

Course Requirements and Registration Priorities Fall 2018

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SEng											
Chemical Engineering											
1	ECHE 126	Introduction to Chemical Engineering	3	6							
2	ECHE 222	Chemistry I	3	6							
3	ECHE 319	Chemical Engineering Thermodynamics	3	6							
4	ECHE 333	Separation Processes-I	3	6	ECHE 319 Chemical Engineering Thermodynamics (D and above)						
5	ECHE 369	Transport Phenomena-II	3	6							
6	ECHE 385	Research Practice	3	6							
7	ECHE 418	Capstone project 1	3	6	ECHE 323 Computational methods in Chemical Engineering-I (D and above)						
8	ECHE 478	Electrochemical Engineering and Corrosion Protection	3	6	ECHE 222 Chemistry I (D and above)			4 year UG SEng Chemical Engineering			
9	ECHE 481	Chemical Reaction Engineering	3	6	ECHE 126 Introduction to Chemical Engineering (D and above) AND BENG 124 Engineering Mathematics I (D and above) AND BENG 225 Engineering Mathematics II (D and above)						
10	ECHE 484	Multi-Phase Flows	3	6	ECHE 319 Chemical Engineering Thermodynamics (D and above) AND ECHE 270 Transport Phenomena-I (D and above)			4 year UG SEng Chemical Engineering			
11	ECHE 486	Chemical Process Safety	3	6							
12	ECHE 487	Soft Matter, Foods and Colloids	3	6				4 year UG SEng Chemical Engineering			
13	ECHE 488	Atmospheric Chemistry and Physics	3	6				4 year UG SEng Chemical Engineering			
14	MCHE 600	MSc Thesis in Chemical Engineering	15	30							
Chemical and Materials Engineering											

15	MCHME 603	Advanced Materials Processing	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
16	MCHME 604	Advanced Materials Characterization Methods	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
17	MCHME 605	Advanced Chemical Reaction Engineering	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
Civil Engineering											
18	ECE 215	Surveying	3	6							
19	ECE 216	Civil Engineering CAD	3	6							
20	ECE 217	Structural Analysis I	3	6	BENG 117 Engineering Mechanics (D and above)						
21	ECE 302	Civil Engineering Materials	3	6	BENG 221 Engineering Materials (D and above)						
22	ECE 303	Construction Management and Practice	3	6	BENG 148 Engineering Practice (D and above)						
23	ECE 307	Engineering Geology and Rock Mechanics	3	6							
24	ECE 318	Structural Design - Concrete	3	6	ECE 479 Structural Analysis II (C- and above)						
25	ECE 401	Capstone Project 1	3	6							
26	ECE 404	Construction Technologies and Processes	3	6	BENG 148 Engineering Practice (D and above) AND ECE 302 Civil Engineering Materials (D and above)						
27	ECE 405	Environmental Engineering	3	6	ECE 473 Environmental Systems (D and above) OR ECE 218 Environmental Chemistry (D and above)						
28	ECE 416	Highway Engineering	3	6	ECE 302 Civil Engineering Materials (D and above)						
29	ECE 421	Behaviour and Design of Structural System	3	6	(ECE 318 Structural Design - Concrete (D and above) OR ECE 314 Structural Engineering Applications I (D and above)) AND (ECE 319 Structural Design - Steel (D and above) OR ECE 315 Structural Engineering Applications II (D and above))			4 year UG SEng Civil Engineering			
30	ECE 481	Individual Research Projects in Civil Engineering	3	6							

31	ECE 482	Solid and Hazardous Waste Management	3	6	ECE 405 Environmental Engineering (C- and above)			4 year UG SEng Civil Engineering		
32	EMEM 507	Project Management	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
33	EMEM 509	Systems Engineering	3	6						
34	EMEM 523	Supply Chain Management	3	6						
35	EMEM 533	Engineering Management and Engineering Economy	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
36	EMEM 537	Engineering Decision Tools	3	6						
37	EMEM 539	Big Data and Information Management	3	6						
38	EMEM 542	Production and Service Operations Management	3	6						
39	EMEM 543	Quality and Lean Management	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
40	MCE 600	MSc Thesis in Civil Engineering	15	30						
41	MCEE 603	Finite Element Methods	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
42	MCEE 604	Advanced Soil Mechanics	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
43	MCEE 605	Advanced Environmental Chemistry	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
44	MSC 601	Technical Communication	3	6						
45	MSC 602	Advanced Applied Mathematics	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM
46	MSC 615	Advanced Statistics and Probability	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM

47	MSC 616	Research Methods	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
Electrical and Computer Engineering											
48	MECE 603	Advanced Data Structures and Algorithms	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
49	MECE 605	Statistics and Probability for Electrical and Computer Engineers	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
50	MECE 606	Embedded Systems and Applications	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
Electrical and Electronic Engineering											
51	EEE 212	Signals and Systems	3	6	BENG 225 Engineering Mathematics II (D and above)						
52	EEE 238	Digital Signal and Image Processing	3	6							
53	EEE 250	Microelectronic Devices and Circuits	3	6	BENG 114 Introduction to Electrical Systems (D and above)						
54	EEE 251	Electronic Engineering Design Principles	3	6	BENG 114 Introduction to Electrical Systems (D and above)						
55	EEE 342	Electromagnetics	3	6							
56	EEE 345	Power Electronics	3	6							
57	EEE 382	Antennas and Propagation	3	6							
58	EEE 384	Digital Integrated Circuits Design	3	6	EEE 250 Microelectronic Devices and Circuits (C- and above)						
59	EEE 437	Capstone Project 1	3	6							
60	EEE 448	Power Transmission and Distribution plants	3	6							
61	EEE 450	RF and Microwave Circuit Design	3	6							
62	EEE 451	High Voltage Engineering	3	6							
63	EEE 452	Power Systems Protection	3	6							
64	EEE 482	Mobile Communications	3	6	EEE 239 Communication systems (C- and above)						
65	EEE 490	Introduction to Big Data	3	6							

66	EEE 491	Internet of Things	3	6	BENG 146 Programming for Engineers (C- and above) AND EEE 343 Embedded Microcontrollers (C- and above)						
67	EEE 492	Deep Learning Machines	3	6							
68	EEE 493	Industry 4.0	3	6							
69	MEE 600	MSc Thesis in Electrical and Electronics Engineering	15	30							
Mechanical Engineering											
70	EME 253	Computer Aided Engineering	3	6							
71	EME 254	Mechanics of Materials	3	6							
72	EME 262	Machine Dynamics I	3	6							
73	EME 354	Advanced Control Systems	3	6	BENG 219 Control Systems (D and above)						
74	EME 358	Heat Transfer	3	6	BENG 226 Engineering Thermodynamics (D and above) AND EME 275 Fluid Mechanics I (D and above)						
75	EME 361	Machine Design	3	6							
76	EME 410	Aerodynamics	3	6	EME 357 Fluid Mechanics 2 (D and above)						
77	EME 412	Heating, Ventilating, and Air Conditioning	3	6							
78	EME 413	Computer Aided Geometric Design	3	6	EME 253 Computer Aided Engineering (C- and above)						
79	EME 451	Capstone project 1	3	6							
80	EME 456	Feasibility Analysis of Clean Energy Technologies	3	6							
81	EME 463	Machine Dynamics II	3	6							
82	EME 467	Vehicle Propulsion Systems	3	6		EME 456 Feasibility Analysis of Clean Energy Technologies (C- and above)					
83	EME 487	Mechatronics Systems Design	3	6	BENG 219 Control Systems (C- and above)						
84	MME 600	MSc Thesis in Mechanical Engineering	15	30							
Mechanical and Aerospace Engineering											
85	ENG 100	Introduction to Engineering	3	6				1 year UG SENG	1 year UG SMG, 1 year UG SST	1 year UG SHSS	

86	ENG 101	Programming for Engineers	3	6				1 year UG SENG	1 year UG SMG, 1 year UG SST	1 year UG SHSS	
87	MMAE 603	Modern Control Engineering	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
88	MMAE 605	Advanced Manufacturing Processes & Strategies	3	6				1 year Gr SENG, 2 year Gr SENG	Science, Engineering and Technology	GSB, GSE, GSPP, SHSS, SMG, SST, SoM	
School of Engineering											
89	BENG 215	Sensors and Actuators	3	6							
90	BENG 228	Engineering Mathematics III	3	6	BENG 124 Engineering Mathematics I (D and above) AND BENG 225 Engineering Mathematics II (D and above)						
91	BENG 405	Project Management	3	6							
92	DENG 782	Personal and Professional Skills Development	3	6				Science, Engineering and Technology			
93	DENG 783	Statistics	3	6				Science, Engineering and Technology			
94	DENG 784	Doctoral Proposal I	0	6				Science, Engineering and Technology			
95	DENG 785	PhD proposal oral defence	0	0				Science, Engineering and Technology			
96	DENG 787	Doctoral Proposal II	3	6	DENG 784 Doctoral Proposal I (C- and above)	DENG 785 PhD proposal oral defence (D and above)		Science, Engineering and Technology			
97	DENG 789	Doctoral Seminar I	3	6	DENG 785 PhD proposal oral defence (C- and above)			Science, Engineering and Technology		4 year Gr SENG (pending graduation)	
98	DENG 790	Doctoral Seminar II	3	6	DENG 789 Doctoral Seminar I (C- and above)			Science, Engineering and Technology			
99	DENG 791	Doctoral Seminar III	3	6	DENG 790 Doctoral Seminar II (C- and above)			Science, Engineering and Technology			
100	DENG 792	Doctoral Seminar IV	3	6	DENG 791 Doctoral Seminar III (C- and above)			Science, Engineering and Technology			
101	DENG 793	Doctoral Seminar V	3	6		DENG 792 Doctoral Seminar IV (C- and above)		Science, Engineering and Technology			
102	DENG 794	Dissertation Research	12	24	DENG 785 PhD proposal oral defence (C- and above)			Science, Engineering and Technology		4 year Gr SENG (pending graduation)	
103	DENG 795	Research at Host University	6	12	DENG 785 PhD proposal oral defence (C- and above)			Science, Engineering and Technology			

104	DENG 796	Thesis Completion	0	0				Science, Engineering and Technology			
105	DENG 797	Oral Defence of PhD Dissertation	0	0	DENG 785 PhD proposal oral defence (C- and above) AND DENG 789 Doctoral Seminar I (C- and above) AND DENG 790 Doctoral Seminar II (C- and above)			Science, Engineering and Technology			
106	DENG 798	Doctoral Seminar VI	3	6	DENG 793 Doctoral Seminar V (C- and above)			Science, Engineering and Technology			
107	DENG 799	Doctoral Seminar VII	3	6	DENG 798 Doctoral Seminar VI (C- and above)			Science, Engineering and Technology			
SST											
Biological Science											
108	BIOL 101	Biology for non-Science majors	3	6				SEng, SHSS, SMG			
109	BIOL 110	Modern Biology I with Lab	4	8			BIOL 110 Modern Biology I (C- and above) OR BIOL 110 Modern Biology I Lab (C- and above)	Biological Sciences, Chemistry	SST	SHSS	
110	BIOL 230	Human Anatomy and Physiology I	4	8	((BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above)) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND ((BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above)) OR BIOL 120 Modern Biology II with Lab (C- and above))			Biological Sciences	SST	SEng, SHSS, SMG	
111	BIOL 305	Introduction to Microbiology with Lab	4	8	((BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above)) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND (BIOL 120 Modern Biology II with Lab (C- and above) OR (BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above)))			Biological Sciences	SST	SEng, SHSS, SMG	

112	BIOL 320	Developmental Biology	3	6	(BIOL 110 Modern Biology I (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above)) AND (BIOL 120 Modern Biology II (C- and above) OR BIOL 120 Modern Biology II with Lab (C- and above)) AND (BIOL 220 Molecular Biology of Cell (C- and above) OR BIOL 301 Molecular Biology of Cell with Lab (C- and above) OR BIOL 231 Human Anatomy and Physiology II (C- and above))			Biological Sciences	SST	SEng, SHSS, SMG	
113	BIOL 340	Introduction to Bioinformatics with Lab	4	8	((BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above)) OR PREM 110 Pre-med Biology I with lab (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above)) AND (BIOL 120 Modern Biology II with Lab (C- and above) OR (BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above))) AND ((BIOL 220 Molecular Biology of Cell (C- and above) AND BIOL 220 Molecular Biology of Cell Lab (C- and above)) OR BIOL 301 Molecular Biology of Cell with Lab (C- and above) OR BIOL 231 Human Anatomy and Physiology II (C- and above))			Biological Sciences	SST	SEng, SHSS, SMG	
114	BIOL 352	Biology of Cancer	3	6	(BIOL 110 Modern Biology I (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND (BIOL 120 Modern Biology II (C- and above) OR BIOL 120 Modern Biology II with Lab (C- and above)) AND (BIOL 220 Molecular Biology of Cell (C- and above) OR BIOL 301 Molecular Biology of Cell with Lab (C- and above) OR BIOL 231 Human Anatomy and Physiology II (C- and above))			Biological Sciences	SST	SEng, SHSS, SMG	

115	BIOL 355	Critical Research Reasoning	3	6	(BIOL 120 Modern Biology II with Lab (C- and above) OR (BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above))) AND (BIOL 231 Human Anatomy and Physiology II (C- and above) OR BIOL 301 Molecular Biology of Cell with Lab (C- and above) OR (BIOL 220 Molecular Biology of Cell (C- and above) AND BIOL 220 Molecular Biology of Cell Lab (C- and above)))			Biological Sciences	SST	SEng, SHSS, SMG
116	BIOL 385	The cell signaling: principles and mechanisms	3	6	BIOL 120 Modern Biology II with Lab (C- and above)			Biological Sciences	SST	SEng, SHSS, SMG
117	BIOL 410	Introduction to Immunology	3	6	(BIOL 110 Modern Biology I (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND (BIOL 120 Modern Biology II (C- and above) OR BIOL 120 Modern Biology II with Lab (C- and above)) AND ((BIOL 220 Molecular Biology of Cell (C- and above) OR BIOL 301 Molecular Biology of Cell with Lab (C- and above)) OR BIOL 210 Introduction to Microbiology (C- and above) OR BIOL 231 Human Anatomy and Physiology II (C- and above))			Biological Sciences	SST	SEng, SHSS, SMG
118	BIOL 455	Biotechnology	3	6	BIOL 301 Molecular Biology of Cell with Lab (C- and above)			Biological Sciences	SST	SEng, SHSS, SMG
119	BIOL 470	Advanced Cell Biology	3	6	BIOL 301 Molecular Biology of Cell with Lab (C- and above) AND BIOL 341 Biochemistry I (C- and above)			Biological Sciences	SST	SEng, SHSS, SMG
120	BIOL 490	Graduation Project 1	4	8				Through Add form only		
121	BIOL 492	Directed study in Biology	3	6				Through Add form only		
122	BIOL 520	Statistical Methods in Life Sciences	3	6						
123	BIOL 550	Structural and Molecular Biology in Health and Disease	3	6						

124	BIOL 560	Molecular Biology of Prokaryotic Cells	3	6							
125	BIOL 600	Graduate Seminar Series	3	6							
126	BIOL 623	Advanced Immunology	3	6				Biological Sciences	SST, Science, Engineering and Technology	SEng, SHSS	
127	BIOL 635	Hot Topics in Life Sciences	3	6							
128	BIOL 670	Gene Therapy	3	6				Biological Sciences	SST, Science, Engineering and Technology	SEng, SHSS	
129	BIOL 690	Research Thesis I	6	12							
Chemistry											
130	CHEM 090	Chemistry for Non-Science majors	3	6				SHSS			
131	CHEM 091	Survey of Physical Science	3	6				SHSS			
132	CHEM 101	General Chemistry I	3	6				Biological Sciences, Chemistry, SMG	SST	SEng, SHSS	
133	CHEM 101L	General Chemistry I lab	1	2		CHEM 101 General Chemistry I (C and above)		Biological Sciences, Chemistry, SMG	SST	SEng, SHSS	
134	CHEM 211	Organic Chemistry I	3	6	CHEM 102 General Chemistry II (C and above)			Chemistry	Biological Sciences	SST	
135	CHEM 211L	Organic Chemistry I Lab	2	4	CHEM 102L General Chemistry II lab (C and above)	CHEM 211 Organic Chemistry I (C and above)		Chemistry	Biological Sciences	SST	
136	CHEM 212	Organic Chemistry II	3	6	CHEM 211 Organic Chemistry I (C and above) OR CHEM 191 Chemistry I for Engineers (C and above)			Chemistry	Biological Sciences	SST	
137	CHEM 220	Quantitative Chemical Analysis with lab	4	8	CHEM 102 General Chemistry II (C and above) AND CHEM 102L General Chemistry II lab (C and above)			Chemistry	Biological Sciences	SST	
138	CHEM 331	Physical Chemistry I	3	6	CHEM 220 Quantitative Chemical Analysis with lab (C and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (C and above)			Chemistry	Biological Sciences	SST	
139	CHEM 331L	Physical Chemistry Lab	1	2		CHEM 331 Physical Chemistry I (C and above)		Chemistry	Biological Sciences	SST	

140	CHEM 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (C and above) AND BIOL 120 Modern Biology II with Lab (C- and above)		Chemistry	Biological Sciences	SST	
141	CHEM 341L	Biochemistry I Lab	1	2	CHEM 212L Organic Chemistry II Lab (C and above)	CHEM 341 Biochemistry I (C and above)	Chemistry	Biological Sciences	SST	
142	CHEM 350	Descriptive Inorganic Chemistry	3	6	CHEM 102 General Chemistry II (C and above)		Chemistry	Biological Sciences	SST	
143	CHEM 400	Chemistry Seminar	3	6	CHEM 380 Research Methods (C and above)		Chemistry	Biological Sciences	SST	
144	CHEM 410	Structural Spectroscopy	4	8	CHEM 212 Organic Chemistry II (C and above)		Chemistry	Biological Sciences	SST	
145	CHEM 450	Advanced Inorganic Chemistry	4	8	CHEM 212 Organic Chemistry II (C and above) AND CHEM 212L Organic Chemistry II Lab (C and above) AND CHEM 350 Descriptive Inorganic Chemistry (C and above)		Chemistry	Biological Sciences	SST	
146	CHEM 471	Environmental Chemistry	3	6	CHEM 320 Instrumental Analysis with Labs (C and above) AND CHEM 212 Organic Chemistry II (C and above)		Chemistry	Biological Sciences	SST	
Computer Science										
147	CSCI 151	Programming for Scientists and Engineers	4	8		ROBT 102 Programming for robotics and physics (C- and above) OR CSCI 150 Fundamentals of Programming (C- and above)	1 year UG SST	SMG, SST	SHSS	
148	CSCI 231	Computer Systems and Organization	3	6	CSCI 152 Performance and Data Structures (C- and above)		Computer Science			
149	CSCI 235	Programming Languages	4	8	CSCI 152 Performance and Data Structures (C and above)		Computer Science			
150	CSCI 262	Software Project Management	3	6	CSCI 152 Performance and Data Structures (C- and above)		Computer Science	SST	SHSS	
151	CSCI 281	Human-Computer Interaction	3	6	CSCI 152 Performance and Data Structures (C- and above)		Computer Science	SST	SHSS	
152	CSCI 299	Internship I	3	6			Through Add form only			

153	CSCI 344	Data Mining and Decision Support	3	6	CSCI 341 Database Systems (C- and above) AND MATH 273 Linear Algebra with Applications (C- and above)			Computer Science			
154	CSCI 361	Software Engineering	3	6	CSCI 152 Performance and Data Structures (C- and above)			Computer Science			
155	CSCI 390	Artificial Intelligence	3	6	CSCI 152 Performance and Data Structures (C- and above)			Computer Science			
156	CSCI 398	Directed Study	3	6				Through Add form only			
157	CSCI 408	Senior Project I	3	6				Computer Science			
158	CSCI 434	Information Security	3	6		CSCI 333 Computer Networks (D and above)		Computer Science			
159	CSCI 471	Complexity and Computability	3	6	MATH 251 Discrete Mathematics (C- and above)			Computer Science			
160	CSCI 494	Deep Learning	3	6	CSCI 390 Artificial Intelligence (C and above) AND MATH 273 Linear Algebra with Applications (C and above)			Computer Science			
161	CSCI 501	Software Principles and Practice	3	6							
162	CSCI 511	CS Track Core-Theory	3	6							
163	CSCI 512	Information Theory	3	6							
164	CSCI 525	Quantum Computing	3	6				Computer Science, Physics	SST, Science, Engineering and Technology	SEng, SHSS	
165	CSCI 545	Big Data Analytics	3	6							
166	CSCI 575	Formal Methods and Applications	3	6							
Mathematics											
167	MATH 109	Mathematical Discovery	3	6				SHSS	SST		
168	MATH 161	Calculus I	4	8				1 year UG SENG, 1 year UG SMG, 1 year UG SST	SST	SEng, SHSS	
169	MATH 162	Calculus II	4	8	MATH 161 Calculus I (C and above)			3 year UG SHSS, 4 year UG SHSS, SST	SHSS		
170	MATH 251	Discrete Mathematics	3	6	MATH 162 Calculus II (C and above)			Computer Science, Mathematics	Physics, Robotics and Mechatronics, SHSS		
171	MATH 263	Calculus III	4	8	MATH 162 Calculus II (C and above)			4 year UG SHSS, SST	SHSS		

172	MATH 273	Linear Algebra with Applications	4	8	MATH 161 Calculus I (C and above)	MATH 162 Calculus II (C and above)		4 year UG SHSS, SST	SHSS		
173	MATH 274	Introduction to Differential Equations	3	6	MATH 162 Calculus II (C and above) AND MATH 273 Linear Algebra with Applications (C and above)			4 year UG SHSS, SST	SHSS		
174	MATH 310	Applied Statistical Methods	3	6	MATH 161 Calculus I (C- and above)		SOC 203 Quantitative Methods in Sociology (C- and above) OR PLS 211 Quantitative Methods (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	Mathematics, SHSS		
175	MATH 321	Probability	3	6	MATH 162 Calculus II (C and above)		ECON 211 Economic Statistics (C- and above) OR PLS 211 Quantitative Methods (C- and above)	4 year UG SHSS, Computer Science, Mathematics	SHSS, SST		
176	MATH 323	Actuarial Mathematics I	3	6	MATH 321 Probability (C- and above) OR MATH 162 Calculus II (C- and above) AND MATH 310 Applied Statistical Methods (C- and above)			Mathematics	SHSS		
177	MATH 351	Numerical Methods with Applications	3	6	MATH 274 Introduction to Differential Equations (C- and above) AND MATH 263 Calculus III (C- and above)			Mathematics	SHSS, SST		
178	MATH 361	Real Analysis I	3	6	MATH 263 Calculus III (C- and above)			Mathematics	SHSS, SST		
179	MATH 425	Stochastic Processes	3	6	MATH 321 Probability (C- and above)			Mathematics	SHSS, SST		
180	MATH 441	Design of Experiments	3	6	MATH 273 Linear Algebra with Applications (C- and above) AND (MATH 310 Applied Statistical Methods (C- and above) OR MATH 322 Mathematical Statistics (C- and above))			Mathematics	SHSS, SST		

181	MATH 471	Nonlinear Differential Equations	3	6	MATH 273 Linear Algebra with Applications (C- and above) AND MATH 274 Introduction to Differential Equations (C- and above)			Mathematics	SHSS, SST		
182	MATH 480	Complex Analysis	3	6	MATH 263 Calculus III (C- and above)			Mathematics	SHSS, SST		
183	MATH 481	Partial Differential Equations	3	6		MATH 274 Introduction to Differential Equations (C- and above) AND MATH 480 Complex Analysis (C- and above)		Mathematics	SHSS, SST		
184	MATH 517	Scientific Modeling and Simulation with Mathematics	3	6	MATH 273 Linear Algebra with Applications (C- and above) OR MATH 351 Numerical Methods with Applications (C- and above)						
185	MATH 518	Applied Finite Element Analysis	3	6	MATH 517 Scientific Modeling and Simulation with Mathematics (B- and above) AND MATH 351 Numerical Methods with Applications (C and above)						
186	MATH 540	Statistical Learning I	3	6	MATH 322 Mathematical Statistics (C- and above) OR (MATH 310 Applied Statistical Methods (C- and above) AND MATH 273 Linear Algebra with Applications (C- and above))						
187	MATH 576	Numerical Methods for Partial Differential Equations	3	6	MATH 551 Advanced Numerical Methods (B- and above)						
188	MATH 676	Advanced Partial Differential Equations with Applications	3	6	MATH 481 Partial Differential Equations (C and above) OR MATH 482 Fourier Analysis (C and above)						
Physics											
189	PHYS 161	Physics I for Scientists and Engineers with Laboratory	4	8		MATH 161 Calculus I (D and above) OR MATH 162 Calculus II (D and above)	PHYS 171 Physics I for Physics Majors with Laboratory (C- and above)	1 year UG SENG, 1 year UG SMG, 1 year UG SST	SST	SEng, SHSS, SMG	
190	PHYS 201	Introductory Astronomy I	3	6	MATH 162 Calculus II (C- and above)			Physics	SEng, SHSS, SMG, SST		

191	PHYS 221	Classical Mechanics I	3	6	PHYS 172 Physics II for Physics Majors with Laboratory (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above)	MATH 263 Calculus III (D and above) AND MATH 274 Introduction to Differential Equations (D and above)		Physics	SST	SEng, SHSS, SMG	
192	PHYS 261	Modern Physics with laboratory	4	8	MATH 162 Calculus II (C- and above) AND (PHYS 152 Introductory Physics II with Lab (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above))			Physics	SST	SEng, SHSS, SMG	
193	PHYS 315	Mathematical Methods of Physics	3	6	(PHYS 172 Physics II for Physics Majors with Laboratory (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above)) AND MATH 274 Introduction to Differential Equations (C- and above)			Physics	SST	SEng, SHSS, SMG	
194	PHYS 361	Classical Electrodynamics I	3	6	(PHYS 172 Physics II for Physics Majors with Laboratory (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above)) AND MATH 274 Introduction to Differential Equations (C- and above)	PHYS 315 Mathematical Methods of Physics (D and above) OR PHYS 411 Advanced Mathematical Physics (D and above)		Physics	SST	SEng, SHSS, SMG	
195	PHYS 452	Quantum Mechanics II	3	6	PHYS 451 Quantum Mechanics I (C- and above)			Physics	SST	SEng, SHSS, SMG	
196	PHYS 465	Advanced Experimental Physics	3	6				Physics	SST	SEng, SHSS, SMG	
197	PHYS 474	Lasers and Photonics	3	6	PHYS 370 Optics with Laboratory (C- and above)			Physics	SST	SEng, SHSS, SMG	
198	PHYS 505	Classical Mechanics	3	6							
199	PHYS 511	Computational Modeling and Simulation	3	6				Physics	SST, Science, Engineering and Technology	SEng, SHSS	
200	PHYS 515	Classical Electrodynamics	3	6							

201	PHYS 550	Advanced Mathematical Physics	3	6				Physics	SST, Science, Engineering and Technology	SEng, SHSS	
202	PHYS 574	Lasers and Photonics	3	6				Physics	SST, Science, Engineering and Technology	SEng, SHSS	
203	SST 501	Teaching and Learning	3	6							
204	SST 503	Laboratory Practicum	3	6	SST 501 Teaching and Learning (C- and above) AND SST 502 Teaching Practicum (C- and above)						
205	SST 591	Research Methods	3	6							
206	SST 693	Thesis Proposal	3	6	SST 591 Research Methods (C- and above)						
Robotics and Mechatronics											
207	ROBT 201	Mechanics: Statics and Dynamics	3	6	MATH 162 Calculus II (C- and above) AND (PHYS 161 Physics I for Scientists and Engineers with Laboratory (C- and above) OR PHYS 171 Physics I for Physics Majors with Laboratory (C- and above))			Robotics and Mechatronics	SST		
208	ROBT 203	Electrical and Electronic Circuits I with Lab	4	8	MATH 162 Calculus II (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above) OR (PHYS 141 Physics I for non-majors with Lab (C- and above) AND PHYS 142 Physics II for non-majors with Lab (C- and above)))			Robotics and Mechatronics	SST		
209	ROBT 205	Signals and Sensing with Lab	4	8	MATH 162 Calculus II (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above))			Robotics and Mechatronics	SST		
210	ROBT 301	Mechanical Design I with CAD Laboratory	4	8	ROBT 201 Mechanics: Statics and Dynamics (C- and above)			Robotics and Mechatronics	SST		
211	ROBT 303	Linear Control Theory with Lab	4	8	ROBT 202 System Dynamics and Modeling (C- and above) AND MATH 274 Introduction to Differential Equations (C- and above)			Robotics and Mechatronics	SST		

212	ROBT 305	Embedded Systems	3	6	ROBT 206 Microcontrollers with Lab (C- and above)			Robotics and Mechatronics	SST		
213	ROBT 307	Power Electronics	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (C- and above)			Robotics and Mechatronics	SST		
214	ROBT 308	Industrial Automation	3	6				Robotics and Mechatronics	SST		
215	ROBT 401	Robot Dynamics and Control	3	6	ROBT 303 Linear Control Theory with Lab (C- and above)			Robotics and Mechatronics	SST		
216	ROBT 407	Statistical Methods and Machine Learning	3	6	MATH 273 Linear Algebra with Applications (C- and above)			Robotics and Mechatronics	SST		
217	ROBT 414	Human-Robot Interaction	3	6	CSCI 152 Performance and Data Structures (C- and above)			Robotics and Mechatronics	SST		
218	ROBT 501	Robot Manipulation and Mobility	3	6							
219	ROBT 503	Dynamic Systems and Control	3	6							
220	ROBT 611	Industrial Robotics	3	6	ROBT 501 Robot Manipulation and Mobility (C- and above) AND CSCI 501 Software Principles and Practice (C- and above)			Robotics	SST, Science, Engineering and Technology	SEng, SHSS	
221	ROBT 613	Brain-Machine Interfaces	3	6				Robotics	SST, Science, Engineering and Technology	SEng, SHSS	
222	ROBT 615	Optimal Control and Planning	3	6	ROBT 501 Robot Manipulation and Mobility (C- and above) AND ROBT 503 Dynamic Systems and Control (C- and above)			Robotics	SST, Science, Engineering and Technology	SEng, SHSS	
SHSS											
Area Studies											
223	EAS 500	Introduction to Eurasia	4	8				Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
224	EAS 501	General Methodology	4	8				Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
225	EAS 503	Thesis I	7.5	15	EAS 500 Introduction to Eurasia (C- and above) AND EAS 501 General Methodology (C- and above) AND EAS 502 Disciplinary Methodology (C- and above)			2 year Gr SHSS Eurasian Studies			
226	EAS 511	Independent Study in Eurasian Studies	4	8							
Area Studies, Political Science and International Relations, Sociology and Anthropology											

227	SOC 514/PLS 514/EAS 506	Qualitative Research Methods	4	8				Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
Communication and Composition											
228	SHSS 150	Rhetoric and Composition	3	6				1 year UG SENG, 1 year UG SMG, 1 year UG SST	1 year UG SHSS, 2 year UG SENG, 2 year UG SHSS, 2 year UG SST	SEng, SHSS, SMG, SST	
229	SHSS 240	Writing for Digital Media	3	6	SHSS 150 Rhetoric and Composition (C- and above)			SHSS	SEng, SMG, SST		
230	SHSS 300	SHSS Internship	3	6				Through Add form only			
231	SHSS 301	SHSS Internship Second Experience	3	6				Through Add form only			
232	SHSS 390	Writing Fellows I - Composition and Collaboration in Theory and Practice	3	6	SHSS 150 Rhetoric and Composition (C- and above)			Through Add form only			
Economics											
233	ECON 101	Introduction to Microeconomics	3	6				1 year UG SHSS	2 year UG SHSS	SEng, SHSS, SMG, SST	
234	ECON 102	Introduction to Macroeconomics	3	6				1 year UG SHSS	2 year UG SHSS	SEng, SHSS, SMG, SST	
235	ECON 201	Intermediate Microeconomics	3	6	ECON 101 Introduction to Microeconomics (C and above) AND (MATH 161 Calculus I (C and above) OR MATH 162 Calculus II (C and above))			Economics	SHSS	SEng, SMG, SST	
236	ECON 202	Intermediate Macroeconomics	3	6	ECON 102 Introduction to Macroeconomics (C and above) AND (MATH 161 Calculus I (C and above) OR MATH 162 Calculus II (C and above))			Economics	SHSS	SEng, SMG, SST	
237	ECON 211	Economic Statistics	3	6	ECON 101 Introduction to Microeconomics (C and above) OR ECON 102 Introduction to Macroeconomics (C and above)			Economics	SHSS	SEng, SMG, SST	
238	ECON 301	Econometrics I	3	6	ECON 211 Economic Statistics (C- and above) OR (MATH 321 Probability (C- and above) AND (MATH 322 Mathematical Statistics (C- and above) OR MATH 310 Applied Statistical Methods (C- and above)))			Economics	SHSS	SEng, SMG, SST	
239	ECON 302	Game Theory and Economic Analysis	3	6	ECON 201 Intermediate Microeconomics (C- and above)			Economics	SHSS	SEng, SMG, SST	

240	ECON 321	Economic Growth	3	6	ECON 202 Intermediate Macroeconomics (C- and above)			Economics	SHSS	SEng, SMG, SST	
241	ECON 325	International Trade	3	6	ECON 201 Intermediate Microeconomics (C- and above) AND ECON 202 Intermediate Macroeconomics (C- and above)			Economics	SHSS	SEng, SMG, SST	
242	ECON 326	The Economics of Financial Markets	3	6	ECON 201 Intermediate Microeconomics (C- and above)			Economics	SHSS	SEng, SMG, SST	
243	ECON 328	Labor Economics	3	6	ECON 201 Intermediate Microeconomics (C- and above)			Economics	SHSS	SEng, SMG, SST	
244	ECON 341	Economic Simulation Modeling	3	6	ECON 201 Intermediate Microeconomics (C- and above)			Economics	SHSS	SEng, SMG, SST	
245	ECON 399	Independent Study in Economics	3	6							
246	ECON 405	Behavioral and Experimental Economics	3	6	ECON 201 Intermediate Microeconomics (C- and above) AND ECON 301 Econometrics I (C- and above)			Economics	SHSS	SEng, SMG, SST	
247	ECON 413	Econometrics II	3	6	ECON 301 Econometrics I (C- and above)			Economics	SHSS	SEng, SMG, SST	
248	ECON 416	Empirical Industrial Organization	3	6	ECON 201 Intermediate Microeconomics (C- and above) AND ECON 301 Econometrics I (C- and above)			Economics	SHSS	SEng, SMG, SST	
249	ECON 501	Microeconomics I	4	8				1 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
250	ECON 502	Macroeconomics I	4	8				1 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
251	ECON 505	Behavioral and Experimental Economics	4	8				2 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
252	ECON 511	Statistics	4	8				1 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
253	ECON 512	Mathematical Economics	4	8				1 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
254	ECON 516	Empirical Industrial Organization	4	8	ECON 501 Microeconomics I (C- and above) AND ECON 531 Econometrics (C- and above)			2 year Gr SHSS Economics	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		

255	ECON 532	Applied Econometrics	4	8				2 year Gr SHSS Economics	GSE, GSE, GSPP, SEng, SHSS, SMG, SST		
256	ECON 589	Thesis I	4	8				2 year Gr SHSS Economics			
History, Philosophy and Religious Studies											
257	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 SMG, 1 year UG SST	SEng, SHSS, SMG, SST	
258	HST 105	Introduction to Eurasian Environmental History	3	6				1 year UG SHSS, 2 year UG SHSS, History	SEng, SHSS, SMG, SST		
259	HST 123	Introduction to the History of Science and Technology	3	6				1 year UG SHSS, 2 year UG SHSS, History	SEng, SHSS, SMG, SST		
260	HST 124	Introduction to the History of Medicine	3	6				1 year UG SHSS, 2 year UG SHSS, History	SEng, SHSS, SMG, SST		
261	HST 238	Conflict of Civilizations: Communities, Confessions and Empires in Central Europe, 1000-1800	3	6				History	SEng, SHSS, SMG, SST		
262	HST 240	Representations of Nature in the Early Modern World	3	6	HST 100 History of Kazakhstan (C- and above)			History	SEng, SHSS, SMG, SST		
263	HST 336	The Totalitarian Phenomenon	3	6	HST 100 History of Kazakhstan (C- and above)			History	SEng, SHSS, SMG, SST		
264	HST 498	Directed Reading	3	6				4 year UG SHSS History and Culture			
265	PHIL 101	Introduction to Philosophy	3	6				SEng, SHSS, SMG, SST			
266	PHIL 141	Critical Thinking	3	6				SEng, SHSS, SMG, SST			
267	PHIL 210	Ethics	3	6				SEng, SHSS, SMG, SST			
268	PHIL 232	Philosophy of Law	3	6				SEng, SHSS, SMG, SST			
269	PHIL 240	Formal Logic	3	6				SEng, SHSS, SMG, SST			
270	PHIL 241	Beyond Common Sense: An Introduction to Paradox	3	6				SEng, SHSS, SMG, SST			
271	PHIL 362	Philosophy of Mind	3	6				SEng, SHSS, SMG, SST			

272	PHIL 399	Special Topics in Philosophy	3	6	PHIL 101 Introduction to Philosophy (C- and above) OR PHIL 210 Ethics (C- and above) OR PHIL 320 Truth, Knowledge and Belief (C- and above) OR PHIL 230/PLS 230 Religion and Democracy (C- and above)						
History, Philosophy and Religious Studies, History, Philosophy and Religious Studies											
273	HST 262/REL 264	Islamic History of Central Eurasia	3	6	HST 100 History of Kazakhstan (C- and above)			History	SEng, SHSS, SMG, SST		
274	PHIL 265/REL 265	Becoming a Sage: Introduction to Daoism	3	6				SEng, SHSS, SMG, SST			
275	REL 110/HST 110	Introduction to World Religions	3	6				GSB, GSE, GSPP, SEng, SHSS, SMG, SST			
History, Philosophy and Religious Studies, Political Science and International Relations											
276	HST 213/PLS 241	Public Health, Society, and the State	3	6				History, Political Science and International Relations	SEng, SHSS, SMG, SST		
History, Philosophy and Religious Studies, Sociology and Anthropology											
277	ANT 313/REL 332	Islam and Politics in Eurasia	3	6				Anthropology, Political Science and International Relations, Sociology	3 year UG SHSS, 4 year UG SHSS	SEng, SHSS, SMG, SST	
Kazakh Language and Turkic Studies											
278	KAZ 201	Academic Kazakh I	3	6	KLL "Basic I" OR KLL "Basic II" OR KLL "Intermediate I" OR KLL "Intermediate II"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
279	KAZ 202	Academic Kazakh II	3	6	KAZ 201 Academic Kazakh I (C- and above) OR KLL "Upper-Intermediate"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
280	KAZ 211	Academic Speaking in Kazakh	3	6	KAZ 202 Academic Kazakh II (C- and above)				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	

281	KAZ 212	Academic Writing in Kazakh	3	6	KLL "Advanced" OR KLL "Upper-Intermediate"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
282	KAZ 226	Kazakh for Medical School	3	6	KLL "Upper-Intermediate" OR KLL "Advanced"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
283	KAZ 313	Kazakh for Business	3	6	KLL "Advanced" OR KLL "Upper-Intermediate"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
284	KAZ 351	Kazakh Short Stories	3	6	KLL "Advanced" OR KLL "Upper-Intermediate"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
285	KAZ 354	Kazakh Drama	3	6	KLL "Advanced" OR KLL "Upper-Intermediate"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
286	KAZ 356	Kazakh Music History	3	6	KLL "Advanced"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
287	KAZ 357	Literature of Alash	3	6	KLL "Advanced" OR KLL "Upper-Intermediate"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
288	KAZ 358	Technique of Translation	3	6	KLL "Upper-Intermediate" OR KLL "Advanced"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	

289	KAZ 362	Creative Writing in Kazakh Language	3	6	KLL "Upper-Intermediate" OR KLL "Advanced"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
290	KAZ 363	Language and Globalization	3	6	KLL "Upper-Intermediate" OR KLL "Advanced"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
291	KAZ 364	Kazakh for Civil Service	3	6	KLL "Advanced" OR KLL "Upper-Intermediate" OR KAZ 314 Speech Culture in Business (C- and above)				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
292	KAZ 368	Onomastics: History and Function of Names	3	6	KLL "Advanced" OR KLL "Upper-Intermediate"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
293	KAZ 371	Contemporary Kazakh Literature	3	6	KLL "Advanced"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
294	KAZ 372	Language and ethnicity	3	6	KLL "Advanced" OR KAZ 211 Academic Speaking in Kazakh (C- and above) OR KAZ 212 Academic Writing in Kazakh (C- and above)				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
295	KAZ 373	Kazakh Terminology	3	6	KLL "Advanced" OR KAZ 202A Kazakh Literature 2/K(C) (C- and above) OR KAZ 211 Academic Speaking in Kazakh (C- and above) OR KAZ 212 Academic Writing in Kazakh (C- and above)				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
296	KAZ 374	Kazakh Diplomacy	3	6	KAZ 202A Kazakh Literature 2/K(C) (C- and above) OR KAZ 211 Academic Speaking in Kazakh (C- and above) OR KAZ 212 Academic Writing in Kazakh (C- and above) OR KLL "Advanced"				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	

297	KAZ 375	Cultural Studies and Kazakh Culture	3	6	KLL "Advanced" OR KAZ 202A Kazakh Literature 2/K(C) (C- and above) OR KAZ 211 Academic Speaking in Kazakh (C- and above) OR KAZ 212 Academic Writing in Kazakh (C- and above)				1 year UG SENG, 1 year UG SMG, 1 year UG SST, 4 year UG SENG, 4 year UG SHSS, 4 year UG SST	1 year UG SHSS, 2 year UG SHSS, 3 year UG SHSS, SEng, SMG, SST	
Languages, Literature and Linguistics											
298	FRE 101	Beginning French I	4	8				World Languages, Literature and Culture	1 year UG SHSS, 2 year UG SHSS	SEng, SHSS, SMG, SST	
299	FRE 311	French for Oral Proficiency	3	6	FRE 201 Intermediate French I (C- and above)			SEng, SHSS, SMG, SST			
300	GER 101	Beginning German	4	8				World Languages, Literature and Culture	1 year UG SHSS, 2 year UG SHSS	SEng, SHSS, SMG, SST	
301	GER 202	Intermediate German II	4	8	GER 201 Intermediate German I (C- and above)			SEng, SHSS, SMG, SST			
302	KOR 101	Beginning Korean I	4	8							
303	LING 130	Introduction to Language and Communication	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST	
304	LING 131	Introduction to Linguistics	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST	
305	LING 272	Language and the Mind	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST	
306	LING 273	Survey of Research Methods in Linguistics	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST	
307	LING 275	Second Language Acquisition Theory and Research I	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST	
308	LING 277	Language Diversity and Language Universals	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST	
309	LING 278	Sounds of the World's Languages	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST	
310	LING 374	Language Contact in Central Asia	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST	
311	PER 101	Beginning Persian I	4	8				World Languages, Literature and Culture	1 year UG SHSS, 2 year UG SHSS	SEng, SHSS, SMG, SST	
312	SPA 101	Beginning Spanish I	4	8				World Languages, Literature and Culture	1 year UG SHSS, 2 year UG SHSS	SEng, SHSS, SMG, SST	

313	SPA 201	Intermediate Spanish I	4	8	SPA 102 Beginning Spanish II (C- and above)			SEng, SHSS, SMG, SST		
314	SPA 314	Advanced Spanish Grammar and Composition	3	6	SPA 202 Intermediate Spanish II (C- and above)			SEng, SHSS, SMG, SST		
315	WLL 110	Introduction to Literary Studies	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST
316	WLL 201	World Literature I	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST
317	WLL 209	Introduction to Translation Studies	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST
318	WLL 257	Fan Culture in the Age of Convergence	3	6				World Languages, Literature and Culture	SHSS	SEng, SMG, SST
319	WLL 314	Petersburg Text in Russian Literature	3	6	Subject "WLL" BETWEEN 100 and 499 OR Subject "HST" BETWEEN 100 and 499			World Languages, Literature and Culture	SHSS	SEng, SMG, SST
320	WLL 440	Oral Epic in Central Asia	3	6	Subject "WLL" BETWEEN 100 and 199 OR Subject "WLL" BETWEEN 200 and 299 OR Subject "WLL" BETWEEN 300 and 399 OR Subject "WLL" BETWEEN 400 and 499			World Languages, Literature and Culture	SHSS	SEng, SMG, SST
321	WLL 498	Languages, Linguistics, and Literatures Capstone I	3	6				Through Add form only		
322	WLL 540	Oral Epic in Central Asia	4	8				Eurasian Studies	GSB, GSE, GSPP, SEng, SHSS, SMG, SST	
Languages, Literature and Linguistics, Sociology and Anthropology										
323	ANT 175/WLL 171	Introduction to Linguistic Anthropology	3	6			ANT 277/WLL 271 Language and Society (C- and above)	1 year UG SHSS, Anthropology, World Languages, Literature and Culture	SHSS	SEng, SMG, SST
324	ANT 376/WLL 376	Language, Gender, and Sexuality	3	6	ANT 175/WLL 171 Introduction to Linguistic Anthropology (C- and above) OR ANT 277/WLL 271 Language and Society (C- and above) OR LING 131 Introduction to Linguistics (C- and above) OR LING 130 Introduction to Language and Communication (C- and above)			4 year UG SHSS Anthropology, 4 year UG SHSS World Language and Literature	SHSS	SEng, SMG, SST

325	ANT 385/WLL 385	Postcolonial Theory and its Applications in Eurasia	3	6	ANT 101 Introduction to Sociocultural Anthropology (C- and above) OR SOC 101 Introduction to Sociology (C- and above) OR WLL 121 Introduction to Cultural Studies (C- and above) OR WLL 102 /PHIL 102 Language, Experience, Culture (C- and above)			Anthropology, Sociology, World Languages, Literature and Culture	3 year UG SHSS, 4 year UG SHSS	SEng, SHSS, SMG, SST	
Political Science and International Relations											
326	PLS 101	Introduction to Political Science	3	6				SEng, SMG, SST	SHSS		
327	PLS 120	Introduction to Political Theory	3	6				Political Science and International Relations	SHSS	SEng, SMG, SST	
328	PLS 140	Introduction to Comparative Politics	3	6				1 year UG SHSS, Political Science and International Relations	SHSS	SEng, SMG, SST	
329	PLS 150	Introduction to International Relations	3	6				1 year UG SHSS, Political Science and International Relations	SHSS	SEng, SMG, SST	
330	PLS 210	Political Science Research Methods	3	6				Political Science and International Relations	SHSS	SEng, SMG, SST	
331	PLS 211	Quantitative Methods	3	6				Political Science and International Relations	SHSS	SEng, SMG, SST	
332	PLS 312	Public Opinion and Elections	3	6	PLS 211 Quantitative Methods (C- and above) OR ECON 211 Economic Statistics (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
333	PLS 315	Political Game Theory	3	6	PLS 211 Quantitative Methods (C- and above) OR ECON 211 Economic Statistics (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
334	PLS 340	Politics of East Asia	3	6	PLS 140 Introduction to Comparative Politics (C- and above) OR PLS 150 Introduction to International Relations (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
335	PLS 342	Political Corruption	3	6	PLS 140 Introduction to Comparative Politics (C- and above) OR PLS 150 Introduction to International Relations (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	

336	PLS 359	United Nations	3	6	PLS 150 Introduction to International Relations (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
337	PLS 370	Law, Politics and Society	3	6	PLS 140 Introduction to Comparative Politics (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
338	PLS 395	Independent Study	3	6	PLS 210 Political Science Research Methods (C- and above) AND PLS 211 Quantitative Methods (C- and above)			Through Add form only			
339	PLS 416	Experimental Political Science	3	6	PLS 210 Political Science Research Methods (C- and above) AND PLS 211 Quantitative Methods (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
340	PLS 431	Politics and Governance of the Russian Federation	3	6	PLS 140 Introduction to Comparative Politics (C- and above) OR PLS 150 Introduction to International Relations (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
341	PLS 432	Comparative Democratization	3	6	PLS 140 Introduction to Comparative Politics (C- and above) OR PLS 150 Introduction to International Relations (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
342	PLS 441	Advanced Topics in Comparative Politics	3	6	PLS 140 Introduction to Comparative Politics (C- and above) AND PLS 210 Political Science Research Methods (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
343	PLS 458	International Organization	3	6	PLS 150 Introduction to International Relations (C- and above) AND PLS 210 Political Science Research Methods (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
344	PLS 465	Politics of International Finance	3	6	PLS 150 Introduction to International Relations (C- and above) AND PLS 210 Political Science Research Methods (C- and above)			Political Science and International Relations	SHSS	SEng, SMG, SST	
345	PLS 511	Advanced Research I	4	8				Political Science and International Relations	GSE, GSP, SEng, SHSS, SMG, SST		
346	PLS 513	Research and Writing in Political Science	4	8				Political Science and International Relations	GSE, GSP, SEng, SHSS, SMG, SST		
347	PLS 516	Experimental Political Science	4	8	PLS 511 Advanced Research I (C- and above)			Political Science and International Relations	GSE, GSP, SEng, SHSS, SMG, SST		

348	PLS 532	Comparative Democratization	4	8	PLS 540 Core Seminar in Comparative Politics (C- and above)			Political Science and International Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
349	PLS 540	Core Seminar in Comparative Politics	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
350	PLS 541	Advanced Topics in Comparative Politics	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
351	PLS 550	Core Seminar in IR	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
352	PLS 565	Politics of International Finance	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
353	PLS 581	Independent Study in Political Science	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEng, SHSS, SMG, SST		
Political Science and International Relations, Sociology and Anthropology											
354	SOC 120/PLS 195	Asian Community: Development in Asia	3	6				SEng, SHSS, SMG, SST			
Sociology and Anthropology											
355	ANT 101	Introduction to Sociocultural Anthropology	3	6				1 year UG SHSS, 2 year UG SHSS Sociology, Anthropology	2 year UG SHSS	SEng, SHSS, SMG, SST	
356	ANT 140	World Prehistory	3	6				1 year UG SHSS, 2 year UG SHSS Sociology, Anthropology	2 year UG SHSS	SEng, SHSS, SMG, SST	
357	ANT 181	Introduction to Medical Anthropology	3	6				1 year UG SHSS, 2 year UG SHSS Sociology, Anthropology, Biological Sciences	2 year UG SHSS	SEng, SHSS, SMG, SST	
358	ANT 262	Monkey business: Primate Society and Behavior	3	6				2 year UG SHSS, Anthropology, Biological Sciences	SHSS	SEng, SMG, SST	
359	ANT 312	The Anthropology of Conflict	3	6				Anthropology, Sociology	3 year UG SHSS, 4 year UG SHSS	SEng, SHSS, SMG, SST	
360	ANT 400	Research Assistance in Anthropology	1	2	SOC 201 Social Science Research Methods (C- and above) OR SOC 203 Quantitative Methods in Sociology (C- and above) OR SOC 214/ANT 214 Qualitative Methods (C- and above)						

361	ANT 404	Research Assistance in Anthropology	3	6	SOC 201 Social Science Research Methods (C- and above) OR SOC 203 Quantitative Methods in Sociology (C- and above) OR SOC 214/ANT 214 Qualitative Methods (C- and above)						
362	SOC 101	Introduction to Sociology	3	6				Anthropology, Sociology	1 year UG SHSS, 2 year UG SHSS, 3 year UG SST Biological Sciences	SEng, SHSS, SMG, SST	
363	SOC 201	Social Science Research Methods	3	6				Anthropology, Sociology	SHSS	SEng, SMG, SST	
364	SOC 210	Gender and Society	3	6				Anthropology, Sociology	SHSS	SEng, SMG, SST	
365	SOC 215	Sociology of Race and Ethnicity	3	6				Anthropology, Sociology	SHSS	SEng, SMG, SST	
366	SOC 223	Social Movements: How People Make Change	3	6				Anthropology, Sociology	SHSS	SEng, SMG, SST	
367	SOC 318	Sexuality and Gender in a Transnational World	3	6	SOC 101 Introduction to Sociology (C- and above) OR SOC 115 Global Social Problems (C- and above) OR SOC 210 Gender and Society (C- and above)			Anthropology, Sociology	SHSS	SEng, SMG, SST	
368	SOC 320	Organized Crime and Corruption	3	6	SOC 101 Introduction to Sociology (C- and above)			Anthropology, Sociology	SHSS	SEng, SMG, SST	
369	SOC 322	Digital Media Research Methods	3	6	SOC 201 Social Science Research Methods (C- and above) OR SOC 203 Quantitative Methods in Sociology (C- and above) OR ECON 211 Economic Statistics (C- and above) OR PLS 210 Political Science Research Methods (C- and above)			Anthropology, Sociology	SHSS	SEng, SMG, SST	
370	SOC 498	Capstone Seminar Part I	3	6				4 year UG SHSS Sociology			
Sociology and Anthropology, Sociology and Anthropology											
371	SOC 212/ANT 285	Food and Society	3	6							
372	SOC 281/ANT 281	Health, Illness and Society	3	6				Anthropology, Biological Sciences, Sociology	SHSS	SEng, SMG, SST	
CPS											
NUFYP											
373	FBIO 011	Introduction to Biology	1	2							

374	FBUS 011	Introduction to Business	1	2							
375	FCHM 011	Introduction to Chemistry	1	2							
376	FEAP 001	English for Academic Purposes	0	0							
377	FGEO 011	Introduction to Geography	1	2							
378	FHUM 011	Introduction to Humanities and Social Science	1	2							
379	FMATH 001	Mathematics	0	0							
380	FPHY 011	Introduction to Physics	1	2							
NUZYP											
381	ZCOM 040	Academic Communications for Graduate Studies I	0	0							
382	ZRDG 030	Academic Reading for Graduate Studies I	0	0							
383	ZWRT 020	Academic Writing for Graduate Studies I	0	0							
GSB											
GSB											
384	GSBF 501	Team Building and Business Communications	1	2							
385	GSBF 511	Statistical Methods	2	4							
386	GSBF 512	Principles of Finance	2	4							
387	GSBF 516	Financial Markets and Institutions	2	4							
388	GSBF 535	Insurance & Actuarial Science	2	4							
389	GSBF 550	Master's Thesis	9	18							
390	MBA 01	Consequential Leadership	1	2							
391	MBA 02	Business Mathematics and Business Computer Application	1	2							
392	MBA 03	Financial Accounting	2	4							
393	MBA 04	Probability and Statistics	2	4							
394	MBA 05	Business Communication	2	4							
395	MBA 07	Managerial Effectiveness	2	4							
396	MBA 09	Marketing Management	2	4							
397	MBA 16	Entrepreneurship	2	4							

398	MBA 19	Distinguished Speaker Series	0	1							
399	MBA 20	Practicum Project	2.5	5							
400	MBAE 5	Competitive Analysis	2	4							
401	MBAE 6	International Finance	2	4							
402	MBAE 7	Supply Chain Management	2	4							
403	MBAE 9	Marketing Strategy	2	4							
404	MSF 01	Financial Modeling	2	4							
405	MSF 03	Advanced Econometrics	2	4							
406	MSF 04	Venture Capital	2	4							
GSPP											
GSPP											
407	DPP 601	Microeconomics in the Public Sector	4	8							
408	DPP 603	Public Administration and Management	4	8							
409	DPP 611	Statistics in Public Policy	4	8							
410	DPP 614	Advanced Quantitative Methods	4	8							
411	DPP 616	Advanced Qualitative Methods	4	8							
412	DPP 621	Public Policy and Analysis	4	8							
413	DPP 625	Ethics and Public Policy	4	8					Public Policy		
414	DPP 637	Comparative Policy-Making and Public Policy	4	8					Public Policy		
415	DPP 639	International Financial Policy	4	8					Public Policy		
416	DPP 670	Behavioral Economics and Public Policy	4	8					Public Policy		
417	MPA 602	Public Administration in Theory and Practice	4	8							
418	MPA 603	Economic Applications for Public Managers	4	8							
419	MPA 605	Research Methods for Decision Making	4	8							
420	MPA 617	Institutions and development policies	4	8					2 year GSPP Public Policy	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM

421	MPA 622	Public Policy and Economics of Health Systems	4	8				2 year GSPP Public Administration	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	
422	MPA 623	Comparative Constitutional Law	4	8				2 year GSPP Public Administration	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	
423	MPA 625	Ethics and Public Policy	4	8				2 year GSPP Public Administration	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	
424	MPA 637	Comparative Policy-Making and Public Policy	4	8				2 year GSPP Public Administration	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	
425	MPA 639	International Financial Policy	4	8				2 year GSPP Public Administration	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	
426	MPA 685	Water Resources Policy and Management	4	8				2 year GSPP Public Administration	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	
427	MPA 699	Master's Project with Overseas Component	0	0							
428	MPP 601	Microeconomics and Public Policy	4	8							
429	MPP 611	Statistical Techniques for Public Policy	4	8							
430	MPP 612	Public Policy Research and Evaluation	4	8							
431	MPP 621	Introduction to Public Policy and Analysis	4	8							
432	MPP 625	Central Asian politics: Comparative Analysis	4	8				2 year GSPP Public Policy	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	
433	MPP 631	Politics and Public Policy	4	8							
434	MPP 670	Behavioral Economics and Public Policy	4	8	MPP 601 Microeconomics and Public Policy (C- and above) OR MPA 603 Economic Applications for Public Managers (C- and above)			2 year GSPP Public Policy	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	
435	MPP 687	Science, Technology, and Public Policy	4	8				2 year GSPP Public Policy	GSPP	GSB, GSE, SEng, SHSS, SMG, SST, SoM	

GSE

436	EDHE 609	Introduction to Educational Leadership: Higher Education	3	6				1 year GSE Educ.Leadership (2-year program)			
437	EDHE 610	Applying Educational Leadership in Kazakhstan	3	6				1 year GSE Educ.Leadership (2-year program)			
438	EDHE 691	Thesis Seminar II	3	6				2 year GSE Educ.Leadership (2-year program)			
439	EDIE 609	Introduction to Educational Leadership: Inclusive Education	3	6				1 year GSE Educ.Leadership (2-year program)			
440	EDIE 651	Inclusive Education: Policy Perspectives	3	6				1 year GSE Educ.Leadership (2-year program)			
441	EDIE 652	Curriculum Design: perspectives on Addressing Barriers to Teaching and Learning (Including SEN)	3	6				1 year GSE Educ.Leadership (2-year program)			
442	EDIE 691	Thesis Seminar II	3	6				2 year GSE Educ.Leadership (2-year program)			
443	EDML 601	Introduction to Linguistics	3	6				1 year GSE MA in Multil.Educ. (2-year program)			
444	EDML 610	Foundations of Multilingual Education	3	6				1 year GSE MA in Multil.Educ. (2-year program)			
445	EDML 613	The Multilingual School	3	6				2 year GSE MA in Multil.Educ. (2-year program)			
446	EDML 620	Language and Literacy Development	3	6				2 year GSE MA in Multil.Educ. (2-year program)			
447	EDML 690	Thesis Research I	3	6				2 year GSE MA in Multil.Educ. (2-year program)			
448	EDSE 609	Introduction to Educational Leadership: School Education	3	6				1 year GSE Educ.Leadership (2-year program)			
449	EDSE 636	Preparing Children for the Future: Skills and Employability	3	6				1 year GSE Educ.Leadership (2-year program)			
450	EDSE 637	Student Discourse and Argumentation: Theories, Practices and Policies	3	6				1 year GSE Educ.Leadership (2-year program)			

451	EDSE 691	Thesis Seminar II	3	6				2 year GSE Educ.Leadership (2-year program)			
452	EDUC 505	Academic English 1	1.5	3				1 year GSE Educ.Leadership (2-year program)			
453	EDUC 507	Academic English III	1.5	3				2 year GSE Educ.Leadership (2-year program)			
454	EDUC 510	Advanced English for Education Professionals I	3	6				1 year GSE MA in Multil.Educ. (2-year program)			
455	EDUC 512	English for Thesis Writing I	3	6				2 year GSE MA in Multil.Educ. (2-year program)			
456	EDUC 571	Basic Kazakh	3	6				1 year GSE Educ.Leadership (2-year program)			
457	EDUC 572	Kazakh for Professional Purposes	3	6				2 year GSE Educ.Leadership (2-year program)			
458	EDUC 590	Academic English Writing for Doctoral Students I	1.5	3				1 year GSE PhD Education			
459	EDUC 591	Academic English Writing for Doctoral Students II	3	6				2 year GSE PhD Education			
460	EDUC 600	Research Methods I	3	6				1 year GSE Educ.Leadership (2-year program), 1 year GSE MA in Multil.Educ. (2-year program)			
461	EDUC 602	Educational Context and Reform in Kazakhstan	3	6				1 year GSE Educ.Leadership (2-year program), 1 year GSE MA in Multil.Educ. (2-year program)			
462	EDUC 701	Education Research Methods	3	6				1 year GSE PhD Education			
463	EDUC 709	Introduction to Scholarship in Education	3	6				1 year GSE PhD Education			
464	EDUC 712	Educational Policy and Reform	3	6				1 year GSE PhD Education			
465	EDUC 720	Philosophy of Education	3	6				1 year GSE PhD Education			

466	EDUC 740	Doctoral Seminar	3	6					For PhD in Education, Year 3. Registration by School Admin			
467	EDUC 750	Dissertation Research	9	18					For PhD in Education, Year 3. Registration by School Admin			
468	EDUC 800	International Study	12	24					2 year GSE PhD Education			
Other												
GSPP												
469	T-PP 5144	Decision and Game Theory for Public Managers	4	8								
470	T-PP 5168	Public Service Leadership	4	8								
471	T-PP 5178	Leadership and Decision-Making Skills	4	8								
472	T-PP 5191	Public Administration, Technology and Innovation	4	8								
473	T-PP 5196	Education Economics and Policy	4	8								
474	T-PP 5203	Behavioral Economics and Public Policy	4	8								
475	T-PP 5216	Economic Growth in Developing Asia	4	8								
476	T-PP 5267	Urban Transport Policy: A Global View	4	8								
477	T-PP 5298	Singapore's Development Experience	4	8								
478	T-PP 5511	Systemic and Integrated Policy Design and Analysis	4	8								
Other												
479	STUMOB 001	Student Mobility Course	0	0								
480	T-DECISION 618	Data Analytics for Business	3	6								
481	T-MARKETING 797	Consumer Behavior	3	6								
SoM												
Applied Nursing												
482	NUR 401	Education: Principles and Practice for Teaching in Nursing	4	8								
483	NUR 403	Data Analytics for Quality Improvement in Healthcare	3	6								

484	NUR 404	Community and Home Health Nursing	4	8							
485	NUR 406.1	Medical-Surgical Nursing: Complex Surgical Management	4	8							
Biomedical Sciences											
486	MMMM 501	Molecular Basis of Infection	3	6							
487	MMMM 502	Molecular Pathology of Cancer	3	6							
488	MMMM 504	Molecular Basis of Genetic Disease	3	6							
489	MMMM 505	Inferential Biostatistics	2	4							
490	MMMM 506	Biocomputing	1	2							
491	MMMM 513	Molecular Basis of Neurological Disorders	3	6							
492	MMMM 603	Recombinant Drugs	3	6							
493	MMMM 604	Nutrigenomics	1.5	3							
494	MMMM 605	Developmental Biology	1.5	3							
Public Health											
495	PUBH 501	Principles of Public Health Problem Solving	3	6							
496	PUBH 511	Inferential Biostatistics	3	6							
497	PUBH 521	Principles of Analytical Epidemiology	3	6							
498	PUBH 528	Qualitative Research Methods	3	6							
499	PUBH 531	Emerging Infectious Diseases	3	6							
500	PUBH 551	Health Services Management, Health Economic and Health Policy	3	6							
501	PUBH 601	Health Education and Promotion	3	6							
502	PUBH 641	Problem Investigations in Environmental Health	3	6							
503	PUBH 662	Graduate Research Seminar II	3	6							
504	PUBH 681	Master's Project Planning	3	6							
SMG											
Mining Engineering											
505	MINE 500	Foundations of Mining	3	6							
506	MINE 511	Applied Geostatistics	3	6							

507	MINE 512	Geology for Mining Engineers	3	6							
508	MINE 516	Advanced Mine Ventilation	3	6							
509	MINE 519	Mine Automation and Maintenance	3	6							
510	MINE 520	Mine Geomechanics	3	6	MINE 500 Foundations of Mining (C- and above) AND MINE 512 Geology for Mining Engineers (C- and above)						
511	MINE 521	Underground Hard Rock Geotechnical Engineering	3	6				2 year Gr SMG			
512	MINE 522	Advanced Geostatistical Modelling	3	6	MINE 511 Applied Geostatistics (C- and above)			2 year Gr SMG			
513	MINE 524	Advanced Tunnelling	3	6				2 year Gr SMG			
514	MINE 526	Thesis Literature Review	6	12							
515	MINE 604	Geology of Ore Deposits	3	6				2 year Gr SMG			
Petroleum Engineering											
516	PETE 501	Foundations of Petroleum Engineering	3	6							
517	PETE 502	Petroleum Geology	3	6							
518	PETE 503	Fluid Flow Through Porous Media	3	6							
519	PETE 504	Advanced Formation Evaluation	3	6	PETE 501 Foundations of Petroleum Engineering (C- and above)						
520	PETE 505	Advanced Drilling Engineering	3	6	PETE 501 Foundations of Petroleum Engineering (C- and above)						