

**Course Requirements and Registration Priorities
Fall 2017**

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SHSS											
Economics											
1	ECON 329	International Finance	3	6	ECON 202 Intermediate Macroeconomics (207) (C- and above)			4 year UG SHSS	3 year UG SHSS	SHSS, SST	
Kazakh Language and Turkic Studies											
2	KAZ 314	Speech Culture in Business	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
3	KAZ 358	Technique of Translation	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
4	KAZ 370	Kazakh for Career Development	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
Political Science and International Relations											
5	PLS 521	Theories of Political Obligations	4	8				1 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
Sociology and Anthropology											
6	ANT 403	Research Assistance in Anthropology	2	4							
CPS											
NUFYP											
7	FEAP 001	English for Academic Purposes	0	0							
8	FHUM 001	Humanities	0	0							
9	FMAT 020	Foundation 'Statistics'	0	0							

10	FMAT 030	Mathematics for Life Sciences (Biology And Chemistry)	0	0						
11	FMAT 040	Mathematics for Physical Sciences	0	0						
12	FSCI 006	Foundation Chemistry and Biology	0	0						
13	FSCI 008	Foundation 'Physics'	0	0						
NUZYP										
14	ZCOM 040	Academic Communications for Graduate Studies I	0	0						
15	ZRDG 030	Academic Reading for Graduate Studies I	0	0						
16	ZWRT 020	Academic Writing for Graduate Studies I	0	0						
GSB										
GSB										
17	EMBAE 700	Entrepreneurial Finance	2.5	5						
18	GSBF 501	Team Building and Business Communications	1	2						
19	GSBF 511	Introduction to Quantitative Methods	2	4						
20	GSBF 512	Principles of Finance	2	4						
21	GSBF 513	Financial Econometrics	2	4						
22	GSBF 515	Investments	2	4						
23	GSBF 516	Financial Markets and Institutions	2	4						
24	GSBF 517	Financial Economics	2	4						
25	MBA 01	Consequential Leadership	1	2						
26	MBA 02	Business Mathematics and Business Computer Application	1	2						
27	MBA 03	Financial Accounting	2	4						
28	MBA 04	Probability and Statistics	2	4						
29	MBA 05	Business Communication	2	4						
30	MBA 07	Managerial Effectiveness	2	4						
31	MBA 08	Managerial Economics	2	4						
32	MBA 09	Marketing Management	2	4						
33	MBA 17	Negotiations	2	4						

34	MBA 19	Distinguished Speaker Series	0	1							
35	MBA 20	Practicum Project	2.5	5							
36	MBAE 12	Data Analytics for Business	2	4							
37	MBAE 6	International Finance	2	4							
38	MBAE 9	Marketing Strategy	2	4							
GSPP											
Master in Public Administration											
39	MPA 602	Public Administration in Theory and Practice	4	8							
40	MPA 603	Economic Applications for Public Managers	4	8							
41	MPA 605	Research Methods for Decision Making	4	8							
42	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	
43	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	
44	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	
45	MPA 684	Selected Topics on Global Energy Policy	4	8					- , 2 year GSPP Public Administration, 2 year GSPP Public Policy	Economics, Eurasian Studies, Political Science and International Relations	
46	MPA 699	Master's Project with Overseas Component	6	12							
47	MPP 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	

48	MPP 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		
Master in Public Policy												
49	MPP 601	Microeconomics and Public Policy	4	8								
50	MPP 611	Statistical Techniques for Public Policy	4	8								
51	MPP 612	Public Policy Research and Evaluation	4	8								
52	MPP 621	Introduction to Public Policy and Analysis	4	8								
53	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		
54	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		
55	MPP 631	Politics and Public Policy	4	8								
56	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		
57	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		
PhD in Public Policy												
58	DPP 601	Microeconomics in the Public Sector	4	8								
59	DPP 603	Public Administration and Management	4	8								
60	DPP 611	Statistics in Public Policy	4	8								
61	DPP 621	Public Policy and Analysis	4	8								
GSE												
MA in Multilingual Education												

62	EDML 610	Foundations of Multilingual Education	3	6							
63	EDML 613	The Multilingual School	3	6							
64	EDML 614	Multilingual curriculum development and assessment	3	6							
65	EDML 623	Globalization and Language Education	3	6							
66	EDML 630	Language Policy and Education Reform Across Contexts	3	6							
67	EDML 690	Thesis Research I	3	6							
68	EDUC 630	Introduction to Linguistics	3	6							
MSc Educational Leadership HE											
69	EDHE 609	Introduction to Educational Leadership: Higher Education	3	6							
70	EDHE 621	Education Policy Analysis and Development	3	6							
71	EDHE 642	Globalisation and higher education	3	6							
72	EDHE 649	Fundamentals of Higher Education	3	6							
73	EDHE 691	Thesis Seminar II	1.5	3							
74	EDUC 502	English for Research	3	6							
75	EDUC 505	Academic English 1	1.5	3							
76	EDUC 507	Academic English III	1.5	3							
77	EDUC 510	Advanced English for Education Professionals	3	6							
78	EDUC 571	Basic Kazakh	3	6							
79	EDUC 590	Academic English Writing for Doctoral Students I	1.5	3							
80	EDUC 600	Research Methods I	3	6							
81	EDUC 602	Educational Context and Reform in Kazakhstan	3	6							
82	EDUC 701	Education Research Methods	3	6							
83	EDUC 703	Kazakh Language	3	6							

84	EDUC 709	Introduction to Scholarship in Education	3	6						
85	EDUC 712	Educational Policy and Reform	3	6						
86	EDUC 720	Philosophy of Education	3	6						
87	EDUC 731	Proposal Defence	3	6						
88	EDUC 740	Doctoral Seminar	3	6						
89	EDUC 750	Dissertation Research	9	18						
90	EDUC 800	International Study	12	24						
MSc Educational Leadership IE										
91	EDIE 609	Introduction to Educational Leadership: Inclusive Education	3	6						
92	EDIE 621	Education Policy Analysis and Development	3	6						
93	EDIE 624	Psychology of Learning (Children as Learners)	3	6						
94	EDIE 691	Thesis Seminar II	1.5	3						
MSc Educational Leadership SE										
95	EDSE 609	Introduction to Educational Leadership: School Education	3	6						
96	EDSE 620	Perspectives on Inclusive Education	3	6						
97	EDSE 632	School Improvement and Effectiveness	3	6						
98	EDSE 634	Assessment: Theories, policies, practices	3	6						
99	EDSE 691	Thesis Seminar II	1.5	3						
100	EDUC 608	Preparing Children for the Future: Skills and Employability	3	6						
Other										
Other										
101	T-CMM 181	Introduction to Mass Communication	3	6						
102	T-ECN 332	Managerial Economics	3	6						
103	T-GOV 382	American Political Concepts	3	6						

104	T-PHI 104	Philosophy of Religion	3	6							
105	T-PP 5178	Leadership and Decision-Making Skills	4	8							
106	T-PP 5196	Education Economics and Policy	4	8							
107	T-PP 5203	Behavioral Economics and Public Policy	4	8							
108	T-PP 5215	Changes in Singapore Political Economy	4	8							
109	T-PP 5267	Urban Transport Policy: A Global View	4	8							
110	T-PP 5269	Environmental Economics and Public Policy	4	8							
111	T-PP 5298	Singapore's Development Experience	4	8							
SoM											
MMM											
112	MMMM 501	Molecular Basis of Infection	3	6							
113	MMMM 502	Molecular Pathology of Cancer	3	6							
114	MMMM 503	Bioethics in Research: Principles and Practice	3	6							
115	MMMM 504	Molecular Basis of Genetic Disease	3	6							
116	MMMM 505	Inferential Biostatistics	2	4							
117	MMMM 506	Biocomputing	1	2							
Nursing											
118	NUR 301	Nutrition for Clinical Practice	3	6							
119	NUR 302	Physical Assessment Across the Lifespan	4	8							
120	NUR 303	Nursing Care of Older Adults	4	8							
121	NUR 304	Introduction to Basic Statistics for Evidence Based Practice	3	6							
Public Health											
122	PUBH 501	Principles of Public Health Problem Solving	3	6							
123	PUBH 511	Inferential Biostatistics	3	6							

124	PUBH 521	Principles of Analytical Epidemiology	3	6							
125	PUBH 528	Qualitative Research Methods	3	6							
126	PUBH 531	Emerging Infectious Diseases	3	6							
127	PUBH 551	Health Services Management, Health Economic and Health Policy	3	6							
128	PUBH 601	Health Education and Promotion	3	6							
129	PUBH 641	Problem Investigations in Environmental Health	3	6							
130	PUBH 662	Graduate Research Seminar II	3	6							
131	PUBH 681	Master's Project Planning	3	6							
SMG											
Mining Engineering											
132	MINE 500	Foundations of Mining	3	6							
133	MINE 511	Applied Geostatistics	3	6							
134	MINE 512	Mining and Engineering Geology	3	6							
135	MINE 513	Rock Excavation Methods	3	6							
136	MINE 518	Advanced Rock Mechanics	3	6							
SMG											
137	DENG 783	Statistics	1.5	3							
SSH											
Area Studies											
138	EAS 500	Introduction to Eurasia	4	8				Eurasian Studies	SHSS, SST		
139	EAS 501	General Methodology	4	8				Eurasian Studies	SHSS, SST		
140	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											

141	EAS 506/PLS 514/SOC 514	Qualitative Research Methods	4	8				Eurasian Studies	SHSS, SST		
Biological Science											
142	BIOL 101	Biology for non-Science majors	3	6			BIOL 110 Modern Biology I (1070) (C- and above)	SHSS			
143	BIOL 110	Modern Biology I with Lab	4	8				Biological Sciences, Chemistry	SST	SHSS	
144	BIOL 210	Introduction to Microbiology with Lab	4	8	BIOL 110 Modern Biology I (1070) (C and above) AND BIOL 120 Modern Biology II (1195) (C and above)			Biological Sciences	SST	SHSS	
145	BIOL 230	Human Anatomy and Physiology I	4	8	BIOL 110 Modern Biology I (107) (C and above) OR BIOL 110 Modern Biology I (1070) (C and above)			Biological Sciences	SST	SHSS	
146	BIOL 320	Developmental Biology	3	6	BIOL 230 Human Anatomy and Physiology I (72) (C and above) OR BIOL 230 Human Anatomy and Physiology I (6217) (C and above)			Biological Sciences	SST	SHSS	
147	BIOL 330	Introduction to Immunology	3	6	BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 301 Molecular Cell Biology (5809) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above)			Biological Sciences	SST	SHSS	
148	BIOL 340	Introduction to Bioinformatics with Lab	4	8	(BIOL 120 Modern Biology II (1195) (C and above) OR (BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 120L Modern Biology II Laboratory (5443) (C and above))) AND MATH 310 Applied Statistical Methods (82) (C and above)			Biological Sciences	SST	SHSS	

149	BIOL 352	Biology of Cancer	3	6	BIOL 231 Human Anatomy and Physiology II (479) (C and above) OR BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 331 Human Anatomy and Physiology II (6218) (C and above) OR BIOL 301 Molecular Cell Biology (5809) (C and above)			Biological Sciences	SST	SHSS	
150	BIOL 355	Jr. Research Seminar	3	6	BIOL 120 Modern Biology II (1195) (C and above)			Biological Sciences	SST	SHSS	
151	BIOL 399	Biology Internship - 2B	3	6				Biological Sciences	SST	SHSS	
152	BIOL 455	Biotechnology	3	6	BIOL 301 Molecular Biology of Cell with Lab (1197) (C- and above) OR (BIOL 301 Molecular Cell Biology (5809) (C- and above) AND BIOL 301L Molecular Cell Biology Laboratory (5678) (C- and above))			Biological Sciences	SST	SHSS	
153	BIOL 470	Advanced Cell Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 110L Modern Biology I Laboratory (5448) (C and above) AND (BIOL 341 Biochemistry I (2002) (C and above) OR CHEM 341 Biochemistry I (1058) (C and above))			Biological Sciences	SST	SHSS	
154	BIOL 490	Senior Honors Thesis	4	8	BIOL 355 Critical Research Reasoning (1000) (B and above)			Biological Sciences	SST	SHSS	
155	BIOL 501	Fundamentals of Biological Sciences	3	6							
156	BIOL 511	Critical Appraisal of Scientific Literature	3	6							
157	BIOL 520	Statistical Methods in Research	3	6							
158	BIOL 600	Graduate Seminar Series	3	6							
159	BIOL 670	Gene Therapy	3	6							
160	BIOL 690	Research Thesis I	6	12							
Chemistry											
161	CHEM 090	Chemistry for Non-Science majors	3	6				SHSS			

162	CHEM 091	Survey of Physical Science	3	6				SHSS			
163	CHEM 101	General Chemistry I	3	6				Biological Sciences, Chemistry	SST	SHSS	
164	CHEM 101L	General Chemistry I lab	1	2		CHEM 101 General Chemistry I (113) (C and above)		Biological Sciences, Chemistry	SST	SHSS	
165	CHEM 102	General Chemistry II	3	6	CHEM 101 General Chemistry I (113) (C and above)			Chemistry	Biological Sciences	SST	
166	CHEM 102L	General Chemistry II lab	1	2	CHEM 101L General Chemistry I lab (179) (C and above)	CHEM 102 General Chemistry II (232) (C and above)		Chemistry	Biological Sciences	SST	
167	CHEM 189c	Independent Study	3	6							
168	CHEM 211	Organic Chemistry I	3	6	CHEM 102 General Chemistry II (232) (C and above)			Chemistry	Biological Sciences	SST	
169	CHEM 211L	Organic Chemistry I Lab	2	4	CHEM 101L General Chemistry I lab (179) (C and above)	CHEM 211 Organic Chemistry I (154) (C and above)		Chemistry	Biological Sciences	SST	
170	CHEM 220	Quantitative Chemical Analysis with lab	4	8	CHEM 102 General Chemistry II (232) (C and above)			Chemistry	Biological Sciences	SST	
171	CHEM 331	Physical Chemistry I	3	6	CHEM 220 Quantitative Chemical Analysis (555) (C and above) AND PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C and above)			Chemistry	Biological Sciences	SST	
172	CHEM 331L	Physical Chemistry Lab	1	2		CHEM 331 Physical Chemistry I (634) (C and above)		Chemistry	Biological Sciences	SST	
173	CHEM 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			Chemistry	Biological Sciences	SST	
174	CHEM 341L	Biochemistry I Lab	1	2	CHEM 212L Organic Chemistry II Lab (444) (C and above)	CHEM 341 Biochemistry I (1058) (C and above)		Chemistry	Biological Sciences	SST	
175	CHEM 350	Descriptive Inorganic Chemistry	3	6	CHEM 101 General Chemistry I (113) (C and above)			Chemistry	Biological Sciences	SST	
176	CHEM 400	Chemistry Seminar	3	6	CHEM 380 Research Methods (636) (C and above)			Chemistry	Biological Sciences	SST	

177	CHEM 410	Structural Spectroscopy	4	8	CHEM 212 Organic Chemistry II (443) (C and above)			Chemistry	Biological Sciences	SST	
178	CHEM 431	Computational Chemistry	3	6	CHEM 332 Physical Chemistry II (1056) (C and above) AND (CSCI 111 Web Programming and Problem Solving (110) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above))			Chemistry	Biological Sciences	SST	
179	CHEM 450	Advanced Inorganic Chemistry	4	8	CHEM 212 Organic Chemistry II (443) (C and above) AND CHEM 212L Organic Chemistry II Lab (444) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)			Chemistry	Biological Sciences	SST	
Communication and Composition											
180	COMM 102	Communication Foundations II	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			SHSS	SST		
181	COMM 225	Science Writing for Popular Media	3	6				SST	SHSS		
182	SHSS 150	Rhetoric and Composition	3	6				1 year UG SHSS, 2 year UG SHSS	SHSS	SST	
183	SHSS 250	Advanced Rhetoric and Composition	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SHSS	SHSS	SST	
184	SHSS 330	Writing Fellows: Composition and Collaboration in Theory and Practice I	3	6	WCS 150 Rhetoric and Composition (2183) (B and above) AND (WCS 220 Science Writing (5686) (B+ and above) OR WCS 230 Say What you Mean: Clarity, Precision, and Style in Academic Writing (3026) (B+ and above) OR WCS 250 Advanced Rhetoric and Composition (3027) (B+ and above))			Through Add form only			
Economics											
185	ECON 101	Introduction to Microeconomics	3	6				1 year UG SHSS	2 year UG SHSS	SHSS, SST	
186	ECON 102	Introduction to Macroeconomics	3	6				1 year UG SHSS	2 year UG SHSS	SHSS, SST	

187	ECON 201	Intermediate Microeconomics	3	6	ECON 101 Introduction to Microeconomics (379) (B- and above) AND (MATH 161 Calculus I (118) (B- and above) OR MATH 162 Calculus II (170) (B- and above))			2 year UG SHSS	SHSS	SST	
188	ECON 202	Intermediate Macroeconomics	3	6	ECON 102 Introduction to Macroeconomics (503) (B- and above) AND (MATH 161 Calculus I (118) (B- and above) OR MATH 162 Calculus II (170) (B- and above))			2 year UG SHSS	SHSS	SST	
189	ECON 211	Economic Statistics	3	6	ECON 101 Introduction to Microeconomics (379) (C and above) OR ECON 102 Introduction to Macroeconomics (503) (C and above)			2 year UG SHSS	SHSS	SST	
190	ECON 301	Econometrics I	3	6	ECON 211 Economic Statistics (2280) (C- and above) OR (MATH 321 Probability (482) (C- and above) AND (MATH 322 Mathematical Statistics (1165) (C- and above) OR MATH 310 Applied Statistical Methods (82) (C- and above))			4 year UG SHSS	3 year UG SHSS	SHSS, SST	
191	ECON 302	Game Theory and Economic Analysis	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)		PLS 315 Political Game Theory (704) (C- and above)	4 year UG SHSS	3 year UG SHSS	SHSS, SST	
192	ECON 320	Money and Banking	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			4 year UG SHSS	3 year UG SHSS	SHSS, SST	
193	ECON 341	Economic Simulation Modeling	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			4 year UG SHSS	3 year UG SHSS	SHSS, SST	
194	ECON 403	Introduction to Contract Theory and Auctions	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)			4 year UG SHSS	3 year UG SHSS	SHSS, SST	
195	ECON 405	Behavioral and Experimental Economics	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)			4 year UG SHSS	3 year UG SHSS	SHSS, SST	
196	ECON 413	Econometrics II	3	6	ECON 301 Econometrics I (664) (C- and above)			4 year UG SHSS	3 year UG SHSS	SHSS, SST	

197	ECON 415	Industrial Organization	3	6	ECON 301 Econometrics I (664) (C- and above)			4 year UG SHSS	3 year UG SHSS	SHSS, SST	
198	ECON 416	Empirical Industrial Organization	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)			4 year UG SHSS	3 year UG SHSS	SHSS, SST	
199	ECON 501	Microeconomics I	4	8				1 year Gr SHSS Economics	SHSS, SST		
200	ECON 502	Macroeconomics I	4	8				1 year Gr SHSS Economics	SHSS, SST		
201	ECON 503	Introduction to Contract Theory and Auctions	4	8				2 year Gr SHSS Economics	SHSS, SST		
202	ECON 505	Behavioral and Experimental Economics	4	8				2 year Gr SHSS Economics	SHSS, SST		
203	ECON 511	Statistics	4	8				1 year Gr SHSS Economics	SHSS, SST		
204	ECON 512	Mathematical Economics	4	8				1 year Gr SHSS Economics	SHSS, SST		
205	ECON 515	Industrial Organization	4	8	ECON 531 Econometrics (2505) (C- and above)			2 year Gr SHSS Economics	SHSS, SST		
206	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		
207	ECON 532	Applied Econometrics	4	8				2 year Gr SHSS Economics	SHSS, SST		
208	ECON 589	Thesis I	4	8				2 year Gr SHSS Economics	SHSS, SST		
History, Philosophy and Religious Studies											
209	HST 100	History of Kazakhstan	3	6				4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SENG, 1 year UG SHSS, 1 year UG SST	SEng, SHSS, SST	
210	HST 123	Introduction to the History of Science and Technology	3	6				1 year UG SHSS, 2 year UG SHSS, History	SHSS, SST		
211	HST 124	Introduction to the History of Medicine	3	6				1 year UG SHSS, 2 year UG SHSS, History	SHSS, SST		
212	HST 131	European History I (to 1700)	3	6				SHSS, SST			
213	HST 182	East Asian History II (from 1500)	3	6				1 year UG SHSS, 2 year UG SHSS, History	SHSS, SST		
214	HST 240	Representations of Nature in the Early Modern World	3	6	HST 100 History of Kazakhstan (172) (C- and above)			History	SHSS, SST		

215	HST 327	Global Cold War	3	6	HST 100 History of Kazakhstan (172) (C- and above) OR HST 103 Central Asian History I (to 1700) (197) (C- and above) OR HST 104 Central Asian History II (1700 - 1991) (1192) (C- and above) OR HST 121 World History I (to 1500) (1193) (C- and above) OR HST 122 World History II (from 1500) (1162) (C- and above) OR HST 131 European History I (to 1700) (201) (C- and above) OR HST 132 European History II (from 1700) (139) (C- and above) OR HST 151 US History I (to 1877) (668) (C- and above) OR HST 152 US History II (from 1877) (465) (C- and above) OR HST 172 Middle Eastern History II (from 1800) (1194) (C- and above) OR HST 182 East Asian History II (from 1500) (213) (C- and above) OR HST 199 Freshman Seminar (241) (C- and above)			History	SHSS, SST		
216	HST 328	History of the Anthropocene	3	6	Subject "HST" BETWEEN 100 and 199			History	SHSS, SST		

217	HST 335	European Nationalisms	3	6	HST 100 History of Kazakhstan (172) (C- and above) OR HST 103 Central Asian History I (to 1700) (197) (C- and above) OR HST 104 Central Asian History II (1700 - 1991) (1192) (C- and above) OR HST 121 World History I (to 1500) (1193) (C- and above) OR HST 122 World History II (from 1500) (1162) (C- and above) OR HST 131 European History I (to 1700) (201) (C- and above) OR HST 132 European History II (from 1700) (139) (C- and above) OR HST 151 US History I (to 1877) (668) (C- and above) OR HST 152 US History II (from 1877) (465) (C- and above) OR HST 172 Middle Eastern History II (from 1800) (1194) (C- and above) OR HST 182 East Asian History II (from 1500) (213) (C- and above) OR HST 199 Freshman Seminar (241) (C- and above)			History	SHSS, SST		
218	HST 423	Orthodox Christianity in Modern and Revolutionary Russia	3	6	Subject "HST" BETWEEN 200 and 299 OR Subject "HST" BETWEEN 300 and 399			History	SHSS, SST		
219	HST 498	Directed Reading	3	6							
220	HST 523	Orthodox Christianity in Modern and Revolutionary Russia	4	8				SHSS, SST			
221	PHIL 101	Introduction to Philosophy	3	6				1 year UG SHSS, 2 year UG SHSS	SHSS, SST		
222	PHIL 110	The Good Life in Practice	3	6				1 year UG SHSS, 2 year UG SHSS	SHSS, SST		
223	PHIL 124	Knowledge and Reality	3	6				1 year UG SHSS, 2 year UG SHSS	SHSS, SST		
224	PHIL 205	Introduction to Modern Philosophy	3	6				SHSS	SST		
225	PHIL 215	Bioethics	3	6				SHSS, SST			
226	PHIL 223	Philosophy of Science	3	6				SHSS, SST			
227	PHIL 240	Formal Logic	3	6				SHSS, SST			
228	PHIL 325	Truth, Lies, Media, and Propaganda	3	6				SHSS, SST			

229	PHIL 361	Philosophy of Language	3	6				SHSS, SST		
230	PHIL 399	Special Topics in Philosophy	3	6	PHIL 101 Introduction to Philosophy (242) (C- and above) OR PHIL 210 Ethics (459) (C- and above) OR PHIL 320 Truth, Knowledge and Belief (470) (C- and above) OR PHIL 230/PLS 230 Religion and Democracy (671) (C- and above)					
231	REL 410	Buddhism in Central Asia	3	6	Subject "REL" BETWEEN 100 and 199			SHSS, SST		
232	REL 510	Buddhism in Central Asia	4	8				Eurasian Studies	SHSS, SST	
History, Philosophy and Religious Studies, History, Philosophy and Religious Studies										
233	HST 261/REL 261	History of Islam (570s to 1258)	3	6	Subject "HST" BETWEEN 100 and 199 OR Subject "REL" BETWEEN 100 and 199			History	SHSS, SST	
234	HST 329/REL 329	Women in Islamic History	3	6				History	SHSS, SST	
History, Philosophy and Religious Studies, Political Science and International Relations										
235	PHIL 231/PLS 222	Global Justice	3	6				SHSS	SST	
History, Philosophy and Religious Studies, Sociology and Anthropology										
236	HST 381	AIDS and Society	3	6	Subject "HST" BETWEEN 101 and 199 OR HST 100 History of Kazakhstan (172) (B- and above)			History	SHSS, SST	
Kazakh Language and Turkic Studies										
237	KAZ 001	Kazakh Language Placement Test	0	0						
238	KAZ 100	Elementary Kazakh	3	6						
239	KAZ 101	Basic Kazakh I	3	6	KLL "[A2] Basic"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST
240	KAZ 111	Intermediate Kazakh I	3	6	KLL "[B1.2] Intermediate"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST

241	KAZ 121	Upper-Intermediate Kazakh	3	6	KLL "[B2.2] Upper-Interm."				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
242	KAZ 211	Kazakh Rhetoric	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"		KAZ 303 Academic Speaking in Kazakh (702) (C- and above) OR KAZ 304 Academic Writing in Kazakh (703) (C- and above)		1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
243	KAZ 212	Academic Kazakh	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"		KAZ 304 Academic Writing in Kazakh (703) (C- and above) OR KAZ 303 Academic Speaking in Kazakh (702) (C- and above)		1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
244	KAZ 213	Kazakh Terminology	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
245	KAZ 225	Kazakh Diplomacy	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
246	KAZ 226	Kazakh for Medical School	3	6	KLL "[B1.2] Intermediate"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	

247	KAZ 230	Kazakh Culture through Ethnography, Literature, and Film	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
248	KAZ 263	Business Etiquette	3	6	KLL "[B2.2] Upper-Interm." OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
249	KAZ 264	Language and ethnicity	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
250	KAZ 313	Kazakh for Business	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
251	KAZ 351	Kazakh Short Stories	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
252	KAZ 354	Kazakh Drama	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
253	KAZ 356	Kazakh Music History	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	

254	KAZ 357	Literature of Alash	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
255	KAZ 362	Creative Writing in Kazakh Language	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
256	KAZ 363	Language and Globalization	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
257	KAZ 364	Kazakh for Civil Service	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
258	KAZ 365	Abai's World	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"						
259	KAZ 366	Kazakh Language for Engineers	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
260	KAZ 368	Onomastics: History and Function of Names	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	
261	KAZ 371	Contemporary Kazakh Literature	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"				1 year UG SENG, 1 year UG SST, 4 year UG SENG, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, 4 year UG SHSS, SEng, SST	

262	TUR 231	Istanbul in Literature and Culture	3	6				SHSS	SST		
263	TUR 305	Introduction to Chagatay and Ottoman Turkish	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			SHSS, SST			
264	TUR 411	Advanced Readings in Turkish Literature	3	6				SHSS, SST			
Languages, Literature and Linguistics											
265	CHN 101	Beginning Mandarin I	4	8				World Languages, Literature and Culture	1 year UG SHSS	1 year UG SST	
266	CHN 201	Intermediate Mandarin I	4	8	CHN 102 Beginning Mandarin II (1844) (C and above)			SHSS, SST			
267	CHN 202	Intermediate Mandarin II	4	8	CHN 201 Intermediate Mandarin I (2181) (C and above)			SHSS, SST			
268	FRE 201	Intermediate French I	4	8	FRE 102 Beginning French II (454) (C- and above)			World Languages, Literature and Culture	SHSS	SST	
269	FRE 312	Advanced Expression	3	6	FRE 201 Intermediate French I (667) (C- and above)			SHSS, SST			
270	GER 102	Beginning German II	4	8	GER 101 Beginning German (3173) (C- and above)			World Languages, Literature and Culture	SHSS	SST	
271	GER 201	Intermediate German I	4	8	GER 102 Beginning German II (3335) (C- and above)			World Languages, Literature and Culture	SHSS	SST	
272	SPA 101	Beginning Spanish I	4	8				World Languages, Literature and Culture	1 year UG SHSS	1 year UG SST, 2 year UG SHSS, 2 year UG SST	
273	SPA 201	Intermediate Spanish I	4	8	SPA 102 Beginning Spanish II (1128) (C- and above)			World Languages, Literature and Culture	SHSS	SST	
274	SPA 314	Advanced Spanish Grammar and Composition	3	6	SPA 202 Intermediate Spanish II (1842) (C- and above)			SHSS, SST			
275	WLL 101	Introduction to Critical Issues in the Humanities and Social Sciences	3	6				World Languages, Literature and Culture	SHSS	SST	
276	WLL 110	Introduction to Literary Studies	3	6				World Languages, Literature and Culture	SHSS	SST	
277	WLL 131	Introduction to Linguistics	3	6				World Languages, Literature and Culture	SHSS	SST	

278	WLL 201	World Literature I	3	6			World Languages, Literature and Culture	SHSS	SST	
279	WLL 244	Survey of Nineteenth-Century Russian Literature	3	6			World Languages, Literature and Culture	SHSS	SST	
280	WLL 248	Survey of Soviet Literature and Culture	3	6			World Languages, Literature and Culture	SHSS	SST	
281	WLL 250	From Page to Screen	3	6			World Languages, Literature and Culture	SHSS	SST	
282	WLL 272	Language and the Mind	3	6			World Languages, Literature and Culture	SHSS	SST	
283	WLL 273	Survey of Research Methods in Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)		1 year UG SHSS	SHSS	SST	
284	WLL 275	Language Contact in Central Asia	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)		World Languages, Literature and Culture	SHSS	SST	
285	WLL 277	Language Diversity and Language Universals	3	6	LING 131 Introduction to Linguistics (1394) (C and above)		World Languages, Literature and Culture	SHSS	SST	
286	WLL 278	Sounds of the World's Languages	3	6			World Languages, Literature and Culture	SHSS	SST	
287	WLL 345	Modern Japanese Literature	3	6	Subject "WLL" BETWEEN 1 and 499 OR Subject "" BETWEEN 1 and 499 OR Subject "" BETWEEN 1 and 499 OR Subject "HST" BETWEEN 1 and 499 OR Subject "" BETWEEN 1 and 499 OR Subject "" BETWEEN 1 and 499 OR Subject "" BETWEEN 1 and 499		World Languages, Literature and Culture	SHSS	SST	
288	WLL 355	Graphic Narrative: Advanced Readings in Sequential Art	3	6	WLL 155 Introduction to the Comic Book (3046) (C- and above) OR WLL 255 The Comic Book in Japan and America (1849) (C- and above)		World Languages, Literature and Culture	SHSS	SST	
289	WLL 399	Independent Study	3	6			Through Add form only			
290	WLL 498	Languages and Literature Capstone I	1	2			4 year UG SHSS World Language and Literature			

Languages, Literature and Linguistics, Languages, Literature and Linguistics

291	SPA 254/WLL 254	Superstition, Magical Realism, and Horror in Hispanic Culture	3	6	Subject "WLL" BETWEEN 100 and 499 OR Subject "HST" BETWEEN 100 and 499			World Languages, Literature and Culture	SHSS	SST	
Languages, Literature and Linguistics, Sociology and Anthropology											
292	ANT 275/WLL 271	Language and Society	3	6				2 year UG SHSS, Anthropology	SHSS	SST	
293	ANT 385/WLL 385	Postcolonial Theory and its Applications in Eurasia	3	6	ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above) OR SOC 101 Introduction to Sociology (508) (C- and above) OR WLL 121 Introduction to Cultural Studies (243) (C- and above) OR WLL 102 /PHIL 102 Language, Experience, Culture (2481) (C- and above)			Anthropology, Sociology, World Languages, Literature and Culture	3 year UG SHSS, 4 year UG SHSS	SHSS, SST	
Mathematics											
294	MATH 109	Mathematical Discovery	3	6			MATH 161 Calculus I (118) (C- and above)	SHSS	SST		
295	MATH 161	Calculus I	4	8				1 year UG SST	SST	SHSS	
296	MATH 162	Calculus II	4	8	MATH 161 Calculus I (118) (C and above)			3 year UG SHSS, 4 year UG SHSS, Economics, SST	SHSS		
297	MATH 251	Discrete Mathematics	3	6	MATH 161 Calculus I (118) (C and above)			Computer Science, Mathematics	SST	SHSS	
298	MATH 263	Calculus III	4	8	MATH 162 Calculus II (170) (C and above)			3 year UG SHSS, 4 year UG SHSS, SST	SHSS		
299	MATH 273	Linear Algebra with Applications	4	8	MATH 161 Calculus I (118) (C and above)	MATH 162 Calculus II (170) (C and above)		4 year UG SHSS, SST	SHSS		
300	MATH 274	Introduction to Differential Equations	3	6	MATH 162 Calculus II (170) (C and above)			4 year UG SHSS, SST	SHSS		
301	MATH 301	Introduction to Number Theory	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)			Mathematics	SHSS, SST		

302	MATH 310	Applied Statistical Methods	3	6	MATH 161 Calculus I (118) (C and above)		MATH 321 Probability (482) (C and above)	2 year UG SST Biological Sciences, 2 year UG SST Computer Science, 3 year UG SST Biological Sciences, 3 year UG SST Computer Science, 4 year UG SST Biological Sciences, 4 year UG SST Computer Science, 5 year UG SST Biological Sciences, 5 year UG SST Computer Science	Mathematics, SHSS		
303	MATH 321	Probability	3	6	MATH 162 Calculus II (170) (C and above)		ECON 211 Economic Statistics (2280) (C- and above) OR PLS 211 Quantitative Methods (221) (C- and above)	4 year UG SHSS, Computer Science, Mathematics	SHSS, SST		
304	MATH 323	Actuarial Mathematics I	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above) OR (MATH 162 Calculus II (170) (C and above) AND MATH 310 Applied Statistical Methods (82) (C and above))			Mathematics	SHSS, SST		
305	MATH 351	Numerical Methods with Applications	3	6	MATH 274 Introduction to Differential Equations (484) (C and above) AND MATH 263 Calculus III (81) (C and above)		ENG 202 Numerical Methods in Engineering (5506) (C and above)	Mathematics	SHSS, SST		
306	MATH 361	Real Analysis I	3	6	MATH 263 Calculus III (81) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)			Mathematics	SHSS, SST		
307	MATH 402	Abstract Algebra I	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)			Mathematics	SHSS, SST		
308	MATH 411	Linear Programming	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 263 Calculus III (81) (C and above)			Mathematics	SHSS, SST		

309	MATH 425	Stochastic Processes	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics	SHSS, SST		
310	MATH 440	Regression Analysis	3	6	MATH 322 Mathematical Statistics (1165) (C and above)		SOC 203 Quantitative Methods in Sociology (1377) (C and above) OR PLS 211 Quantitative Methods (221) (C and above)	Mathematics	SHSS, SST		
311	MATH 471	Nonlinear Differential Equations	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above)			Mathematics	SHSS, SST		
312	MATH 481	Partial Differential Equations	3	6	MATH 274 Introduction to Differential Equations (484) (C and above)	MATH 480 Complex Analysis (618) (C and above)		Mathematics	SHSS, SST		
313	MATH 517	Scientific Modeling and Simulation with Mathematics	3	6							
314	MATH 540	Statistical Analysis	3	6							
Physics											
315	PHYS 161	Physics I for Scientists and Engineers with Laboratory	4	8		MATH 161 Calculus I (118) (C and above)	PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above)	SST	SHSS		
316	PHYS 201	Introductory Astronomy I	3	6				SHSS, SST			
317	PHYS 221	Classical Mechanics I	3	6	(PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above)) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			Physics	SHSS, SST		

318	PHYS 261	Modern Physics with laboratory	4	8	MATH 162 Calculus II (170) (C- and above) AND (PHYS 152 Introductory Physics II with Lab (1176) (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above))			Physics	SHSS, SST		
319	PHYS 315	Mathematical Methods of Physics	3	6	(PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)) AND MATH 274 Introduction to Differential Equations (484) (C- and above)			Physics	SHSS, SST		
320	PHYS 361	Classical Electrodynamics I	3	6		PHYS 315 Applied Mathematical Methods (653) (D and above) OR PHYS 411 Advanced Mathematical Physics (3142) (D and above)		SHSS, SST			
321	PHYS 452	Quantum Mechanics II	3	6	PHYS 451 Quantum Mechanics I (1415) (C- and above)			SHSS, SST			
322	PHYS 465	Advanced Experimental Physics	3	6	PHYS 370 Optics with Laboratory (1405) (C- and above)			Physics			
323	PHYS 474	Lasers and Photonics	3	6	PHYS 370 Optics with Laboratory (1405) (C- and above)			SHSS, SST			
324	PHYS 491	Directed Study of Advanced Physics Topics	3	6				Through Add form only			
325	PHYS 505	Classical Mechanics	3	6							
326	PHYS 511	Computational Modeling and Simulation	3	6							
327	PHYS 515	Classical Electrodynamics	3	6							
328	PHYS 545	Advanced Instrumentation Methods	3	6							

329	PHYS 550	Advanced Mathematical Physics	3	6							
330	PHYS 574	Lasers and Photonics	3	6							
331	SST 501	Teaching and Learning	3	6							
Political Science and International Relations											
332	PLS 101	Introduction to Political Science	3	6				SST	1 year UG SHSS	SHSS	
333	PLS 120	Introduction to Political Theory	3	6				1 year UG SHSS, Political Science and International Relations	SHSS	SST	
334	PLS 140	Introduction to Comparative Politics	3	6				1 year UG SHSS	Political Science and International Relations	SHSS, SST	
335	PLS 150	Introduction to International Relations	3	6						SHSS, SST	
336	PLS 210	Political Science Research Methods	3	6				Political Science and International Relations	SHSS		
337	PLS 211	Quantitative Methods in Political Science	3	6			ECON 211 Economic Statistics (2280) (C- and above)	Political Science and International Relations	SHSS		
338	PLS 340	Politics of East Asia	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS		
339	PLS 359	United Nations	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS		
340	PLS 360	Foreign Policy Analysis	3	6	PLS 150 Introduction to International Relations (511) (C- and above)			Political Science and International Relations	SHSS		
341	PLS 370	Law, Politics and Society	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS		
342	PLS 391	Intermediate Special Topics in Comparative Politics	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS		
343	PLS 412	Scientific Research in International Relations	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			Political Science and International Relations	SHSS		

344	PLS 421	Theories of Political Obligations	3	6	PLS 325 Ancient Political Theory (675) (C- and above) OR PLS 326 Modern Political Theory (1131) (C- and above)			Political Science and International Relations	SHSS, SST		
345	PLS 422	Just War Theory	3	6	PLS 120 Introduction to Political Theory (512) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS, SST		
346	PLS 441	Advanced Topics in Comparative Politics	3	6	PLS 140 Introduction to Comparative Politics (223) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS, SST		
347	PLS 445	Political Violence	3	6	(PLS 140 Introduction to Comparative Politics (223) (C- and above) OR PLS 150 Introduction to International Relations (511) (C- and above)) AND PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS, SST		
348	PLS 465	Politics of International Finance	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS, SST		
349	PLS 469	International Relations of Eurasia	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations	SHSS, SST		
350	PLS 495	Research Practicum in PSIR	1	2	PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			Through Add form only			
351	PLS 511	Advanced Research I	4	8				1 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
352	PLS 512	Scientific Research in International Relations	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
353	PLS 513	Research and Writing in Political Science	4	8				2 year Gr SHSS Political Sciences and Int. Relations			
354	PLS 522	Just War Theory	4	8				1 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		

355	PLS 541	Advanced Topics in Comparative Politics	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
356	PLS 545	Political Violence	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
357	PLS 550	Core Seminar in IR	4	8				1 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
358	PLS 565	Politics of International Finance	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
359	PLS 569	International Relations of Eurasia	4	8				2 year Gr SHSS Political Sciences and Int. Relations	SHSS, SST		
SSH											
360	SHSS 301	School of Humanities and Social Sciences Internship: Second Experience	3	6				Through Add form only			
Sociology and Anthropology											
361	ANT 101	Introduction to Sociocultural Anthropology	3	6				1 year UG SHSS, Anthropology	2 year UG SHSS	SHSS, SST	
362	ANT 140	World Prehistory	3	6				1 year UG SHSS, Anthropology	2 year UG SHSS	SHSS, SST	
363	ANT 160	Introduction to Biological Anthropology	3	6			ANT 361 Human Evolution: Bones, Stones and Genomes (160) (C- and above)	1 year UG SHSS, Anthropology	2 year UG SHSS	SHSS, SST	
364	ANT 231	Frauds and Fallacies in Archaeology	3	6				2 year UG SHSS, Anthropology	SHSS	SST	
365	ANT 400	Research Assistance in Anthropology	1	2							
366	ANT 498	Capstone Seminar I	3	6				4 year UG SHSS Anthropology			
367	SOC 101	Introduction to Sociology	3	6				1 year UG SHSS, 2 year UG SHSS, Anthropology, Biological Sciences, Sociology		SHSS	
368	SOC 115	Global Social Problems	3	6				1 year UG SHSS	2 year UG SHSS	SHSS, SST	
369	SOC 203	Quantitative Methods in Sociology	3	6				Anthropology, Sociology	SHSS	SST	
370	SOC 215	Sociology of Race and Ethnicity	3	6				Anthropology, Sociology	SHSS	SST	

371	SOC 301	Classical Sociological Theory	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above) OR ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above)		Anthropology, Sociology	3 year UG SHSS, 4 year UG SHSS	SHSS, SST	
372	SOC 314	Organizations and Society	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above)		Anthropology, Sociology	SHSS	SST	
373	SOC 318	Sexuality and Gender in a Transnational World	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above) OR SOC 210 Gender and Society (226) (C- and above)		Anthropology, Sociology	3 year UG SHSS, 4 year UG SHSS	SHSS, SST	
374	SOC 321	Applied Policy Analysis: Tools and Perspectives	3	6	SOC 101 Introduction to Sociology (508) (C and above)		Anthropology, Sociology	3 year UG SHSS, 4 year UG SHSS	SHSS, SST	
375	SOC 400	Research Assistance in Sociology	1	2						
376	SOC 403	Research Assistance in Sociology	2	4						
377	SOC 498	Capstone Seminar Part I	3	6			Anthropology, Sociology	SHSS	SST	
Sociology and Anthropology, Sociology and Anthropology										
378	ANT 216	Marriage and Kinship	3	6			1 year UG SHSS, 2 year UG SHSS, Anthropology	SHSS	SST	
379	ANT 285/SOC 212	Food and Society	3	6			Anthropology, Sociology	1 year UG SHSS, 2 year UG SHSS	SHSS, SST	
SEDS										
Chemical Engineering										
380	MCHE 600	MSc Thesis in Chemical Engineering	15	30						
381	MCHE 613	Physical Chemistry of Oil & Gas	1.5	3						
382	MCHE 614	Applied Chemical Engineering Thermodynamics	1.5	3						
383	MCHE 615	Advanced Unit Operations	1.5	3						
384	MCHE 616	Advanced Chemical Reactor Engineering	1.5	3	ECHE 481 Chemical Reaction Engineering (1985) (D and above)					

385	MCHE 618	Plant Economics and Planning	1.5	3							
386	MCHE 619	Safety Engineering and Loss Prevention	1.5	3							
Chemical and Materials Engineering											
387	ECHE 126	Introduction to Chemical Engineering	3	6							
388	ECHE 222	Chemistry I	3	6							
389	ECHE 319	Chemical Engineering Thermodynamics	3	6							
390	ECHE 333	Separation Processes-I	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above)						
391	ECHE 369	Transport Phenomena-II	3	6							
392	ECHE 385	Research Practice	3	6							
393	ECHE 418	Capstone project 1	3	6	ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)						
394	ECHE 419	Advanced Process Simulation	3	6	ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)						
395	ECHE 481	Chemical Reaction Engineering	3	6	ECHE 126 Introduction to Chemical Engineering (33) (D and above) AND BENG 124 Engineering Mathematics I (101) (D and above) AND BENG 225 Engineering Mathematics II (48) (D and above)						
396	ECHE 482	Computational Methods in Chemical Engineering-II	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above) AND ECHE 333 Separation Processes-I (1271) (D and above) AND ECHE 383 Separation Processes II (1982) (D and above) AND ECHE 481 Chemical Reaction Engineering (1985) (D and above) AND ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)						

397	ECHE 484	Multi-Phase Flows	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above) AND ECHE 270 Transport Phenomena-I (735) (D and above)						
Civil Engineering											
398	MCE 600	MSc Thesis in Civil Engineering	15	30							
399	MCE 601	Sustainable Development	3	6							
400	MCE 604	Advanced Project Management	3	6							
401	MCE 606	Environmental Impacts and Assessments	3	6							
402	MSC 615	Advanced Statistics and Probability	3	6							
403	MSC 616	Research Methods	3	6							
Civil and Environmental Engineering											
404	ECE 215	Surveying	3	6							
405	ECE 216	Civil Engineering CAD	3	6							
406	ECE 217	Structural Analysis I	3	6	BENG 117 Engineering Mechanics (740) (D and above)						
407	ECE 302	Civil Engineering Materials	3	6	BENG 221 Engineering Materials (47) (D and above)						
408	ECE 307	Engineering Geology and Rock Mechanics	3	6							
409	ECE 318	Structural Design - Concrete	3	6	ECE 479 Structural Analysis II (2460) (C- and above)						
410	ECE 401	Capstone Project 1	3	6							
411	ECE 404	Construction Technologies and Processes	3	6	BENG 148 Engineering Practice (1073) (D and above) AND ECE 302 Civil Engineering Materials (1040) (D and above)						
412	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (1953) (D and above) OR ECE 218 Environmental Chemistry (3296) (D and above)						
413	ECE 416	Highway Engineering	3	6	ECE 302 Civil Engineering Materials (1040) (D and above)						
414	ECE 473	Environmental Systems	3	6							

415	E MEM 507	Project Management	3	6							
416	E MEM 523	Supply Chain Management	3	6							
417	E MEM 527	Globalization and Engineering	3	6							
418	E MEM 533	Engineering Management and Engineering Economy	3	6							
419	E MEM 537	Engineering Decision Tools	3	6							
420	E MEM 538	Knowledge and Innovation Management	3	6							
421	E MEM 539	Big Data and Information Management	3	6							
422	E MEM 542	Production and Service Operations Management	3	6							
Computer Science											
423	CSCI 151	Programming for Scientists and Engineers	4	8			CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 115 Programming Fundamentals (5257) (D and above) OR ENG 101 Programming for Engineers (4517) (B- and above)	1 year UG SST	SST	SHSS	
424	CSCI 231	Computer Systems and Organization	3	6		CSCI 151 Programming for Scientists and Engineers (192) (C- and above)		Computer Science			
425	CSCI 241	Database Systems	3	6		CSCI 152 Performance and Data Structures (489) (C- and above)		Computer Science			
426	CSCI 262	Software Project Management	3	6		CSCI 152 Performance and Data Structures (489) (C- and above)		Computer Science	SST	SHSS	
427	CSCI 281	Human-Computer Interaction	3	6		CSCI 152 Performance and Data Structures (489) (C- and above)		Computer Science	SST	SHSS	
428	CSCI 307	Computer Science Seminar	3	6				Computer Science			

429	CSCI 344	Data Mining and Decision Support	3	6	CSCI 341 Database Systems (195) (C- and above) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			Computer Science			
430	CSCI 390	Artificial Intelligence	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
431	CSCI 408	Senior Project I	3	6				Computer Science			
432	CSCI 434	Information Security	3	6		CSCI 333 Computer Networks (1145) (D and above)		Computer Science			
433	CSCI 471	Complexity and Computability	3	6	MATH 251 Discrete Mathematics (85) (C- and above)			Computer Science			
434	CSCI 501	Software Principles and Practice	3	6							
435	CSCI 511	CS Track Core-Theory	3	6							
436	CSCI 525	Quantum Computing	3	6							
437	CSCI 545	Big Data Analytics	3	6							
438	SST 503	Laboratory Practicum	3	6	SEDS 502 Teaching Practicum (2824) (P)						
439	SST 591	Research Methods	3	6							
440	SST 693	Thesis Proposal	3	6	SEDS 591 Research Methods (3184) (C- and above)						
Electrical and Computer Engineering											
441	EEE 212	Signals and Systems	3	6	BENG 225 Engineering Mathematics II (48) (D and above)						
442	EEE 238	Digital Signal and Image Processing	3	6							
443	EEE 250	Microelectronic Devices and Circuits	3	6	BENG 114 Introduction to Electrical Systems (1076) (D and above)						
444	EEE 251	Electronic Engineering Design Principles	3	6	BENG 114 Introduction to Electrical Systems (1076) (D and above)						
445	EEE 342	Electromagnetics	3	6							
446	EEE 345	Power Electronics	3	6	ELCE 201 Circuit Theory (5507) (D and above)						
447	EEE 382	Antennas and Propagation	3	6							

448	EEE 384	Digital Integrated Circuits Design	3	6	EEE 250 Microelectronic Devices and Circuits (3152) (C- and above)						
449	EEE 435	Digital Communications	3	6							
450	EEE 437	Capstone Project 1	3	6							
451	EEE 448	Power Transmission and Distribution plants	3	6							
452	EEE 450	RF and Microwave Circuit Design	3	6							
453	EEE 451	High Voltage Engineering	3	6							
454	EEE 452	Power Systems Protection	3	6	ELCE 303 Power System Analysis (6180) (D and above)						
455	EEE 482	Mobile Communications	3	6	EEE 239 Communication systems (534) (C- and above)						
Electrical and Electronic Engineering											
456	MEE 600	MSc Thesis in Electrical and Electronics Engineering	15	30							
457	MEE 607	Statistical Signal Processing	3	6							
458	MEE 608	Special Topics in Circuits Theory	3	6							
459	MEE 622	Modern Control Theory	3	6							
460	MEE 623	Random Processes	3	6							
Mechanical Engineering											
461	MME 600	Master Thesis in Mechanical Engineering	15	30							
462	MME 604	Engineering Mathematics	3	6							
463	MME 605	Numerical Techniques for Engineers	3	6							
464	MME 606	Advanced Control Systems	3	6							
Mechanical and Aerospace Engineering											
465	EME 253	Computer Aided Engineering	3	6							
466	EME 254	Mechanics of Materials	3	6							
467	EME 262	Machine Dynamics I	3	6							
468	EME 354	Advanced Control Systems	3	6	BENG 219 Control Systems (728) (D and above)						

469	EME 358	Heat Transfer	3	6	BENG 226 Engineering Thermodynamics (1553) (D and above) AND EME 275 Fluid Mechanics I (1988) (D and above)						
470	EME 361	Machine Design	3	6							
471	EME 410	Aerodynamics	3	6	EME 357 Fluid Mechanics II (1280) (D and above)						
472	EME 412	Heating, Ventilating and Air Conditioning	3	6	MAE 301 Engineering Thermodynamics (5927) (D and above)						
473	EME 413	Computer Aided Geometric Design	3	6	EME 253 Computer Aided Engineering (1050) (C- and above)						
474	EME 451	Capstone Project 1	3	6							
475	EME 456	Feasibility Analysis of Clean Energy Technologies	3	6							
476	EME 463	Machine Dynamics II	3	6							
477	EME 467	Vehicle Propulsion Systems	3	6							
478	EME 486	Oscillation of Mechanical Systems	3	6							
Robotics and Mechatronics											
479	ROBT 201	Mechanics: Statics and Dynamics	3	6	MATH 162 Calculus II (170) (C- and above) AND (PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C- and above) OR PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above))			Robotics and Mechatronics	SHSS, SST		
480	ROBT 203	Electrical and Electronic Circuits I with Lab	4	8	MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above) OR (PHYS 141 Physics I for non-majors with Lab (1437) (C- and above) AND PHYS 142 Physics II for non-majors with Lab (1438) (C- and above)))			Robotics and Mechatronics	SHSS, SST		

481	ROBT 205	Signals and Sensing with Lab	4	8	MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above))			Robotics and Mechatronics	SHSS, SST		
482	ROBT 301	Mechanical Design I	3	6	ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above)			Robotics and Mechatronics	SHSS, SST		
483	ROBT 303	Linear Control Theory with Lab	4	8	ROBT 202 System Dynamics and Modeling (68) (C- and above)			Robotics and Mechatronics	SHSS, SST		
484	ROBT 305	Embedded Systems	3	6	ROBT 206 Microcontrollers with Lab (476) (C- and above)			Robotics and Mechatronics	SHSS, SST		
485	ROBT 307	Power Electronics	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above)			Robotics and Mechatronics	SHSS, SST		
486	ROBT 401	Robot Dynamics and Control	3	6	ROBT 303 Linear Control Theory with Lab (623) (C- and above)			Robotics and Mechatronics	SHSS, SST		
487	ROBT 407	Statistical Methods and Machine Learning	3	6	MATH 273 Linear Algebra with Applications (84) (C- and above) AND MATH 321 Probability (482) (C- and above) AND CSCI 152 Performance and Data Structures (489) (C- and above)			Robotics and Mechatronics	SHSS, SST		
488	ROBT 414	Human-Robot Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Robotics and Mechatronics	SHSS, SST		
489	ROBT 501	Robot Manipulation and Mobility	3	6							
490	ROBT 503	Dynamic Systems and Control	3	6							
491	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)						
492	ROBT 613	Brain-Machine Interfaces	3	6							
School of Engineering											
493	BENG 117	Engineering Mechanics	3	6							

494	BENG 124	Engineering Mathematics I	3	6							
495	BENG 145	Occupal and Environment Health and Safety	3	6							
496	BENG 146	Programming for Engineers	3	6							
497	BENG 215	Sensors and Actuators	3	6							
498	BENG 221	Engineering Materials	3	6							
499	BENG 228	Engineering Mathematics III	3	6	BENG 124 Engineering Mathematics I (101) (D and above) AND BENG 225 Engineering Mathematics II (48) (D and above)						
500	BENG 304	Internship	2	4							
501	BENG 308	Internship	4	8							
502	BENG 312	Internship	6	12							
503	BENG 405	Project Management	3	6							
504	DENG 782	Personal and Professional Skills Development	1.5	3							
505	DENG 784	Doctoral Proposal I	0	6							
506	DENG 794	Dissertation Research	12	24	DENG 785 PhD Proposal Oral Defence (2604) (P)						