

Course Requirements and Registration Priorities
School of Engineering and Digital Sciences (Graduate: PhD), Spring 2020

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SEDS											
Chemical and Materials Engineering											
1	DCHME 700	Thesis Research	0	0				Science, Engineering and Technology			
2	DCHME 701	Current Research Literature	4	8				Science, Engineering and Technology			
3	DCHME 715	Air Quality, Toxicity and Health	4	8				Science, Engineering and Technology			
4	DCHME 751	Advanced Safety, Reliability and Risk Engineering in Process Industries	4	8				Science, Engineering and Technology			
5	DCHME 752	Polymer Melt Fluid Mechanics and Processing	4	8				Science, Engineering and Technology			
6	DCHME 763	Advanced Heat and Mass Transfer	4	8				Science, Engineering and Technology			
Civil Engineering											
7	DCEE 700	Thesis Research	0	0				Science, Engineering and Technology			
8	DCEE 701	Current Research Literature	4	8				Science, Engineering and Technology			
9	DCEE 759	Geotechnical Earthquake Engineering	4	8				Science, Engineering and Technology			
10	DCEE 762	Advanced Project Management	4	8				Science, Engineering and Technology			
11	DCEE 766	Advanced Pavement Design, Analysis, and Rehabilitation	4	8				Science, Engineering and Technology			
12	DCEE 767	Advanced Concrete Design	4	8				Science, Engineering and Technology			
13	DCEE 769	Sustainable Development	4	8				Science, Engineering and Technology			
Computer Science											
14	CSCI 700	Thesis Research	0	0				Science, Engineering and Technology			
15	CSCI 702	Advanced Hardware/Software Co-Design	4	8				Science, Engineering and Technology			
16	CSCI 722	Current Research Literature	4	8				Science, Engineering and Technology			
17	CSCI 745	Advanced Big Data Analytics	4	8				Science, Engineering and Technology			

18	CSCI 747	Advanced Algorithmic Trading	4	8				Science, Engineering and Technology		
19	CSCI 791	Advanced Artificial Reasoning and Problem solving	4	8				Science, Engineering and Technology		
20	DS 704	Advanced Data Mining and Decision Support	4	8				Science, Engineering and Technology		
Electrical and Computer Engineering										
21	DELCE 700	Thesis Research	0	0				Science, Engineering and Technology		
22	DELCE 701	Current Research Literature	4	8				Science, Engineering and Technology		
23	DELCE 755	Advanced Electromagnetics	4	8				Science, Engineering and Technology		
24	DELCE 759	Advanced Pattern Recognition and Machine Learning	4	8				Science, Engineering and Technology		
25	DELCE 760	Advanced System Modelling and Control	4	8				Science, Engineering and Technology		
Mechanical and Aerospace Engineering										
26	DMAE 700	Thesis Research	0	0				Science, Engineering and Technology		
27	DMAE 702	Current Research Literature	4	8				Science, Engineering and Technology		
28	DMAE 703	Numerical Techniques for Engineers	4	8	MATH 476 Numerical Methods for Partial Differential Equations (1829) (C- and above) OR MATH 451 Advanced Numerical Methods (2105) (C- and above) OR BENG 234 Numerical Methods (737) (C- and above) OR MATH 351 Numerical Methods with Applications (1166) (C- and above)			Science, Engineering and Technology		
29	DMAE 756	Design and Manufacturing with Environmental Concern	4	8				Science, Engineering and Technology		
30	DMAE 757	Design Optimization	4	8				Science, Engineering and Technology		
31	DMAE 769	Advanced Computational Fluid Dynamics (CFD) and Heat Transfer in Mechanical Engineering	4	8				Science, Engineering and Technology		
Robotics and Mechatronics										
32	ROBT 700	Thesis Research	0	0				Science, Engineering and Technology		
33	ROBT 702	Advanced Robot Perception and Vision	4	8				Science, Engineering and Technology		

34	ROBT 722	Current Research Literature	4	8				Science, Engineering and Technology			
School of Engineering											
35	DENG 789	Doctoral Seminar I	3	6	DENG 785 PhD proposal oral defence (2604) (C- and above)			SEDS			
36	DENG 790	Doctoral Seminar II	3	6	DENG 789 Doctoral Seminar I (4598) (C- and above)			Science, Engineering and Technology			
37	DENG 791	Doctoral Seminar III	3	6	DENG 790 Doctoral Seminar II (4599) (C- and above)						
38	DENG 792	Doctoral Seminar IV	3	6	DENG 791 Doctoral Seminar III (4600) (C- and above)			Science, Engineering and Technology			
39	DENG 794	Dissertation Research	12	24	DENG 785 PhD proposal oral defence (2604) (C- and above)			Science, Engineering and Technology			
40	DENG 796	Thesis Completion	0	0				Science, Engineering and Technology			
41	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			