

**Course Requirements and Registration Priorities  
(Graduate: Master), Spring 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	MCHE 601	Pipeline Engineering & Flow Assurance	3	6							
2	MCHE 602	Process Engineering and Simulation	3	6	MCHE 615 Advanced Unit Operations (D and above)						
3	MCHE 603	Crude Oil Processing	3	6							
4	MCHE 604	Natural Gas Processing	3	6							
5	MCHE 605	Petroleum Refining Water/Wastewater Use and Management	3	6							
<b>Civil Engineering</b>											
6	E MEM 510	Managerial Accounting	2	4							
7	E MEM 511	Business Strategy	2	4							
8	E MEM 512	Leading Change	2	4							
9	E MEM 513	Entrepreneurship	2	4							
10	E MEM 514	Finance	2	4							
11	E MEM 516	Management of Organizations	2	4							
12	E MEM 517	Marketing	2	4							
13	E MEM 527	Globalization and Engineering	3	6							
14	E MEM 529	Capstone Project	8	16							
15	E MEM 544	Lean Production	1.5	3							
16	E MEM 545	Business Communication	2	4							
17	MCE 610	Sustainable Transportation Systems	3	6							
18	MCE 611	Sustainable Infrastructure Systems	3	6							
19	MCE 612	Resilient Structural and Geotechnical Systems	3	6							

20	MCE 613	Numerical Method in Geotechnical Engineering	3	6							
21	MCE 615	Applications of Geomatics in Civil Engineering	3	6							
<b>Electrical and Electronic Engineering</b>											
22	MEE 601	Industrial and Commercial Power System	3	6							
23	MEE 602	Advanced Power Electronics	3	6							
24	MEE 603	Special Topics in Power Engineering	3	6							
25	MEE 609	Internet of Things	3	6							
26	MEE 615	Wireless Communications	3	6							
27	MEE 618	Optical Communication	3	6							
28	MEE 619	Photonics Technology	3	6							
29	MEE 620	RF and Microwave Communications Systems	3	6							
<b>Mechanical Engineering</b>											
30	MME 622	Advanced Design and Manufacturing	3	6							
31	MME 623	Design and Manufacturing with Environmental Concern	3	6							
32	MME 624	Design Optimization	3	6							
33	MME 625	Advanced Computer Aided Engineering	3	6							
34	MME 626	Advanced Manufacturing Processes and Strategies	3	6							
<b>SST</b>											
<b>Biological Science</b>											
35	BIOL 530	Bioethics Principles and Practices	3	6							
36	BIOL 550	Structural and Molecular Biology in Health and Disease	3	6							
37	BIOL 560	Molecular Biology of Prokaryotic Cells	3	6							
38	BIOL 600	Graduate Seminar Series	3	6							
39	BIOL 699	Research Thesis II	6	12							
<b>Computer Science</b>											
40	CSCI 502	Hardware Software Co-Design	3	6	CSCI 501 Software Principles and Practice (C- and above)						
41	CSCI 591	Advanced Artificial Intelligence	3	6	CSCI 501 Software Principles and Practice (C- and above)						
<b>Physics</b>											
42	PHYS 510	Quantum Mechanics	3	6							
43	PHYS 520	Statistical Physics	3	6							
44	SST 502	Teaching Practicum	3	6	SST 501 Teaching and Learning (C- and above)						

45	SST 504	Innovation & Entrepreneurship	3	6						
46	SST 592	Research Seminar	3	6						
47	SST 692	Thesis	15	30						
<b>Robotics and Mechatronics</b>										
48	ROBT 502	Robot Perception & Vision	3	6	ROBT 501 Robot Manipulation and Mobility (C- and above)					
<b>SHSS</b>										
<b>Area Studies</b>										
49	EAS 502	Disciplinary Methodology	4	8						
50	EAS 504	Thesis II	12.5	25	EAS 500 Introduction to Eurasia (C- and above) AND EAS 501 General Methodology (C- and above) AND EAS 502 Disciplinary Methodology (C- and above) AND EAS 503 Thesis I (C- and above)					
<b>Economics</b>										
51	ECON 521	Microeconomic Theory II	4	8	ECON 501 Microeconomics I (C- and above) AND ECON 512 Mathematical Economics (C- and above)					
52	ECON 522	Macroeconomics II	4	8	ECON 502 Macroeconomics I (C- and above) AND ECON 512 Mathematical Economics (C- and above)					
53	ECON 524	Research Methodology	4	8	ECON 501 Microeconomics I (C- and above) AND ECON 502 Macroeconomics I (C- and above) AND ECON 511 Statistics (C- and above)	ECON 531 Econometrics (D and above)				
54	ECON 531	Econometrics	4	8	ECON 511 Statistics (C- and above) AND ECON 512 Mathematical Economics (C- and above)					
55	ECON 590	Thesis II	8	16	ECON 589 Thesis I (P and above)					
<b>History, Philosophy and Religious Studies, History, Philosophy and Religious Studies</b>										
56	REL 572/HST 572	History of Sufism in the Middle East and Central Asia	4	8						
<b>Languages, Literature and Linguistics</b>										
57	LING 570	Multilingualism and Language Contact	4	8						

58	WLL 542	Contemporary Russian and Russophone Literature	4	8							
<b>Political Science and International Relations</b>											
59	PLS 510	Advanced Research II	4	8	PLS 511 Advanced Research I (D and above)						
60	PLS 516	Experimental Political Science	4	8	PLS 511 Advanced Research I (C- and above)						
61	PLS 521	Theories of Political Obligations	4	8							
62	PLS 522	Just War Theory	4	8							
63	PLS 541	Advanced Topics in Comparative Politics	4	8							
64	PLS 547	Comparative Political Parties	4	8							
65	PLS 557	International Security and Conflict	4	8							
66	PLS 598	MA Thesis for Political Science and International Relations	10	20							
<b>Sociology and Anthropology, Sociology and Anthropology</b>											
67	SOC 518/ANT 580	Gender, Power and Social Change in South Asia	4	8							
<b>GSB</b>											
<b>GSB</b>											
68	MBA 06	Global Financial management	2	4							
69	MBA 10	Foundations of Strategy	2	4							
70	MBA 12	Operations Management	2	4							
71	MBA 13	Macroeconomics	2	4							
72	MBA 14	Decision Models	2	4							
73	MBA 15	Corporate Finance	2	4							
74	MBA 16	Entrepreneurship	2	4							
75	MBA 18	Financial Statement Analysis	2	4							
<b>GSPP</b>											
<b>GSPP</b>											
76	MPA 608	Strategic Management and Leadership	4	8							
77	MPA 610	National Identity and Public Policy	4	8				1 year GSPP Public Administration	GSPP		
78	MPA 611	Benefit Cost Analysis	4	8							
79	MPA 615	Law, institutions and development	3	6							
80	MPA 616	Development, Industrial and Finance Policies	3	6							
81	MPA 617	Institutions and development policies	4	8				1 year GSPP Public Administration	GSPP		
82	MPA 621	Global Health Policies and Systems	3	6							

83	MPA 622	Public Policy and Economics of Health Systems	4	8				1 year GSPP Public Administration	GSPP		
84	MPA 639	International Financial Policy	4	8				1 year GSPP Public Administration	GSPP		
85	MPA 699	Master's Project with Overseas Component	0	0							
86	MPP 602	Macroeconomics and Public Policy	4	8							
87	MPP 613	Public Policy Research Design and Analysis	4	8							
88	MPP 622	Economics, Philosophy and Public Policy	4	8				Public Policy	GSPP		
89	MPP 623	International Political Economy	4	8				Public Policy	GSPP		
90	MPP 626	International Political Economy of Energy and Climate Change	4	8				Public Policy	GSPP		
91	MPP 632	Public International Law	4	8				Public Policy	GSPP		
92	MPP 641	Public Management and Leadership	4	8							
93	MPP 662	Public Project Evaluation and Analysis	4	8	MPP 601 Microeconomics and Public Policy (D and above)			Public Policy	GSPP		
94	MPP 699	Policy Analysis Exercise with Singapore Component	4	8	MPP 601 Microeconomics and Public Policy (D and above) AND MPP 602 Macroeconomics and Public Policy (D and above) AND MPP 611 Statistical Techniques for Public Policy (D and above) AND MPP 612 Public Policy Research and Evaluation (D and above) AND MPP 613 Public Policy Research Design and Analysis (D and above) AND MPP 621 Introduction to Public Policy and Analysis (D and above) AND MPP 631 Politics and Public Policy (D and above)						
<b>GSE</b>											
<b>GSE</b>											
95	EDHE 642	Globalisation and higher education	3	6							
96	EDHE 649	Fundamentals of Higher Education	3	6							
97	EDIE 651	Inclusive Education: Policy Perspectives	3	6							
98	EDML 611	Plurilingual Individual	3	6							

99	EDML 612	Multilingual Society	3	6							
100	EDML 614	Multilingual curriculum development and assessment	3	6							
101	EDML 629	Multiliteracies: Teaching Language and Literacy for a Multilingual Context	3	6							
102	EDML 691	Thesis Research II	3	6							
103	EDSE 623	Foundations of Early Childhood Education	3	6							
104	EDSE 630	Professional Identity	3	6							
105	EDUC 506	Academic English II	1.5	3							
106	EDUC 511	Advanced English for Education Professionals II	3	6							
107	EDUC 512	English for Thesis Writing I	3	6							
108	EDUC 513	English for Thesis Writing II	3	6							
109	EDUC 571	Basic Kazakh	3	6							
110	EDUC 572	Kazakh for Professional Purposes	3	6							
111	EDUC 573	Academic Writing in Kazakh	3	6							
112	EDUC 600	Research Methods II	3	6							
113	EDUC 640	Thesis Seminar (Part III)	1.5	3							
114	EDUC 670	Internship Project	6	12							
115	EDUC 671	Work-based project	6	12							
<b>SoM</b>											
<b>Public Health</b>											
116	PUBH 512	Biostatistical Modeling and Sampling	3	6							
117	PUBH 522	Advanced Analytical Epidemiology	3	6							
118	PUBH 561	Graduate Research Seminar I	3	6							
119	PUBH 631	Social and Behavioral Sciences in Public Health	3	6							