

Course Requirements and Registration Priorities (Master), Spring 2019

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
GSB											
GSB											
1	GSBF 512	Principles of Finance	2.5	5							
2	GSBF 513	Financial Data Analytics II	2.5	5							
3	GSBF 514	Corporate Finance	2.5	5							
4	GSBF 515a	Investments I	2.5	5							
5	GSBF 515b	Investments II	2.5	5	GSBF 515a Investments I (4106) (C- and above)						
6	GSBF 517	Macroeconomics for Finance	2.5	5							
7	GSBF 520	Empirical Asset Pricing	2	4							
8	GSBF 541	Global Finance Experience Residency (I)	2	4							
9	MBA 08	Managerial Economics	2	4							
10	MBA 10	Foundations of Strategy	2	4							
11	MBA 11	Managerial Accounting	2	4							
12	MBA 12	Operations Management	2	4							
13	MBA 13	Macroeconomics	2	4							
14	MBA 15	Corporate Finance	2	4							
15	MBA 16	Entrepreneurship	2	4							
16	MBA 17	Negotiations	2	4							
17	MBAE 13	Raising Capital	2	4							
18	MSF 06	Credit Modeling	2.5	5							
GSP											
Master in Public Administration											
19	MPA 608	Strategic Management and Leadership	4	8				Public Administration			
20	MPA 699	Master's Project with Overseas Component	0	0				Public Administration			

21	MPE 610	National Identity and Public Policy	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM	
22	MPE 611	Benefit Cost Analysis	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM	
23	MPE 638	Contemporary Security Challenges in Central Asia and Beyond	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM	
24	MPE 643	Marketing Public Policy	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM	
25	MPE 648	Environmental Economics and Public Policy	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM	
26	MPE 663	Applied Public Economics and Finance	4	8	MPP 601 Microeconomics and Public Policy (1449) (B- and above) OR MPA 603 Economic Applications for Public Managers (2074) (B- and above)			GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM		
27	MPE 671	Game Theory and Public Policy	4	8				GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM		
28	MPE 681	Natural Resource Management and Policy	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM	
29	MPE 682	Sustainable Development and Environmental Governance	4	8				GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM		
Master in Public Policy											
30	MPP 602	Macroeconomics and Public Policy	4	8				Public Policy			
31	MPP 613	Policy Research Design and Methods	4	8				Public Policy			
32	MPP 641	Public Management and Leadership	4	8				Public Policy			
33	MPP 685	Urban Planning and Public Policy	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM	

34	MPP 699	Policy Analysis Exercise with Overseas Component	8	16	MPP 601 Microeconomics and Public Policy (1449) (C- and above) AND MPP 611 Statistics for Public Policy (1450) (C- and above) AND MPP 613 Policy Research Design and Methods (1301) (C- and above) AND MPP 621 Public Policy and Analysis (1451) (C- and above)			Public Policy			
GSE											
MA in Multilingual Education											
35	EDML 611	Plurilingual Individual	3	6				1 year GSE MA in Multil.Education			
36	EDML 612	Multilingual Society	3	6				1 year GSE MA in Multil.Education			
37	EDML 614	Multilingual curriculum development and assessment	3	6				2 year GSE MA in Multil.Education			
38	EDML 620	Language and Literacy Development	3	6				Multilingual Education			
39	EDML 691	Thesis Research II	6	12				2 year GSE MA in Multil.Education			
MSc Educational Leadership HE											
40	EDHE 665	Comparative Higher Education	3	6				Retake Course			
41	EDHE 692	Thesis Seminar III	4.5	9				2 year GSE Educ.Leadership			
42	EDUC 506	Academic English II	1.5	3				1 year GSE Educ.Leadership			
43	EDUC 508	Academic English IV	1.5	3				2 year GSE Educ.Leadership			
44	EDUC 511	Advanced English for Education Professionals II	3	6				1 year GSE MA in Multil.Education			
45	EDUC 513	English for Thesis Writing II	3	6				2 year GSE MA in Multil.Education			
46	EDUC 571	Basic Kazakh	3	6				1 year GSE MA in Multil.Education, 1 year GSE PhD Education			
47	EDUC 572	Kazakh for Professional Purposes	3	6				GSE			

48	EDUC 573	Academic Writing in Kazakh	3	6				Education, Multilingual Education			
49	EDUC 600	Research Methods II	3	6				1 year GSE Educ.Leadership, 1 year GSE MA in Multil.Education			
50	EDUC 670	Internship Project	6	12				1 year GSE Educ.Leadership			
51	EDUC 671	Work-based project	6	12				1 year GSE Educ.Leadership			
52	EDUC 675	Learning to Work	4.5	9				2 year GSE Educ.Leadership			
MSc Educational Leadership IE											
53	EDIE 692	Thesis Seminar III	4.5	9				2 year GSE Educ.Leadership			
MSc Educational Leadership SE											
54	EDSE 620	Perspectives on Inclusive Education	3	6				2 year GSE MA in Multil.Education			
55	EDSE 692	Thesis Seminar III	4.5	9				2 year GSE Educ.Leadership			
Other											
Other											
56	T - 009AM 16	Managerial Decision Making	3	6							
57	T - 032AM 16	Project Management: Managerial Approach	3	6							
58	T - UES 15	Political Analysis	3	6							
SoM											
MMM											
59	MMMM 507	Critical Analysis of the Contemporary Concepts in Molecular Medicine	3	6							
60	MMMM 508	Molecular Immunology	3	6							
61	MMMM 509	From the Bench to the Bedside: Drug Development and Clinical Trials	3	6							
62	MMMM 510	Natural Medicine	3	6							
63	MMMM 511	Research Methods in Molecular Biomedicine	3	6							
64	MMMM 512	Molecular Basis of Chronic Inflammation	1	2							

65	MMMM 690	Master Research Project	15	30							
Medicine											
66	MHPW 200	Health, Physical Fitness, and Well Being	3	6							
Public Health											
67	PUBH 512	Biostatistical Modeling and Sampling	3	6							
68	PUBH 522	Advanced Analytical Epidemiology	3	6							
69	PUBH 551	Health Services Management, Health Economic and Health Policy	3	6							
70	PUBH 552	Principles of Health Economics and Policy	3	6	PUBH 551 Health Services Management, Health Economic and Health Policy (3696) (C and above)						
71	PUBH 561	Graduate Research Seminar I	3	6							
72	PUBH 631	Social and Behavioral Sciences in Public Health	3	6							
73	PUBH 682	Master's Project Implementation	12	24							
SMG											
Mining Engineering											
74	MINE 507	Rock Excavation Methods	3	6				1 year Gr SMG Mining Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
75	MINE 508	Advanced Rock Mechanics	3	6				1 year Gr SMG Mining Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
76	MINE 509	Advanced Surface Mine Design	3	6				1 year Gr SMG Mining Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
77	MINE 510	Advanced Underground Mine Design	3	6				1 year Gr SMG Mining Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
78	MINE 691	Thesis II	15	30	MINE 690 Thesis I (4531) (P)			2 year Gr SMG Mining Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
Petroleum Engineering											
79	PETE 500	Research Methods	3	6				1 year Gr SMG Petroleum Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
80	PETE 506	Advanced Reservoir Simulation	3	6				1 year Gr SMG Petroleum Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
81	PETE 507	Advanced Reservoir Engineering	3	6				1 year Gr SMG Petroleum Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		

82	PETE 508	Advanced Production Engineering	3	6				1 year Gr SMG Petroleum Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
83	PETE 606	Advanced Enhanced Oil Recovery	3	6				1 year Gr SMG Petroleum Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
School of Mining and Geosciences											
84	SMG 520	Research Methods	3	6				1 year Gr SMG Mining Engineering	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
SSH											
Area Studies											
85	EAS 502	Disciplinary Methodology	4	8				1 year Gr SHSS Eurasian Studies, 2 year Gr SHSS Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
86	EAS 504	Thesis II	12.5	25	EAS 500 Introduction to Eurasia (1632) (C- and above) AND EAS 501 General Methodology (1633) (C- and above) AND EAS 502 Disciplinary Methodology (1379) (C- and above) AND EAS 503 Thesis I (2141) (C- and above)			1 year Gr SHSS Eurasian Studies, 2 year Gr SHSS Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
87	EAS 511	Independent Study in Eurasian Studies	4	8				1 year Gr SHSS Eurasian Studies, 2 year Gr SHSS Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
Biological Science											
88	BIOL 570	Advanced Biotechnology	3	6				Biological Sciences	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
89	BIOL 580	Applied Bioinformatics	3	6	BIOL 520 Statistical Methods in Life Sciences (1203) (C and above)			Biological Sciences	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
90	BIOL 591	Cellular Biophysics	3	6				Biological Sciences	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
91	BIOL 600	Graduate Seminar Series	3	6				Biological Sciences			
92	BIOL 699	Research Thesis II	6	12				Instructor's permission required. Registration by Add Course form only			
Economics											

93	ECON 515	Industrial Organization	4	8	ECON 531 Econometrics (2505) (C- and above)			1 year Gr SHSS Economics, 2 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
94	ECON 521	Microeconomic Theory II	4	8	ECON 501 Microeconomics I (2187) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)			1 year Gr SHSS Economics, 2 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
95	ECON 522	Macroeconomics II	4	8	ECON 502 Macroeconomics I (2186) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)			1 year Gr SHSS Economics, 2 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
96	ECON 524	Research Methodology	4	8	ECON 501 Microeconomics I (2187) (C- and above) AND ECON 502 Macroeconomics I (2186) (C- and above) AND ECON 511 Statistics (2188) (C- and above)	ECON 531 Econometrics (2505) (D and above)		1 year Gr SHSS Economics, 2 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
97	ECON 531	Econometrics	4	8	ECON 511 Statistics (2188) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)			1 year Gr SHSS Economics, 2 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
98	ECON 590	Thesis II	8	16	ECON 589 Thesis I (3714) (P)			1 year Gr SHSS Economics, 2 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
History, Philosophy and Religious Studies											
99	HST 511	Exploring Eurasian Environmental History	4	8				1 year Gr SHSS Eurasian Studies, 2 year Gr SHSS Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
Languages, Literature and Linguistics											
100	WLL 542	Contemporary Russian and Russophone Literature	4	8				1 year Gr SHSS Eurasian Studies, 2 year Gr SHSS Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
Mathematics											

101	MATH 512	Optimization Methods and Techniques	3	6				Applied Mathematics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
102	MATH 519	Scientific Computing	3	6				Applied Mathematics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
103	MATH 541	Data Analysis and Statistical Learning	3	6	MATH 540 Statistical Learning (2340) (B- and above)			Applied Mathematics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
104	MATH 551	Advanced Numerical Methods	3	6				Applied Mathematics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
Physics											
105	PHYS 510	Quantum Mechanics	3	6				Physics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
106	PHYS 520	Statistical Physics	3	6				Physics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
Political Science and International Relations											
107	PLS 510	Advanced Research I	4	8				1 year Gr SHSS Political Sciences and Int. Relations, 2 year Gr SHSS Political Sciences and Int. Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
108	PLS 522	Just War Theory	4	8				1 year Gr SHSS Political Sciences and Int. Relations, 2 year Gr SHSS Political Sciences and Int. Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
109	PLS 541	Advanced Topics in Comparative Politics	4	8				1 year Gr SHSS Political Sciences and Int. Relations, 2 year Gr SHSS Political Sciences and Int. Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
110	PLS 545	Political Violence	4	8				1 year Gr SHSS Political Sciences and Int. Relations, 2 year Gr SHSS Political Sciences and Int. Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		

111	PLS 547	Comparative Political Parties	4	8				1 year Gr SHSS Political Sciences and Int. Relations, 2 year Gr SHSS Political Sciences and Int. Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
112	PLS 551	Advanced Topics in International Relations	4	8				1 year Gr SHSS Political Sciences and Int. Relations, 2 year Gr SHSS Political Sciences and Int. Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
113	PLS 557	International Security and Conflict	4	8				1 year Gr SHSS Political Sciences and Int. Relations, 2 year Gr SHSS Political Sciences and Int. Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
114	PLS 598	MA Thesis I	6	12				1 year Gr SHSS Political Sciences and Int. Relations, 2 year Gr SHSS Political Sciences and Int. Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
Sociology and Anthropology											
115	SOC 521	Informal Practices and Social Order in Eurasia	4	8				1 year Gr SHSS Eurasian Studies, 2 year Gr SHSS Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST, SoM		
SEDS											
Chemical Engineering											
116	MCHE 600	MSc Thesis in Chemical Engineering	15	30							
Chemical and Materials Engineering											
117	MCHME 600	Research Seminar	3	6				1 year Gr SEng Chemical and Materials Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
118	MCHME 606	Advanced Heat and Mass Transfer	3	6				1 year Gr SEng Chemical and Materials Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		

119	MCHME 704	Advanced Safety, Reliability and Risk Engineering in Process Industries	3	6				1 year Gr SEng Chemical and Materials Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
120	MCHME 712	Advanced Tissue Engineering	3	6				1 year Gr SEng Chemical and Materials Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
Civil Engineering											
121	MSC 600	Research Methods and Ethics	3	6				1 year Gr SEng Chemical and Materials Engineering, 1 year Gr SEng Civil and Environmental Engineering, 1 year Gr SEng Electrical and Computer Engineering, 1 year Gr SEng Mechanical and Aerospace Engineering	Science, Engineering and Technology		
Civil and Environmental Engineering											
122	EMEM 510	Managerial Accounting	2	4				1 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
123	EMEM 511	Business Strategy	2	4				1 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		

124	EMEM 512	Leading Change	2	4				1 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
125	EMEM 513	Entrepreneurship	2	4				1 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
126	EMEM 514	Finance	2	4				1 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
127	EMEM 516	Management of Organizations	2	4				1 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
128	EMEM 517	Marketing	2	4				1 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		

129	EMEM 527	Globalization and Engineering	3	6				2 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
130	EMEM 529	Capstone Project	8	16				2 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
131	EMEM 535	Managing Product and Service Development	3	6				2 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
132	EMEM 543	Quality and Lean Management	3	6				2 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
133	EMEM 545	Business Communication	2	4				1 year Gr SENG Engineering Management	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		

134	MCEE 600	Research Seminar	3	6				1 year Gr SEng Civil and Environmental Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
135	MCEE 606	Advanced Project Management	3	6				1 year Gr SEng Civil and Environmental Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
136	MCEE 700	Structural Dynamics and Earthquake Engineering	3	6				1 year Gr SEng Civil and Environmental Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
137	MCEE 701	Advanced Concrete Technology	3	6				1 year Gr SEng Civil and Environmental Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
138	MCEE 703	Theory of Physico-Chemical Treatment Processes	3	6				1 year Gr SEng Civil and Environmental Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		

139	MCEE 704	Contaminated Site Management and Soil Treatment Technologies	3	6				1 year Gr SEng Civil and Environmental Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
Computer Science											
140	CSCI 502	Hardware Software Co-Design	3	6	CSCI 501 Software Principles and Practice (2408) (C- and above)			Computer Science, Robotics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
141	CSCI 515	Modeling and Simulation for Computer Science	3	6				Computer Science, Robotics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
142	CSCI 591	Advanced Artificial Intelligence	3	6	CSCI 501 Software Principles and Practice (2408) (C- and above) OR DS 501 Fundamentals of Data Science (5218) (C- and above)			Computer Science	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	
143	CSCI 694	Thesis	15	30				Registration by SST School Office			
144	SEDS 502	Teaching Practicum	3	6				Registration by SST School Office			
145	SEDS 504	Innovation and Entrepreneurship	3	6				Registration by SST School Office			
146	SEDS 592	Research Seminar	3	6				Registration by SST School Office			
Electrical and Computer Engineering											
147	MECE 600	Research Seminar	3	6				1 year Gr SEng Electrical and Computer Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		

148	MECE 700	Industrial and Commercial Power System	3	6				1 year Gr SEng Electrical and Computer Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
149	MECE 703	Advanced Photonics	3	6				1 year Gr SEng Electrical and Computer Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
150	MECE 705	Advanced Mixed Signal Circuit Design	3	6				1 year Gr SEng Electrical and Computer Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
151	MECE 717	Pattern Recognition and Machine Learning	3	6				1 year Gr SEng Electrical and Computer Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
152	MECE 718	Deep Learning for Internet of Things	3	6				1 year Gr SEng Electrical and Computer Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		

153	MECE 724	System Modelling and Control	3	6				1 year Gr SEng Electrical and Computer Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
Mechanical Engineering											
154	MME 600	Master Thesis in Mechanical Engineering	15	30							
Mechanical and Aerospace Engineering											
155	MMAE 600	Research Seminar	3	6				1 year Gr SEng Mechanical and Aerospace Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
156	MMAE 604	Advanced Computational Fluid Dynamics and Heat Transfer in Mechanical Engineering	3	6				1 year Gr SEng Mechanical and Aerospace Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
157	MMAE 700	Advanced Statistics and Probability	3	6				1 year Gr SEng Mechanical and Aerospace Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		

158	MMAE 701	Numerical Techniques for Engineers	3	6				1 year Gr SEng Mechanical and Aerospace Engineering	1 year PhD SENG Science, Engineering and Technology, 2 year PhD SENG Science, Engineering and Technology, 3 year PhD SENG Science, Engineering and Technology, 4 year PhD SENG Science, Engineering and Technology, 5 year PhD SENG Science, Engineering and Technology		
Robotics and Mechatronics											
159	ROBT 502	Robot Perception & Vision	3	6	ROBT 501 Robot Manipulation and Mobility (2263) (C- and above)			Robotics	SST	GSB, GSE, GSPP, SEng, SHSS, SMG, SoM	