6	(ECE 318 Structural Design - Concrete (3709) (D and above) OR ECE 314 Structural Engineering Applications I (1042) (D and above)) AND (ECE 319 Structural Design - Steel (4038) (D and above) OR ECE 315 Structural Engineering Applications II (1041) (D and above))			4 year UG SEng Civil Engineering			
30	ECE 481	Individual Research Projects in Civil Engineering	3	6							
31	ECE 482	Solid and Hazardous Waste Management	3	6	ECE 405 Environmental Engineering (1265) (C- and above)			4 year UG SEng Civil Engineering			
32	EMEM 507	Project Management	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
33	EMEM 509	Systems Engineering	3	6							
34	EMEM 523	Supply Chain Management	3	6							
35	EMEM 533	Engineering Management and Engineering Economy	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
36	EMEM 537	Engineering Decision Tools	3	6							
37	EMEM 539	Big Data and Information Management	3	6							
38	EMEM 542	Production and Service Operations Management	3	6							
39	EMEM 543	Quality and Lean Management	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
40	MCE 600	MSc Thesis in Civil Engineering	15	30							
41	MCEE 603	Finite Element Methods	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
42	MCEE 604	Advanced Soil Mechanics	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
43	MCEE 605	Advanced Environmental Chemistry	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
44	MSC 601	Technical Communication	3	6							

45	MSC 602	Advanced Applied Mathematics	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
46	MSC 615	Advanced Statistics and Probability	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
47	MSC 616	Research Methods	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
Electrical and Computer Engineering										
48	MECE 603	Advanced Data Structures and Algorithms	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
49	MECE 605	Statistics and Probability for Electrical and Computer Engineers	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
50	MECE 606	Embedded Systems and Applications	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
Electrical and Electronic Engineering										
51	EEE 212	Signals and Systems	3	6	BENG 225 Engineering Mathematics II (48) (D and above)					
52	EEE 238	Digital Signal and Image Processing	3	6						
53	EEE 250	Microelectronic Devices and Circuits	3	6	BENG 114 Introduction to Electrical Systems (1076) (D and above)					
54	EEE 251	Electronic Engineering Design Principles	3	6	BENG 114 Introduction to Electrical Systems (1076) (D and above)					
55	EEE 342	Electromagnetics	3	6						
56	EEE 345	Power Electronics	3	6						
57	EEE 382	Antennas and Propagation	3	6						
58	EEE 384	Digital Integrated Circuits Design	3	6	EEE 250 Microelectronic Devices and Circuits (3152) (C- and above)					
59	EEE 437	Capstone Project 1	3	6						
60	EEE 448	Power Transmission and Distribution plants	3	6						
61	EEE 450	RF and Microwave Circuit Design	3	6						

62	EEE 451	High Voltage Engineering	3	6							
63	EEE 452	Power Systems Protection	3	6							
64	EEE 482	Mobile Communications	3	6	EEE 239 Communication systems (534) (C- and above)						
65	EEE 490	Introduction to Big Data	3	6							
66	EEE 491	Internet of Things	3	6	BENG 146 Programming for Engineers (2234) (C- and above) AND EEE 343 Embedded Microcontrollers (1532) (C- and above)						
67	EEE 492	Deep Learning Machines	3	6							
68	EEE 493	Industry 4.0	3	6							
69	MEE 600	MSc Thesis in Electrical and Electronics Engineering	15	30							
Mechanical Engineering											
70	EME 253	Computer Aided Engineering	3	6							
71	EME 254	Mechanics of Materials	3	6							
72	EME 262	Machine Dynamics I	3	6							
73	EME 354	Advanced Control Systems	3	6	BENG 219 Control Systems (728) (D and above)						
74	EME 358	Heat Transfer	3	6	BENG 226 Engineering Thermodynamics (1553) (D and above) AND EME 275 Fluid Mechanics I (1988) (D and above)						
75	EME 361	Machine Design	3	6							
76	EME 410	Aerodynamics	3	6	EME 357 Fluid Mechanics 2 (1280) (D and above)						
77	EME 412	Heating, Ventilating, and Air Conditioning	3	6							
78	EME 413	Computer Aided Geometric Design	3	6	EME 253 Computer Aided Engineering (1050) (C- and above)						
79	EME 451	Capstone project 1	3	6							
80	EME 456	Feasibility Analysis of Clean Energy Technologies	3	6							

81	EME 463	Machine Dynamics II	3	6							
82	EME 467	Vehicle Propulsion Systems	3	6							
83	EME 487	Mechatronics Systems Design	3	6	BENG 219 Control Systems (728) (C- and above)						
84	MME 600	MSc Thesis in Mechanical Engineering	15	30							
Mechanical and Aerospace Engineering											
85	ENG 100	Introduction to Engineering	3	6				1 year UG SENG	1 year UG SMG, 1 year UG SST	1 year UG SHSS	
86	ENG 101	Programming for Engineers	3	6				1 year UG SENG	1 year UG SMG, 1 year UG SST	1 year UG SHSS	
87	MMAE 603	Modern Control Engineering	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
88	MMAE 605	Advanced Manufacturing Processes & Strategies	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
School of Engineering											
89	BENG 215	Sensors and Actuators	3	6							
90	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)						
91	BENG 405	Project Management	3	6							
92	DENG 782	Research Methods and Ethics	3	6					Science, Engineering and Technology		
93	DENG 783	Statistics	3	6					Science, Engineering and Technology		
94	DENG 784	Doctoral Proposal I	0	6					Science, Engineering and Technology		
95	DENG 785	PhD proposal oral defence	0	0					Science, Engineering and Technology		
96	DENG 787	Doctoral Proposal II	3	6	DENG 784 Doctoral Proposal I (1774) (C- and above)	DENG 785 PhD proposal oral defence (2604) (D and above)			Science, Engineering and Technology		

97	DENG 789	Doctoral Seminar I	3	6	DENG 785 PhD proposal oral defence (2604) (C- and above)			Science, Engineering and Technology		4 year Gr SENG (pending graduation)	
98	DENG 790	Doctoral Seminar II	3	6	DENG 789 Doctoral Seminar I (4598) (C- and above)			Science, Engineering and Technology			
99	DENG 791	Doctoral Seminar III	3	6	DENG 790 Doctoral Seminar II (4599) (C- and above)			Science, Engineering and Technology			
100	DENG 792	Doctoral Seminar IV	3	6	DENG 791 Doctoral Seminar III (4600) (C- and above)			Science, Engineering and Technology			
101	DENG 793	Doctoral Seminar V	3	6	DENG 792 Doctoral Seminar IV (4601) (C- and above)			Science, Engineering and Technology			
102	DENG 794	Dissertation Research	12	24	DENG 785 PhD proposal oral defence (2604) (C- and above)			Science, Engineering and Technology		4 year Gr SENG (pending graduation)	
103	DENG 795	Research at Host University	6	12	DENG 785 PhD proposal oral defence (2604) (C- and above)			Science, Engineering and Technology			
104	DENG 796	Thesis Completion	0	0				Science, Engineering and Technology			
105	DENG 797	Oral Defence of PhD Dissertation	0	0	DENG 785 PhD proposal oral defence (2604) (C- and above) AND DENG 789 Doctoral Seminar I (4598) (C- and above) AND DENG 790 Doctoral Seminar II (4599) (C- and above)			Science, Engineering and Technology			
106	DENG 798	Doctoral Seminar VI	3	6	DENG 793 Doctoral Seminar V (4602) (C- and above)			Science, Engineering and Technology			
107	DENG 799	Doctoral Seminar VII	3	6	DENG 798 Doctoral Seminar VI (4607) (C- and above)			Science, Engineering and Technology			