

## Course Requirements and Registration Priorities (Master), Fall 2017

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
<b>SHSS</b>											
<b>Political Science and International Relations</b>											
1	PLS 521	Theories of Political Obligations	4	8				1 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
<b>GSB</b>											
<b>GSB</b>											
2	EMBAE 700	Entrepreneurial Finance	2.5	5							
3	GSBF 501	Team Building and Business Communications	1	2							
4	GSBF 511	Applied Data Analytics I	2.5	5							
5	GSBF 512	Principles of Finance	2.5	5							
6	GSBF 513	Financial Data Analytics II	2.5	5							
7	GSBF 515a	Investments I	2.5	5							
8	GSBF 516	Financial Markets and Institutions	2	4							
9	GSBF 517	Macroeconomics for Finance	2.5	5							
10	MBA 01	Consequential Leadership	1	2							
11	MBA 02	Business Mathematics and Business Computer Application	1	2							
12	MBA 03	Financial Accounting	2	4							
13	MBA 04	Probability and Statistics	2	4							
14	MBA 05	Business Communication	2	4							
15	MBA 07	Managerial Effectiveness	2	4							
16	MBA 08	Managerial Economics	2	4							
17	MBA 09	Marketing Management	2	4							
18	MBA 17	Negotiations	2	4							
19	MBA 19	Distinguished Speaker Series	0	1							
20	MBA 20	Practicum Project	2.5	5							
21	MBAE 12	Data Analytics for Business	2	4							
22	MBAE 6	International Finance	2	4							

23	MBAE 9	Marketing Strategy	2	4							
<b>GSPP</b>											
<b>Master in Public Administration</b>											
24	MPA 602	Public Administration in Theory and Practice	4	8							
25	MPA 603	Economic Applications for Public Managers	4	8							
26	MPA 605	Research Methods for Public Managers	4	8							
27	MPA 618	Current Issues in Macroeconomic Policy	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
28	MPA 619	Contemporary Issues in Foreign Policy	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
29	MPA 622	Public Policy and Economics of Health Systems	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
30	MPA 699	Master's Project with Overseas Component	0	0							
31	MPE 671	Game Theory and Public Policy	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
32	MPE 682	Sustainable Development and Environmental Governance	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
33	MPE 684	Global Energy Policy	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
<b>Master in Public Policy</b>											
34	MPP 601	Microeconomics and Public Policy	4	8							
35	MPP 611	Statistics for Public Policy	4	8							
36	MPP 612	Public Policy Research and Evaluation	4	8							

37	MPP 621	Public Policy and Analysis	4	8							
38	MPP 625	Central Asian politics: Comparative Analysis	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
39	MPP 626	International Political Economy of Energy and Climate Change	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
40	MPP 631	Politics and Public Policy	4	8							
41	MPP 632	Public International Law	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
42	MPP 636	Weapons of Mass Destruction Nonproliferation and Disarmament	4	8					-, 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
<b>GSE</b>											
<b>MA in Multilingual Education</b>											
43	EDML 601	Introduction to Linguistics	3	6							
44	EDML 610	Foundations of Multilingual Education	3	6							
45	EDML 613	The Multilingual School	3	6							
46	EDML 614	Multilingual curriculum development and assessment	3	6							
47	EDML 623	Globalization and Language Education	3	6							
48	EDML 630	Language Policy and Education Reform Across Contexts	3	6							
49	EDML 690	Thesis Research I	3	6							
<b>MSc Educational Leadership HE</b>											
50	EDHE 609	Introduction to Educational Leadership: Higher Education	3	6							
51	EDHE 621	Education Policy Analysis and Development	3	6							
52	EDHE 642	Globalisation and higher education	3	6							

53	EDHE 649	Fundamentals of Higher Education	3	6							
54	EDHE 691	Thesis Seminar II	3	6							
55	EDUC 502	English for Research	3	6							
56	EDUC 505	Academic English 1	1.5	3							
57	EDUC 507	Academic English III	1.5	3							
58	EDUC 510	Advanced English for Education Professionals I	3	6							
59	EDUC 571	Basic Kazakh	3	6							
60	EDUC 602	Educational Context and Reform in Kazakhstan	3	6							
61	EDUC 607	Research Methods 1	3	6							
<b>MSc Educational Leadership IE</b>											
62	EDIE 609	Introduction to Educational Leadership: Inclusive Education	3	6							
63	EDIE 621	Education Policy Analysis and Development	3	6							
64	EDIE 624	Psychology of Learning (Children as Learners)	3	6							
65	EDIE 691	Thesis Seminar II	3	6							
<b>MSc Educational Leadership SE</b>											
66	EDSE 609	Introduction to Educational Leadership: School Education	3	6							
67	EDSE 620	Perspectives on Inclusive Education	3	6							
68	EDSE 632	School Improvement and Effectiveness	3	6							
69	EDSE 634	Assessment: Theories, policies, practices	3	6							
70	EDSE 636	Preparing Children for the Future: Skills and Employability	3	6							
71	EDSE 691	Thesis Seminar II	3	6							
<b>Other</b>											
<b>Other</b>											
72	T-PP 5178	Leadership and Decision-Making Skills	4	8							
73	T-PP 5196	Education Economics and Policy	4	8							

74	T-PP 5203	Behavioral Economics and Public Policy	4	8							
75	T-PP 5215	Changes in Singapore Political Economy	4	8							
76	T-PP 5267	Urban Transport Policy: A Global View	4	8							
77	T-PP 5269	Environmental Economics and Public Policy	4	8							
78	T-PP 5298	Singapore's Development Experience	4	8							
<b>SoM</b>											
<b>MMM</b>											
79	MMMM 501	Molecular Basis of Infection	3	6							
80	MMMM 502	Molecular Basis of Cancer	3	6							
81	MMMM 503	Bioethics in Research: Principles and Practice	3	6							
82	MMMM 504	Molecular Basis of Genetic Disease	3	6							
83	MMMM 505	Inferential Biostatistics	2	4							
84	MMMM 506	Biocomputing	1	2							
<b>Public Health</b>											
85	PUBH 501	Principles of Public Health Problem Solving	3	6							
86	PUBH 511	Inferential Biostatistics	3	6							
87	PUBH 521	Principles of Analytical Epidemiology	3	6							
88	PUBH 528	Qualitative Research Methods	3	6							
89	PUBH 531	Emerging Infectious Diseases	3	6							
90	PUBH 551	Health Services Management, Health Economic and Health Policy	3	6							
91	PUBH 601	Health Education and Promotion	3	6							
92	PUBH 641	Problem Investigations in Environmental Health	3	6							
93	PUBH 662	Graduate Research Seminar II	3	6							
94	PUBH 681	Master's Project Planning	3	6							
<b>SMG</b>											

Mining Engineering											
95	MINE 501	Foundations of Mining	3	6							
96	MINE 502	Geology for Mining Engineers	3	6							
97	MINE 503	Applied Geostatistics	3	6							
98	MINE 507	Rock Excavation Methods	3	6							
99	MINE 508	Advanced Rock Mechanics	3	6							
SSH											
Area Studies											
100	EAS 500	Introduction to Eurasia	4	8				Eurasian Studies	SHSS, SST		
101	EAS 501	General Methodology	4	8				Eurasian Studies	SHSS, SST		
102	EAS 503	Thesis I	7.5	15	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)			2 year Gr SHSS Eurasian Studies			
Area Studies, Political Science and International Relations, Sociology and Anthropology											
103	SOC 514/PLS 514/EAS 506	Qualitative Research Methods	4	8				Eurasian Studies	SHSS, SST		
Biological Science											
104	BIOL 501	Fundamentals of Biological Sciences	3	6							
105	BIOL 520	Statistical Methods in Life Sciences	3	6							
106	BIOL 600	Graduate Seminar Series	3	6							
107	BIOL 635	Hot Topics in Life Sciences	3	6							
108	BIOL 670	Gene Therapy	3	6							
109	BIOL 690	Research Thesis I	6	12							
Economics											
110	ECON 501	Microeconomics I	4	8				1 year Gr SHSS Economics	SHSS, SST		

111	ECON 502	Macroeconomics I	4	8				1 year Gr SHSS Economics	SHSS, SST		
112	ECON 503	Introduction to Contract Theory and Auctions	4	8				2 year Gr SHSS Economics	SHSS, SST		
113	ECON 505	Behavioral and Experimental Economics	4	8				2 year Gr SHSS Economics	SHSS, SST		
114	ECON 511	Statistics	4	8				1 year Gr SHSS Economics	SHSS, SST		
115	ECON 512	Mathematical Economics	4	8				1 year Gr SHSS Economics	SHSS, SST		
116	ECON 515	Industrial Organization	4	8	ECON 531 Econometrics (2505) (C- and above)			2 year Gr SHSS Economics	SHSS, SST		
117	ECON 516	Empirical Industrial Organization	4	8	ECON 501 Microeconomics I (2187) (C- and above) AND ECON 531 Econometrics (2505) (C- and above)			2 year Gr SHSS Economics	SHSS, SST		
118	ECON 532	Applied Econometrics	4	8				2 year Gr SHSS Economics	SHSS, SST		
119	ECON 589	Thesis I	4	8				2 year Gr SHSS Economics	SHSS, SST		
<b>History, Philosophy and Religious Studies</b>											
120	HST 523	Orthodox Christianity in Modern and Revolutionary Russia	4	8				SHSS, SST			
121	REL 510	Buddhism in Central Asia	4	8				Eurasian Studies	SHSS, SST		
<b>Mathematics</b>											
122	MATH 517	Scientific Modeling and Simulation with Mathematics	3	6							
123	MATH 540	Statistical Learning	3	6							
<b>Physics</b>											
124	PHYS 505	Classical Mechanics	3	6							
125	PHYS 511	Computational Modeling and Simulation	3	6							
126	PHYS 515	Classical Electrodynamics	3	6							
127	PHYS 545	Advanced Instrumentation Methods	3	6							
128	PHYS 550	Advanced Mathematical Physics	3	6							
129	PHYS 574	Lasers and Photonics	3	6							

130	SST 501	Teaching and Learning	3	6							
<b>Political Science and International Relations</b>											
131	PLS 511	Advanced Research I	4	8				1 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
132	PLS 512	Scientific Research in International Relations	4	8	PLS 511 Advanced Research I (1631) (C- and above) AND PLS 510 Advanced Research I (1946) (C- and above) AND PLS 550 Core Seminar in IR (1372) (C- and above)			2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
133	PLS 522	Just War Theory	4	8				1 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
134	PLS 541	Advanced Topics in Comparative Politics	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
135	PLS 545	Political Violence	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
136	PLS 550	Core Seminar in IR	4	8				1 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
137	PLS 565	Politics of International Finance	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
138	PLS 569	International Relations of Eurasia	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
139	PLS 597	Research for Thesis	6	12				2 year Gr SHSS Political Sciences and Int. Relations			
<b>SEDS</b>											
<b>Chemical Engineering</b>											
140	MCHE 600	MSc Thesis in Chemical Engineering	15	30							
141	MCHE 613	Physical Chemistry of Oil & Gas	1.5	3							
142	MCHE 614	Applied Chemical Engineering Thermodynamics	1.5	3							
143	MCHE 615	Advanced Unit Operations	1.5	3							



144	MCHE 616	Advanced Chemical Reactor Engineering	1.5	3	ECHE 481 Chemical Reaction Engineering (1985) (D and above)						
145	MCHE 618	Plant Economics and Planning	1.5	3							
146	MCHE 619	Safety Engineering and Loss Prevention	1.5	3							
<b>Civil Engineering</b>											
147	MCE 600	MSc Thesis in Civil Engineering	15	30							
148	MCE 601	Sustainable Development	3	6							
149	MCE 604	Advanced Project Management	3	6							
150	MCE 606	Environmental Impacts and Assessments	3	6							
151	MSC 615	Advanced Statistics and Probability	3	6							
152	MSC 616	Research Methods	3	6							
<b>Civil and Environmental Engineering</b>											
153	E MEM 507	Project Management	3	6							
154	E MEM 523	Supply Chain Management	3	6							
155	E MEM 527	Globalization and Engineering	3	6							
156	E MEM 533	Engineering Management and Engineering Economy	3	6							
157	E MEM 537	Engineering Decision Tools	3	6							
158	E MEM 538	Knowledge and Innovation Management	3	6							
159	E MEM 539	Big Data and Information Management	3	6							
160	E MEM 542	Production and Service Operations Management	3	6							
<b>Computer Science</b>											
161	CSCI 501	Software Principles and Practice	3	6							
162	CSCI 511	Theory of Computation	3	6							
163	CSCI 525	Quantum Computing	3	6							

164	CSCI 545	Big Data Analytics	3	6							
165	CSCI 693	Thesis Proposal	3	6	SEDS 591 Research Methods (3184) (C- and above)						
166	SEDS 503	Laboratory Practicum	3	6	SEDS 502 Teaching Practicum (2824) (P)						
167	SEDS 591	Research Methods	3	6							
<b>Electrical and Electronic Engineering</b>											
168	MEE 600	MSc Thesis in Electrical and Electronics Engineering	15	30							
169	MEE 607	Statistical Signal Processing	3	6							
170	MEE 608	Special Topics in Circuits Theory	3	6							
171	MEE 622	Modern Control Theory	3	6							
172	MEE 623	Random Processes	3	6							
<b>Mechanical Engineering</b>											
173	MME 600	Master Thesis in Mechanical Engineering	15	30							
174	MME 604	Engineering Mathematics	3	6							
175	MME 605	Numerical Techniques for Engineers	3	6							
176	MME 606	Advanced Control Systems	3	6							
<b>Robotics and Mechatronics</b>											
177	ROBT 501	Robot Manipulation and Mobility	3	6							
178	ROBT 503	Dynamic Systems and Control	3	6							
179	ROBT 611	Industrial Robotics	3	6	ROBT 501 Robot Manipulation and Mobility (2263) (C- and above) AND CSCI 501 Software Principles and Practice (2408) (C- and above)						
180	ROBT 613	Brain-Machine Interfaces	3	6							