

**Course Requirements and Registration Priorities
(Graduate: Master), Spring 2018**

#	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	4							
2	GSBF 514	Corporate Finance	2	4							
3	GSBF 518	Risk Management	2	4							
4	GSBF 519	Financial Reporting and Analysis	2	4							
5	GSBF 521	Ethics, Governance and Regulation	2	4							
6	GSBF 541	Global Finance Experience Residency (I)	2	4							
7	MBA 10	Foundations of Strategy	2	4							
8	MBA 13	Macroeconomics	2	4							
9	MBA 14	Decision Models	2	4							
10	MBA 15	Corporate Finance	2	4							
11	MBA 17	Negotiations	2	4							
12	MBAE 13	Raising Capital	2	4							
13	MBAE 2	Emerging Markets Strategy	2	4							
14	MSF 01	Financial Modeling	2	4							
15	MSF 02	Thesis Preparation Seminar	2	4							
GSPP											
GSPP											
16	MPA 608	Strategic Management and Leadership	4	8							
17	MPA 610	National Identity and Public Policy	4	8					GSPP		
18	MPA 611	Benefit Cost Analysis	4	8					GSPP		
19	MPA 624	Public Management Reforms in Transitional Countries	4	8					GSPP		
20	MPA 699	Master's Project with Overseas Component	0	0							
21	MPE 617	Institutions and development policies	4	8					GSPP		

22	MPP 602	Macroeconomics and Public Policy	4	8							
23	MPP 613	Public Policy Research Design and Analysis	4	8							
24	MPP 623	International Political Economy	4	8				2 year GSPP Public Policy	GSPP		
25	MPP 627	Environmental Economics and Public Policy	4	8				2 year GSPP Public Policy	GSPP		
26	MPP 628	Economic Growth in Developing Asia	4	8				2 year GSPP Public Policy	GSPP		
27	MPP 641	Public Management and Leadership	4	8							
28	MPP 685	Urban Planning and Public Policy	4	8				2 year GSPP Public Policy	GSPP		
29	MPP 699	Policy Analysis Exercise with Singapore Component	8	16	MPP 601 Microeconomics and Public Policy (1449) (D and above) AND MPP 602 Macroeconomics and Public Policy (1023) (D and above) AND MPP 611 Statistical Techniques for Public Policy (1450) (D and above) AND MPP 612 Public Policy Research and Evaluation (1025) (D and above) AND MPP 613 Public Policy Research Design and Analysis (1301) (D and above) AND MPP 621 Introduction to Public Policy and Analysis (1451) (D and above) AND MPP 631 Politics and Public Policy (1303) (D and above)						
GSE											
GSE											
30	EDHE 610	Applying Educational Leadership in Kazakhstan	3	6							
31	EDHE 692	Thesis Seminar III	4.5	9							
32	EDIE 610	Applying Educational Leadership in Kazakhstan	3	6							
33	EDIE 692	Thesis Seminar III	4.5	9							
34	EDML 611	Plurilingual Individual	3	6				1 year GSE MA in Multil.Education			

35	EDML 612	Multilingual Society	3	6				1 year GSE MA in Multil.Education			
36	EDML 621	Principles and Methods of Language Education in Multilingual Contexts	3	6				2 year GSE MA in Multil.Education			
37	EDML 691	Thesis Research II	6	12							
38	EDSE 610	Applying Educational Leadership in Kazakhstan	3	6							
39	EDSE 620	Perspectives on Inclusive Education	3	6							
40	EDSE 692	Thesis Seminar III	4.5	9							
41	EDUC 506	Academic English II	1.5	3				1 year GSE Educ.Leadership			
42	EDUC 508	Academic English IV	1.5	3							
43	EDUC 511	Advanced English for Education Professionals II	3	6				1 year GSE MA in Multil.Education			
44	EDUC 513	English for Thesis Writing II	3	6							
45	EDUC 572	Kazakh for Professional Purposes	3	6				1 year GSE MA in Multil.Education, 1 year GSE PhD Education			
46	EDUC 573	Academic Writing in Kazakh	3	6				1 year GSE Educ.Leadership, 1 year GSE MA in Multil.Education, 1 year GSE PhD Education			
47	EDUC 600	Research Methods II	3	6				1 year GSE Educ.Leadership, 1 year GSE MA in Multil.Education			
48	EDUC 670	Internship Project	6	12				1 year GSE Educ.Leadership			
49	EDUC 671	Work-based project	6	12				1 year GSE Educ.Leadership			
50	EDUC 675	Learning to Work	4.5	9							
SoM											
Biomedical Sciences											
51	MMMM 507	Critical Analysis of the Contemporary Concepts in Molecular Medicine	3	6							
52	MMMM 508	Molecular Immunology	2	4							

53	MMMM 509	From the Bench to the Bedside: Drug Development and Clinical Trials	3	6							
54	MMMM 510	Natural Medicine	3	6							
55	MMMM 511	Research Methods in Molecular Biomedicine	3	6							
56	MMMM 512	Molecular Basis of Chronic Inflammation	1	2							
Public Health											
57	PUBH 512	Biostatistical Modeling and Sampling	3	6							
58	PUBH 522	Advanced Analytical Epidemiology	3	6							
59	PUBH 561	Graduate Research Seminar I	3	6							
60	PUBH 631	Social and Behavioral Sciences in Public Health	3	6							
61	PUBH 633	Methods in Public Health	3	6							
62	PUBH 682	Master's Project Implementation	12	24							
SMG											
Mining Engineering											
63	MINE 505	Advanced Mine Ventilation	3	6							
64	MINE 509	Advanced Surface Mine Design	3	6							
65	MINE 510	Advanced Underground Mine Design	3	6							
66	MINE 601	Mine Management and Sustainability	3	6							
School of Mining and Geosciences											
67	SMG 520	Research Methods	3	6							
SSH											
Area Studies											
68	EAS 502	Disciplinary Methodology	4	8							

69	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)			Eurasian Studies			
70	EAS 511	Independent Study in Eurasian Studies	4	8				Through Add form only			
Biological Science											
71	BIOL 530	Bioethics Principles and Practices	3	6				1 year Gr SST Biological Sciences			
72	BIOL 550	Structural and Molecular Biology in Health and Disease	3	6				1 year Gr SST Biological Sciences			
73	BIOL 560	Molecular Biology of Prokaryotic Cells	3	6				1 year Gr SST Biological Sciences			
74	BIOL 600	Graduate Seminar Series	3	6				1 year Gr SST Biological Sciences, 2 year Gr SST Biological Sciences			
75	BIOL 637	Fundamentals of Advanced Microscopy	3	6	BIOL 501 Fundamentals of Biological Sciences (1201) (C- and above)						
76	BIOL 699	Research Thesis II	6	12				2 year Gr SST Biological Sciences			
Economics											
77	ECON 521	Microeconomic Theory II	4	8	ECON 501 Microeconomics I (2187) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)			Economics, Eurasian Studies, Political Science and International Relations			
78	ECON 522	Macroeconomics II	4	8	ECON 502 Macroeconomics I (2186) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)			Economics, Eurasian Studies, Political Science and International Relations			
79	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)		Economics, Eurasian Studies, Political Science and International Relations			

80	ECON 528	Wages and the Labor Market	4	8	ECON 521 Microeconomic Theory II (2506) (C- and above) AND ECON 531 Econometrics (2505) (C- and above)			Economics, Eurasian Studies, Political Science and International Relations			
81	ECON 531	Econometrics	4	8	ECON 511 Statistics (2188) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)			Economics, Eurasian Studies, Political Science and International Relations			
82	ECON 590	Thesis II	8	16	ECON 589 Thesis I (3714) (P)						
History, Philosophy and Religious Studies											
83	HST 524	Global Histories	4	8							
Mathematics											
84	MATH 512	Optimization Methods and Techniques	3	6	MATH 517 Scientific Modeling and Simulation with Mathematics (2341) (B- and above)			1 year Gr SST Applied Mathematics			
85	MATH 541	Data Analysis and Statistical Learning	3	6	MATH 540 Statistical Learning (2340) (B- and above)			1 year Gr SST Applied Mathematics			
86	MATH 551	Advanced Numerical Methods	3	6	MATH 517 Scientific Modeling and Simulation with Mathematics (2341) (B- and above)			1 year Gr SST Applied Mathematics			
Physics											
87	PHYS 510	Quantum Mechanics	3	6				1 year Gr SST Physics			
88	PHYS 520	Statistical Physics	3	6				1 year Gr SST Physics			
89	SST 502	Teaching Practicum	3	6	SST 501 Teaching and Learning (2260) (C- and above)			1 year Gr SST Applied Mathematics, 1 year Gr SST Computer Science, 1 year Gr SST Physics, 1 year Gr SST Robotics and Mechatronics			
90	SST 504	Innovation & Entrepreneurship	3	6				1 year Gr SST Computer Science, 1 year Gr SST Physics, 1 year Gr SST Robotics and Mechatronics			
91	SST 592	Research Seminar	3	6				1 year Gr SST Applied Mathematics, 1 year Gr SST Computer Science, 1 year Gr SST Physics, 1 year Gr SST Robotics and Mechatronics			

92	SST 692	Thesis	15	30				2 year Gr SST Computer Science, 2 year Gr SST Physics, 2 year Gr SST Robotics and Mechatronics			
Political Science and International Relations											
93	PLS 510	Advanced Research II	4	8	PLS 511 Advanced Research I (1631) (D and above)			1 year Gr SHSS Political Sciences and Int. Relations			
94	PLS 531	Politics and Governance of the Russian Federation	4	8				2 year Gr SHSS Political Sciences and Int. Relations	1 year Gr SHSS Political Sciences and Int. Relations		
95	PLS 540	Core Seminar in Comparative Politics	4	8				1 year Gr SHSS Political Sciences and Int. Relations			
96	PLS 547	Comparative Political Parties	4	8				2 year Gr SHSS Political Sciences and Int. Relations	1 year Gr SHSS Political Sciences and Int. Relations		
97	PLS 555	The Politics of Arms in International Relations	4	8				2 year Gr SHSS Political Sciences and Int. Relations	1 year Gr SHSS Political Sciences and Int. Relations		
98	PLS 558	International Organization	4	8	PLS 550 Core Seminar in IR (1372) (C- and above)			2 year Gr SHSS Political Sciences and Int. Relations	1 year Gr SHSS Political Sciences and Int. Relations		
99	PLS 598	MA Thesis I	6	12				2 year Gr SHSS Political Sciences and Int. Relations			
Sociology and Anthropology											
100	ANT 520	Materiality in Eurasian Society	4	8							
SEDS											
Chemical Engineering											
101	MCHE 601	Pipeline Engineering & Flow Assurance	3	6							
102	MCHE 602	Process Engineering and Simulation	3	6	MCHE 615 Advanced Unit Operations (3145) (D and above)						
103	MCHE 603	Crude Oil Processing	3	6							
104	MCHE 604	Natural Gas Processing	3	6							
105	MCHE 605	Petroleum Refining Water/Wastewater Use and Management	3	6							

Civil Engineering

106	EMEM 510	Managerial Accounting	2	4						
107	EMEM 511	Business Strategy	2	4						
108	EMEM 512	Leading Change	2	4						
109	EMEM 513	Entrepreneurship	2	4						
110	EMEM 514	Finance	2	4						
111	EMEM 516	Management of Organizations	2	4						
112	EMEM 517	Marketing	2	4						
113	EMEM 529	Capstone Project	8	16						
114	EMEM 535	Managing Product and Service Development	3	6						
115	EMEM 543	Quality and Lean Management	3	6						
116	EMEM 545	Business Communication	2	4						
117	MCE 609	Contaminated Site Management and Soil Treatment Technologies	3	6						
118	MCE 610	Sustainable Transportation Systems	3	6						
119	MCE 611	Sustainable Infrastructure Systems	3	6						
120	MCE 612	Resilient Structural and Geotechnical Systems	3	6						

Computer Science

121	CSCI 502	Hardware Software Co-Design	3	6	CSCI 501 Software Principles and Practice (2408) (C- and above)			1 year Gr SST Computer Science, 1 year Gr SST Robotics and Mechatronics		
122	CSCI 591	Advanced Artificial Intelligence	3	6	CSCI 501 Software Principles and Practice (2408) (C- and above)			1 year Gr SST Computer Science		

Electrical and Electronic Engineering

123	MEE 601	Industrial and Commercial Power System	3	6						
124	MEE 602	Advanced Power Electronics	3	6						
125	MEE 609	Internet of Things	3	6						

126	MEE 615	Wireless Communications	3	6							
127	MEE 618	Optical Communication	3	6							
128	MEE 620	RF and Microwave Communications Systems	3	6							
129	MEE 624	Pattern Recognition	3	6							
130	MEE 627	Switched Capacitor Converters (Special Topics in Power Engineering)	3	6							
131	MEE 629	System Design for Wireless	3	6							
Mechanical Engineering											
132	MME 622	Advanced Design and Manufacturing	3	6							
133	MME 623	Design and Manufacturing with Environmental Concern	3	6							
134	MME 624	Design Optimization	3	6							
135	MME 625	Advanced Computer Aided Engineering	3	6							
136	MME 626	Advanced Manufacturing Processes and Strategies	3	6							
Robotics and Mechatronics											
137	ROBT 502	Robot Perception & Vision	3	6	ROBT 501 Robot Manipulation and Mobility (2263) (C- and above)				1 year Gr SST Robotics and Mechatronics		