

## Course Requirements and Registration Priorities (Master), Fall 2022

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
<b>GSB</b>											
<b>GSB</b>											
1	GSBF 501	Team Building and Business Communications	1	2				For GSB programs only! Registration by School admin.			
2	GSBF 511	Applied Data Analytics I	2.5	5				For GSB programs only! Registration by School admin.			
3	GSBF 512	Principles of Finance	2.5	5				For GSB programs only! Registration by School admin.			
4	GSBF 515a	Investments I	2.5	5				For GSB programs only! Registration by School admin.			
5	GSBF 517	Macroeconomics for Finance	2.5	5				For GSB programs only! Registration by School admin.			
6	GSBF 542	Global Finance Experience Residency (II)	3	6							
7	GSBF 550A	Master's Thesis	5	10				For GSB programs only! Registration by School admin.			
8	MBA 01	Consequential Leadership	1	2							
9	MBA 02	Business Mathematics and Business Computer Application	1	2							
10	MBA 03	Financial Accounting	2	4				For GSB programs only! Registration by School admin.			
11	MBA 04	Probability and Statistics	2	4				For GSB programs only! Registration by School admin.			
12	MBA 05	Business Communication	2	4				For GSB programs only! Registration by School admin.			
13	MBA 07	Managerial Effectiveness	2	4							
14	MBA 11	Managerial Accounting	2	4				For GSB programs only! Registration by School admin.			
15	MBA 13	Macroeconomics	2	4				For GSB programs only! Registration by School admin.			

16	MBA 17	Negotiations	2	4				For GSB programs only! Registration by School admin.			
17	MBA 19	Distinguished Speaker Series	0	1				For GSB programs only! Registration by School admin.			
18	MBA 20	Practicum Project	2.5	5				For GSB programs only! Registration by School admin.			
19	MBAE 16	Project Management	2	4				For GSB programs only! Registration by School admin.			
20	MBAE 17	China Business Environment	2	4				For GSB programs only! Registration by School admin.			
21	MBAE 18	Consumer Behavior	2	4				For GSB programs only! Registration by School admin.			
22	MBAE 20	Marketing Research	2	4							
23	MBAE 21	Project Finance	2	4				For GSB programs only! Registration by School admin.			
24	MBAE 8	Leadership	2	4							
25	MSF 02	Thesis Preparation Seminar	2	4				For GSB programs only! Registration by School admin.			
26	MSF 04	Private Equity	2	4				For GSB programs only! Registration by School admin.			
27	MSF 07	Economic Policy in Global Markets	2	4				For GSB programs only! Registration by School admin.			
28	MSF 08	Microeconomics for Finance	2.5	5				For GSB programs only! Registration by School admin.			
29	MSF 10	Independent Research	2	4				For GSB programs only! Registration by School admin.			
<b>GSPP</b>											
<b>Master in Public Administration</b>											
30	MPA 602	Public Administration in Theory and Practice	4	8				1 year GSPP Public Administration			
31	MPA 603	Economic Applications for Public Managers	4	8				1 year GSPP Public Administration			
32	MPA 605	Research Methods for Public Managers	4	8				1 year GSPP Public Administration			

33	MPA 609	Human Resource Policy and Management	4	8				2 year GSPP Public Administration		
34	MPA 699	Master's Project with Overseas Component	0	0				2 year GSPP Public Administration		
35	MPE 617	Institutions and development policies	4	8				2 year GSPP Public Policy	2 year GSPP Public Administration	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
36	MPE 625	Ethical Challenges in Governance	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
37	MPE 627	Public Policy and Health Issues	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
38	MPE 628	Good Governance and Corruption	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
39	MPE 634	Foreign Policy Analysis	4	8				2 year GSPP Public Policy	2 year GSPP Public Administration	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
40	MPE 639	International Financial Policy	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
41	MPE 648	Environmental Economics and Public Policy	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
42	MPE 671	Game Theory and Public Policy	4	8				2 year GSPP Public Policy	2 year GSPP Public Administration	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
<b>Master in Public Policy</b>										
43	MPP 601	Microeconomics and Public Policy	4	8				1 year GSPP Public Policy		
44	MPP 611	Statistics for Public Policy	4	8				1 year GSPP Public Policy		
45	MPP 613	Policy Research Design and Methods	4	8				1 year GSPP Public Policy		
46	MPP 621	Public Policy and Analysis	4	8				1 year GSPP Public Policy		
47	MPP 631	Politics and Public Policy	4	8				2 year GSPP Public Policy		
48	MPP 699-0	Policy Analysis Exercise with Overseas Component	0	0	MPP 613 Policy Research Design and Methods (1301) (C- and above)					
<b>GSE</b>										
<b>MA in Multilingual Education</b>										
49	EDML 601	Introduction to Linguistics	3	6				1 year GSE MA in Multil.Education		
50	EDML 610	Foundations of Multilingual Education	3	6				1 year GSE MA in Multil.Education		

51	EDML 613	The Multilingual School	3	6				2 year GSE MA in Multil.Education		
52	EDML 614	Multilingual curriculum development and assessment	3	6				2 year GSE MA in Multil.Education		
53	EDML 627	Application of CLIL in Teaching	3	6				2 year GSE MA in Multil.Education		
54	EDML 690	Thesis Research I	3	6				2 year GSE MA in Multil.Education		
<b>MSc Educational Leadership HE</b>										
55	EDHE 603	Thesis Seminar 3	3	6				2 year GSE Educ.Leadership		
56	EDHE 625	Fundamentals of Higher Education	3	6				1 year GSE Educ.Leadership		
57	EDHE 627	Student Experience, Learning and Success in Higher Education	3	6				2 year GSE Educ.Leadership		
58	EDHE 631	Sociology of Higher Education	3	6				2 year GSE Educ.Leadership		
59	EDUC 506	Academic English II	1.5	3				2 year GSE (pending graduation), 3 year GSE (pending graduation)		
60	EDUC 507	Academic English III	1.5	3				Educational Leadership		
61	EDUC 510	Advanced English for Education Professionals I	3	6				1 year GSE MA in Multil.Education		
62	EDUC 512	English for Thesis Writing I	3	6				2 year GSE MA in Multil.Education		
63	EDUC 535	Academic English I	2	4				1 year GSE Educ.Leadership		
64	EDUC 602	Educational Context and Reform in Kazakhstan	3	6				1 year GSE MA in Multil.Education		
65	EDUC 606	Introduction to Education Research	2	4				1 year GSE Educ.Leadership		
66	EDUC 607	Research Methods 1	3	6				1 year GSE		
67	EDUC 617	Contextualizing Education Reform in Kazakhstan and Beyond	3	6				1 year GSE Educ.Leadership		
<b>MSc Educational Leadership IE</b>										
68	EDIE 603	Thesis Seminar 3	3	6				2 year GSE Educ.Leadership		
69	EDIE 625	Fundamentals of Inclusive Education	3	6				1 year GSE Educ.Leadership		
70	EDIE 631	Developing Inclusive Schools for an Inclusive Society	3	6				2 year GSE Educ.Leadership		
<b>MSc Educational Leadership SE</b>										

71	EDSE 603	Thesis Seminar 3	3	6				2 year GSE Educ.Leadership			
72	EDSE 625	Fundamentals of School Education	3	6				1 year GSE Educ.Leadership			
73	EDSE 632	School Improvement and Effectiveness	3	6				2 year GSE Educ.Leadership			
74	EDSE 634	Assessment: Theories, policies, practices	3	6				2 year GSE Educ.Leadership			
75	EDSE 691	Thesis Seminar II	3	6				2 year GSE (pending graduation)			
<b>Other</b>											
<b>Other</b>											
76	T - MCE 012	G20 and Global Governance	4	8							
77	T - MSE 078	Productivity and Economic Growth	4	8							
78	T - MSP 073	Policy Process Analysis	4	8							
79	T - MSR 047	Public-Private Partnerships in Infrastructure Development	4	8							
80	T - MSR 053	Land Policy	4	8							
81	T - MSZ 001	Programming Fundamentals using Python	4	8							
82	T - PP 5019	Economic Development Strategy	1	2							
83	T - PP 5020	Analysis of Economic Growth	1	2							
84	T - PP 5021	Digital Transformation and Economic Prosperity	1	2							
85	T - PP 5022	Embracing Globalisation for Economic Growth	1	2							
86	T - PP 5227	Principles and Policies in Sustainability and the Environment	4	8							
87	T - PP 5515	Gender and Development	4	8							
<b>SoM</b>											
<b>MMM</b>											
88	MMMM 501	Molecular Basis of Infection	3	6				SoM			
89	MMMM 502	Molecular Basis of Cancer	3	6				SoM			
90	MMMM 503	Bioethics in Research: Principles and Practice	3	6				SoM			

91	MMMM 504	Molecular Basis of Genetic Disease	3	6				SoM			
92	MMMM 506	Biocomputing	1	2				SoM			
93	MMMM 513	Molecular Basis of Neurological Disorders	3	6				SoM			
94	MMMM 601	Entrepreneurship	2	4				SoM			
95	MMMM 603	Recombinant Drugs	3	6				SoM			
96	MMMM 605	Developmental Biology	3	6				SoM			
<b>MPTOX</b>											
97	MPTX 501	Organ system and common diseases	3	6				SoM			
98	MPTX 502	Cellular Communications	3	6				SoM			
99	MPTX 503	Principles of Pharmacology and Toxicology	3	6		MPTX 501 Organ system and common diseases (5841) (C and above)		SoM			
100	MPTX 505	Drug Discovery I	3	6		MPTX 503 Principles of Pharmacology and Toxicology (5843) (C and above)		SoM			
101	MPTX 506	Systemic Pharmacology II	3	6	MPTX 503 Principles of Pharmacology and Toxicology (5843) (C- and above) AND MPTX 504 Systemic Pharmacology I (5844) (C- and above)			SoM			
102	MPTX 601	Biostatistics and Critical Appraisal	3	6	MPTX 503 Principles of Pharmacology and Toxicology (5843) (C- and above) AND MPTX 505 Drug Discovery I (5845) (C- and above)			SoM			

103	MPTX 602	Current Topics in Pharmacology and Toxicology	3	6	MPTX 503 Principles of Pharmacology and Toxicology (5843) (C- and above) AND MPTX 505 Drug Discovery I (5845) (C- and above)	MPTX 601 Biostatistics and Critical Appraisal (6342) (C- and above)			SoM		
104	MPTX 603	Introduction to Research Project	6	12	MPTX 503 Principles of Pharmacology and Toxicology (5843) (C- and above) AND MPTX 505 Drug Discovery I (5845) (C- and above)	MPTX 601 Biostatistics and Critical Appraisal (6342) (C- and above)			SoM		
105	MPTX 604E	Scientific Writing	3	6					SoM		
<b>MSMR</b>											
106	MSMR 501	Musculoskeletal System	3	6					Sports Medicine and Rehabilitation		
107	MSMR 503	Exercise Genetics, Physiology and Endocrinology	3	6					Sports Medicine and Rehabilitation		
108	MSMR 504	Pharmacology in Sports and Rehabilitation	3	6					Sports Medicine and Rehabilitation		
109	MSMR 505	Exercise and Biomechanics	3	6					Sports Medicine and Rehabilitation		
110	MSMR 507	Management and Rehabilitation of Injury	4	8					Sports Medicine and Rehabilitation		
111	MSMR 510	Biostatistics and Epidemiology	3	6					Sports Medicine and Rehabilitation		
112	MSMR 603	Master Research Project	8	16					Sports Medicine and Rehabilitation		
113	MSMR 701	Ethics and Professionalism	3	6					SoM		
<b>Public Health</b>											
114	PUBH 501	Principles of Public Health Problem Solving	3	6					SoM		
115	PUBH 511	Inferential Biostatistics	3	6					SoM		
116	PUBH 521	Principles of Analytical Epidemiology	3	6					SoM		
117	PUBH 528	Qualitative Research Methods	3	6					SoM		

118	PUBH 552	Principles of Health Economics and Policy	3	6	PUBH 551 Health Services Management, Health Economic and Health Policy (3696) (C and above)			SoM		
119	PUBH 561	Graduate Research Seminar I	3	6				SoM		
120	PUBH 599	Global Nutrition and Sustainability	3	6				SoM		
121	PUBH 601	Health Education and Promotion	3	6				SoM		
122	PUBH 633	Methods in Public Health	3	6				SoM		
123	PUBH 681	Master's Project Planning	3	6				SoM		
<b>SMG</b>										
<b>Mining Engineering</b>										
124	MINE 501	Foundations of Mining	3	6				1 year Gr SMG Mining Engineering		
125	MINE 502	Geology for Mining Engineers	3	6				1 year Gr SMG Mining Engineering		
126	MINE 503	Applied Geostatistics	3	6				Mining Engineering		
127	MINE 504	Mine Geomechanics	3	6				Mining Engineering		
128	MINE 505	Advanced Mine Ventilation	3	6				Mining Engineering		
129	MINE 601	Mine Management and Sustainability	3	6				Mining Engineering		
130	MINE 602	Mine Maintenance and Services	3	6	MINE 502 Geology for Mining Engineers (3691) (C- and above)			Mining Engineering		
131	MINE 690	Thesis I	6	12				Mining Engineering		
<b>Petroleum Engineering</b>										
132	PETE 501	Foundations of Petroleum Engineering	3	6				Petroleum Engineering		
133	PETE 502	Petroleum Geology	3	6				Petroleum Engineering		
134	PETE 503	Fluid Flow Through Porous Media	3	6				Petroleum Engineering		
135	PETE 504	Advanced Formation Evaluation	3	6				Petroleum Engineering		



136	PETE 505	Advanced Drilling Engineering	3	6				Petroleum Engineering			
137	PETE 509	Advanced Well Testing and Evaluation	3	6				Petroleum Engineering			
138	PETE 600	Thesis I	6	12				Petroleum Engineering			
139	PETE 601	Petroleum Data Analytics	3	6				Petroleum Engineering			
140	PETE 602	Research Seminar	3	6				Petroleum Engineering			
141	PETE 620	Thesis II	12	24				2 year Gr SMG Petroleum Engineering			
<b>SSH</b>											
<b>Area Studies</b>											
142	EAS 500	Introduction to Eurasia	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
143	EAS 501	General Methodology	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
144	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)			Instructor's Permission Required. Registration through Add Course form only!			
145	EAS 511	Independent Study in Eurasian Studies	4	8				Instructor's Permission Required. Registration through Add Course form only!			
146	EAS 512	Topics in Eurasian Studies	4	8				Instructor's Permission Required. Registration through Add Course form only!			
<b>Area Studies, Political Science and International Relations, Sociology and Anthropology</b>											
147	SOC 514/PLS 514/EAS 506	Qualitative Research Methods	4	8				SSH	GSB, GSE, GSPP, SEDS, SMG, SoM		
<b>Biological Science</b>											

148	BIOL 520	Statistical Methods in Life Sciences	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
149	BIOL 550	Structural and Molecular Biology in Health and Disease	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
150	BIOL 560	Molecular Biology of Prokaryotic Cells	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
151	BIOL 592	Graduate Research Seminar	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
152	BIOL 599	Master's Thesis Research	0	0				1 year Gr SSH Biological Sciences and Technologies, 2 year Gr SSH Biological Sciences and Technologies			
153	BIOL 631	Synthetic Biology	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
154	BIOL 632	Drug Discovery and Design	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
155	BIOL 634	Advanced Cancer Biology	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
156	BIOL 670	Gene Therapy	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
157	BIOL 691	Master's Thesis Research Proposal	3	6				2 year Gr SSH Biological Sciences and Technologies			
<b>Chemistry</b>											
158	CHEM 510	Principles of Physical Chemistry	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
159	CHEM 518	Applied Polymer Science	4	8				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
160	CHEM 520	Applied Analytical Chemistry	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
161	CHEM 522	Analytical Environmental Chemistry	3	6	CHEM 520 Applied Analytical Chemistry (5267) (C and above)			Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
162	CHEM 530	Inorganic Structures and Reaction Mechanisms	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	

163	CHEM 531	Nanochemistry and Functional Nanomaterials	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
164	CHEM 543	Structural Identification of Organic Compounds	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
165	CHEM 591	Scientific Methods in Chemistry	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
166	CHEM 691	Thesis Proposal	3	6				Chemistry			
<b>Communication and Composition</b>											
167	WCS 501	Science Communication	3	6				SSH		SMG, SoM	
<b>Communication and Composition, Languages, Literature and Linguistics</b>											
168	WLL 562/WCS 562	Creative Nonfiction	4	8				Instructor's Permission Required. Registration through Add Course form only!			
<b>Economics</b>											
169	ECON 501	Microeconomics I	4	8				Economics	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
170	ECON 502	Macroeconomics I	4	8				Economics	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
171	ECON 503	Introduction to Contract Theory and Auctions	4	8				Economics	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
172	ECON 511	Statistics	4	8				Economics	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
173	ECON 512	Mathematical Economics	4	8				Economics	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
174	ECON 532	Applied Econometrics	4	8				Economics	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
175	ECON 533	Econometrics II Panel Data	4	8	ECON 531 Econometrics (2505) (C- and above)			Economics	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
176	ECON 589	Thesis I	4	8							
<b>History, Philosophy and Religious Studies</b>											
177	HST 533	Empire, Nation and Identity in Nineteenth-Century Eurasia	4	8				SSH		GSB, GSE, GSPP, SEDS, SMG, SoM	
<b>History, Philosophy and Religious Studies, Languages, Literature and Linguistics</b>											

178	HST 541/WLL 541	Utopias in Russian and Soviet Literature	4	8				SSH	GSB, GSE, GSPP, SEDS, SMG, SoM		
<b>Kazakh Language and Turkic Studies</b>											
179	TUR 575	Advanced Topics in Turkic Studies	4	8				Instructor's Permission Required. Registration through Add Course form only!			
<b>Mathematics</b>											
180	MATH 510	Measure Theory and Applications	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
181	MATH 512	Optimization Methods and Techniques	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
182	MATH 518	Applied Finite Element Analysis	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
183	MATH 519	Scientific Computing	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
184	MATH 540	Statistical Learning	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
185	MATH 551	Advanced Numerical Methods	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
186	MATH 576	Numerical Methods for Partial Differential Equations	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
187	MATH 592	Research Seminar	3	6				Applied Mathematics			
188	MATH 676	Advanced Partial Differential Equations with Applications	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
<b>Physics</b>											
189	PHYS 505	Classical Mechanics	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
190	PHYS 511	Computational Modeling and Simulation	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
191	PHYS 515	Classical Electrodynamics	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
192	PHYS 530	Solid State Physics	4	8				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	

193	PHYS 550	Advanced Mathematical Physics	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
194	PHYS 591	Research Methods	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
195	PHYS 600	Thesis Research	0	0				Physics			
<b>Political Science and International Relations</b>											
196	PLS 511	Advanced Research I	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
197	PLS 515	Maximum Likelihood Models	4	8	PLS 510 Advanced Research I (1946) (C- and above)			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
198	PLS 516	Experimental Political Science	4	8	PLS 511 Advanced Research I (1631) (C- and above)			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
199	PLS 532	Comparative Democratization	4	8	PLS 540 Core Seminar in Comparative Politics (1374) (C- and above)			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
200	PLS 540	Core Seminar in Comparative Politics	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
201	PLS 541	Advanced Topics in Comparative Politics	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
202	PLS 545	Political Violence	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
203	PLS 550	Core Seminar in IR	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
204	PLS 598	MA Thesis I	6	12				Instructor's Permission Required. Registration through Add Course form only!			
<b>Sociology and Anthropology</b>											
205	SOC 510	Social Inequality	4	8				SSH	GSB, GSE, GSPP, SEDS, SMG, SoM		
206	SOC 515	Social Problems and Issues in Eurasia	4	8				SSH	GSB, GSE, GSPP, SEDS, SMG, SoM		
<b>SEDS</b>											

**Chemical and Materials Engineering**

207	MBME 601	Master Thesis I	12	24				2 year Gr SEDS Biomedical Engineering			
208	MBME 603	Biomaterials Science & Engineering	3	6				1 year Gr SEDS Biomedical Engineering	SEDS, SMG		
209	MBME 604	Biosensors	3	6				1 year Gr SEDS Biomedical Engineering	SEDS, SMG		
210	MBME 610	Anatomy and Physiology for Biomedical Engineers	3	6				1 year Gr SEDS Biomedical Engineering	SEDS, SMG		
211	MBME 703	Medical Device Technology	3	6				2 year Gr SEDS Biomedical Engineering	SEDS, SMG		
212	MCHME 601	Master Thesis I	12	24				2 year Gr SEDS Chemical and Materials Engineering			
213	MCHME 603	Advanced Materials Processing	3	6				1 year Gr SEDS Chemical and Materials Engineering	SEDS, SMG		
214	MCHME 604	Advanced Materials Characterization Methods	3	6				1 year Gr SEDS Chemical and Materials Engineering	SEDS, SMG		
215	MCHME 605	Advanced Chemical Reaction Engineering	3	6				1 year Gr SEDS Chemical and Materials Engineering	SEDS, SMG		
216	MCHME 714	Computational Materials Engineering	3	6				2 year Gr SEDS Chemical and Materials Engineering	SEDS, SMG		

**Civil Engineering**

217	MSC 600	Research Methods and Ethics	3	6				1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SEDS Engineering Management	Engineering Management, SEDS, SMG, SSH		
218	MSC 601	Technical Communication	3	6				1 year Gr SEDS Biomedical Engineering, 1 year Gr SEDS Chemical and Materials Engineering, 1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SEDS Computer Science, 1 year Gr SEDS Mechanical and Aerospace Engineering, 1 year Gr SEDS Robotics and Mechatronics	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Robotics	Electrical and Computer Engineering, Mechanical and Aerospace Engineering, SMG	

219	MSC 602	Advanced Applied Mathematics	3	6				1 year Gr SEDS Biomedical Engineering, 1 year Gr SEDS Chemical and Materials Engineering, 1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SEDS Mechanical and Aerospace Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering		
220	MSC 615	Advanced Statistics and Probability	3	6				1 year Gr SEDS Engineering Management	Engineering Management	SEDS	
<b>Civil and Environmental Engineering</b>											
221	EMEM 507	Project Management	3	6				1 year Gr SEDS Engineering Management	Engineering Management	SEDS	
222	EMEM 509	Systems Engineering	3	6				2 year Gr SEDS Mechanical Engineering, 2 year Gr SEDS Mechanical and Aerospace Engineering	Engineering Management, Mechanical and Aerospace Engineering	SEDS	
223	EMEM 523	Supply Chain Management	3	6				2 year Gr SEDS Engineering Management	Engineering Management	SEDS	
224	EMEM 533	Engineering Management and Engineering Economy	3	6				1 year Gr SEDS Engineering Management	Engineering Management	SEDS	
225	EMEM 537	Engineering Decision Tools	3	6				2 year Gr SEDS Engineering Management	Engineering Management	SEDS	
226	EMEM 538	Knowledge and Innovation Management	3	6				1 year Gr SEDS Engineering Management	Engineering Management	SEDS	
227	EMEM 539	Big Data and Information Management	3	6				2 year Gr SEDS Engineering Management	Engineering Management	SEDS	
228	EMEM 549	Capstone Project I	3	6							
229	MCEE 601	Master Thesis I	12	24	MCEE 600 Research Seminar (4692) (P)			2 year Gr SEDS Civil and Environmental Engineering			
230	MCEE 603	Finite Element Methods	3	6				1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SEDS Mechanical and Aerospace Engineering	SEDS		
231	MCEE 604	Advanced Soil Mechanics	3	6				1 year Gr SEDS Civil and Environmental Engineering	SEDS, SMG		
232	MCEE 605	Advanced Environmental Chemistry	3	6				1 year Gr SEDS Civil and Environmental Engineering	SEDS, SMG		

233	MCEE 716	Unsaturated Soil Mechanics for Engineering Practice	3	6			2 year Gr SEDS Civil and Environmental Engineering	SEDS, SMG		
<b>Computer Science</b>										
234	CSCI 501	Software Principles and Practice	3	6			Computer Science, Robotics	SEDS	SSH	
235	CSCI 511	Theory of Computation	3	6			Computer Science, Data Science	SEDS	SSH	
236	CSCI 515	Modeling and Simulation for Computer Science	3	6			Computer Science, Data Science	SEDS	SSH	
237	CSCI 585	Computer Vision	3	6			Computer Science, Data Science	SEDS	SSH	
238	CSCI 594	Deep Learning	3	6			Computer Science, Data Science	SEDS	SSH	
239	CSCI 693	Thesis Proposal	3	6	SEDS 591 Research Methods (3184) (C- and above)		2 year Gr SEDS Computer Science			
240	DS 501	Fundamentals of Data Science	3	6			Data Science			
241	DS 502	Probability and Statistics for Data Science	3	6			Data Science	Computer Science	SEDS, SSH	
242	DS 507	Database Management Systems	3	6			Data Science	Computer Science	SEDS, SSH	
243	DS 551	Process and Project Management	3	6			Data Science	Computer Science	SEDS, SSH	
244	DS 552	Data-Driven Innovation	3	6			Data Science	Computer Science	SEDS, SSH	
245	DS 693	Thesis Proposal	3	6	SEDS 591 Research Methods (3184) (C- and above)		2 year Gr SEDS Data Science			
246	SEDS 503	Laboratory Practicum	3	6	SEDS 502 Teaching Practicum (2824) (P)		2 year Gr SEDS Computer Science, 2 year Gr SEDS Data Science, 2 year Gr SEDS Robotics and Mechatronics			
247	SEDS 591	Research Methods	3	6			1 year Gr SEDS Computer Science, 1 year Gr SEDS Data Science, 1 year Gr SEDS Robotics and Mechatronics			
<b>Electrical and Computer Engineering</b>										
248	MECE 601	Master Thesis I	12	24			2 year Gr SEDS Electrical and Computer Engineering			
249	MECE 603	Advanced Data Structures and Algorithms	3	6			1 year Gr SEDS Electrical and Computer Engineering	SEDS, SMG, SSH		
250	MECE 605	Statistics and Probability for Electrical and Computer Engineers	3	6			1 year Gr SEDS Electrical and Computer Engineering	SEDS, SMG, SSH		



251	MECE 606	Embedded Systems and Applications	3	6				1 year Gr SEDS Electrical and Computer Engineering	SEDS, SMG, SSH		
252	MECE 726	Modern Semiconductor Devices and Systems	3	6				2 year Gr SEDS Electrical and Computer Engineering			
<b>Mechanical and Aerospace Engineering</b>											
253	MMAE 600	Research Seminar	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering			
254	MMAE 601	Master Thesis I	12	24	MMAE 600 Research Seminar (4703) (P)			2 year Gr SEDS Mechanical and Aerospace Engineering			
255	MMAE 603	Modern Control Engineering	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	SEDS, SMG		
256	MMAE 605	Advanced Manufacturing Processes and Strategies	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	SEDS, SMG		
257	MMAE 702	Sustainable Vehicle Transportation Systems	3	6				2 year Gr SEDS Mechanical and Aerospace Engineering	SEDS, SMG		
258	MMAE 706	Computational and Unsteady Aerodynamics	3	6				2 year Gr SEDS Mechanical and Aerospace Engineering			
<b>Robotics and Mechatronics</b>											
259	ROBT 501	Robot Manipulation and Mobility	3	6				Robotics	SEDS		
260	ROBT 503	Dynamic Systems and Control	3	6				Robotics	SEDS		
261	ROBT 613	Brain-Machine Interfaces	3	6				Robotics	SEDS		
262	ROBT 615	Optimal Control and Planning	3	6	ROBT 501 Robot Manipulation and Mobility (2263) (C- and above) AND ROBT 503 Dynamic Systems and Control (2264) (C- and above)			Robotics	SEDS		
263	ROBT 691	Thesis Proposal	6	12				Robotics	SEDS		