Course Requirements and Registration Priorities (Undergraduate), Fall 2025

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
GSB											
Bachelor of Business Administration											
1	BBA 208	Data Analytics for Business	3	6				Business Administration (UG)			
2	BBA 210	Fundamentals of Marketing	3	6				Business Administration (UG)			
3	BBA 230	Entrepreneurship	3	6				Business Administration (UG)			
GSB											
4	BUS 101	Core Course in Business	3	6				2 year UG SOM Medical Sciences, 2 year UG SOM Nursing, 3 year UG SOM, 4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SMG (pending graduation), 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SSH (pending graduation), Business Administration (UG)	3 year UG SEDS, 3 year UG SMG, 3 year UG SSH	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SSH	
SoM											
Medical Sciences											
5	NUSM 101	Introduction to Medicine	2	4				1 year UG SOM A Six-Year Medical Program			
6	NUSM 102	Biology for Medical students I with Lab	4	8				1 year UG SOM A Six-Year Medical Program			
7	NUSM 301	Introduction to Immunology, Microbiology and Genetics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SOM Medical Sciences			
8	NUSM 302	Introduction to Statistics for Evidence-Based Practice	3	6	MATH 161 Calculus I (118) (C- and above)			3 year UG SOM Medical Sciences			
9	NUSM 303	Introduction to Anatomy and Histology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SOM Medical Sciences			

10	NUSM 401	Introduction to Being a Physician	2	4	NUSM 310 Capstone Project (7138) (C and above)			4 year UG SOM Medical Sciences		
11	NUSM 402	Medical Anatomy	8	16	NUSM 310 Capstone Project (7138) (C and above)			4 year UG SOM Medical Sciences		
12	NUSM 403	Human Genetics	3	6	NUSM 310 Capstone Project (7138) (C and above)			4 year UG SOM Medical Sciences		
13	NUSM 405	Fuel Metabolism	3	6	NUSM 310 Capstone Project (7138) (C and above)			4 year UG SOM Medical Sciences		
14	NUSM 408	Pharmacology	2	4	NUSM 310 Capstone Project (7138) (C and above)			4 year UG SOM Medical Sciences		
15	NUSM 410	Basics of Medical Interviewing	0	0	NUSM 310 Capstone Project (7138) (C- and above)			4 year UG SOM Medical Sciences		
16	NUSM 411a	Basics of Physical Examination	0	0	NUSM 310 Capstone Project (7138) (C- and above)			4 year UG SOM Medical Sciences		
17	NUSM 412	Evidence-based Medicine I and Biostatistics	0	0	NUSM 310 Capstone Project (7138) (C- and above)			4 year UG SOM Medical Sciences		
18	NUSM 413	English-Russian-Kazakh Medical Terminology	0	0	NUSM 310 Capstone Project (7138) (C- and above)			4 year UG SOM Medical Sciences		
19	NUSM 414	Medical Ethics and Professionalism	0	0	NUSM 310 Capstone Project (7138) (C- and above)			4 year UG SOM Medical Sciences		
Nursing										
20	NUR 205	Psychology for the Health Practitioner	3	6				3 year UG SOM Nursing		
21	NUR 221	Nursing Research: Introduction to Critical Appraisal and Evidence-Based Practice	3	6				3 year UG SOM Nursing		
22	NUR 302	Physical Assessment Across the Lifespan	4	8				1 year UG SOM Nursing		
23	NUR 303	Nursing Care of Older Adults	4	8				1 year UG SOM Nursing		
24	NUR 304	Introduction to Basic Statistics for Evidence Based Practice	3	6				1 year UG SOM Nursing		
25	NUR 308	Enhanced Communication in Professional Nursing	4	8				1 year UG SOM Nursing		
26	NUR 311C	Obstetric Nursing + Clinical	5	10				3 year UG SOM Nursing		

#	Code	Title										
27	NUR 312C	Pediatric Nursing + Clinical: Care of Children and Families	4	8				3 year UG SOM Nursing				
28	NUR 401	Education: Principles and Practice for Teaching in Nursing	4	8				2 year UG SOM Nursing				
29	NUR 403	Data Analytics for Quality Improvement in Healthcare	3	6				2 year UG SOM Nursing				
30	NUR 404	Community and Home Health Nursing	4	8				2 year UG SOM Nursing				
31	NUR 406.1	Medical-Surgical Nursing: Complex Surgical Management	4	8				2 year UG SOM Nursing				
32	NUR 411C	Community and Home Health Nursing and Clinical	4	8				4 year UG SOM Nursing				
33	NUR 412	Geriatric Nursing: Nursing Care of the Older Adult	3	6				4 year UG SOM Nursing				
34	NUR 413C	Medical Surgical Nursing 3 - Management of the Complex and Critically Ill Patient and Clinical	7	14				4 year UG SOM Nursing				
35	NUR 421	Capstone I: Developing a Project Proposal in Nursing	3	6				4 year UG SOM Nursing				
SMG												
Economics, SMG												
36	ECON 220/SMG 200	Resource Economics	3	6	MATH 161 Calculus I (118) (C- and above) OR MATH 162 Calculus II (170) (C- and above)		ECON 201 Intermediate Microeconomics (133) (C- and above) OR ECON 202 Intermediate Macroeconomics (207) (C- and above)	3 year UG SMG, 4 year UG SMG	4 year UG SEDS, 4 year UG SSH			
Geosciences												
37	GEOL 201	Mineralogy	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			2 year UG SMG Geology	2 year UG SMG Mining Engineering, 3 year UG SMG Geology, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering			

#	Code	Title			Prerequisite						
38	GEOL 202	Geologic Maps and Cross-Sections	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)			2 year UG SMG Geology	2 year UG SMG Mining Engineering		
39	GEOL 203	Sedimentary petrology	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)	GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)		3 year UG SMG Geology			
40	GEOL 207	Geomorphology	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above) OR GEOL 102 Fundamentals of Geology (4772) (C- and above)			2 year UG SMG Geology			
41	GEOL 302	Thermodynamics and Geochemistry	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)			3 year UG SMG Geology			
42	GEOL 303	Structural Geology and Tectonics	3	6	(GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)) AND GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)			3 year UG SMG Geology	2 year UG SMG Mining Engineering		
43	GEOL 305	Geology of ore deposits	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above) OR GEOL 201 Mineralogy (5122) (D and above)			3 year UG SMG Geology	2 year UG SMG Mining Engineering, 3 year UG SMG Mining Engineering		
44	GEOL 310	Field Geology 2	3	6	GEOL 303 Structural Geology and Tectonics (5874) (D and above) OR GEOL 301 Igneous and metamorphic petrology (5886) (D and above)			4 year UG SMG Geology	4 year UG SMG Mining Engineering		

45	GEOL 401	Petroleum Geology and Geochemistry	3	6				4 year UG SMG Geology, 4 year UG SMG Petroleum Engineering			
46	GEOL 402	Water Resource Management	3	6				4 year UG SMG Geology	4 year UG SMG Mining Engineering	4 year UG SEDS, 4 year UG SSH	
47	GEOL 404	Research Project I	3	6				4 year UG SMG Geology			
Mining Engineering											
48	MINE 301	Mine Surveying and Geographic Information Systems	3	6				3 year UG SMG Mining Engineering			
49	MINE 302	Geomechanics	3	6				3 year UG SMG Mining Engineering			
50	MINE 401	Mining Geotechnical Engineering	3	6	MINE 302 Geomechanics (5878) (C- and above)			4 year UG SMG Mining Engineering			
51	MINE 402	Mine Planning	3	6				4 year UG SMG Mining Engineering	3 year UG SMG Mining Engineering		
52	MINE 403	Coal Mining	3	6				4 year UG SMG Mining Engineering			
53	MINE 405	Mine Ventilation	3	6				4 year UG SMG Mining Engineering	3 year UG SMG Mining Engineering		
54	MINE 407	Mining and Environment	3	6				4 year UG SMG Mining Engineering			
55	MINE 489	Mine Design Project I	3	6				4 year UG SMG Mining Engineering			
Petroleum Engineering											
56	PETE 201	Fluid Mechanics and Thermodynamics	3	6	MATH 161 Calculus I (118) (D and above) OR CHEM 101 General Chemistry I (113) (D and above)			2 year UG SMG Mining Engineering, 2 year UG SMG Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation)			
57	PETE 301	Numerical Methods for Petroleum Engineers	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above)			3 year UG SMG Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation)			

58	PETE 302	Reservoir Engineering I with Laboratory works	4	8	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above)			3 year UG SMG Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation)		
59	PETE 303	Well Logging and Formation Evaluation	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			3 year UG SMG Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation)		
60	PETE 304	Well Completion and Stimulation	3	6	PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			3 year UG SMG Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation)		
61	PETE 400	Capstone Design Project I	3	6	PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above) AND PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			4 year UG SMG Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation)		
62	PETE 405	Enhanced Oil Recovery	3	6	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (D and above)			4 year UG SMG Petroleum Engineering		
63	PETE 409	Surface Facilities	3	6	PETE 307 Production Engineering (6146) (C- and above) AND PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation)		
SMG										
64	SMG 100	Introduction to Natural Resources Extraction	3	6				1 year UG SMG, 2 year UG SMG, 3 year UG SMG	4 year UG SEDS, 4 year UG SSH	
65	SMG 210	Strength of Materials	3	6				2 year UG SMG, 3 year UG SMG		
SSH										
Biological Science										

66	BIOL 101	Introductory Biology	3	6			BIOL 110 Modern Biology I (1070) (C- and above)	5 year UG SSH (pending graduation), Anthropology, Business Administration (UG), Chemistry, Economics, History, Mathematics, Nursing, Physics, Political Science and International Relations, SEDS, SMG, Sociology, Undeclared SSH, World Languages, Literature and Culture		
67	BIOL 105	General Biology	3	6				Biological Sciences	Undeclared SSH	
68	BIOL 110	Modern Biology I	3	6				1 year UG SOM Medical Sciences, 2 year UG SSH Biological Sciences, 2 year UG SSH Undeclared		
69	BIOL 110L	Modern Biology I Laboratory	1	2		BIOL 110 Modern Biology I (1070) (C and above)		1 year UG SOM Medical Sciences, 2 year UG SSH Biological Sciences, 2 year UG SSH Undeclared		
70	BIOL 120	Modern Biology II	3	6	BIOL 110 Modern Biology I (1070) (C and above)			2 year UG SOM Medical Sciences, Biological Sciences, Undeclared SSH		
71	BIOL 120L	Modern Biology II Laboratory	1	2	BIOL 110 Modern Biology I (1070) (C and above) OR BIOL 110L Modern Biology I Laboratory (5448) (C and above)	BIOL 120 Modern Biology II (1195) (C and above)		2 year UG SOM Medical Sciences, Biological Sciences, Undeclared SSH		
72	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)			2 year UG SOM Medical Sciences, Biological Sciences		
73	BIOL 301	Molecular Cell Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences	
74	BIOL 305	Introduction to Microbiology	3	6	(BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 120L Modern Biology II Laboratory (5443) (C and above)) OR BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences	

75	BIOL 305L	Introduction to Microbiology Laboratory	1	2	BIOL 120 Modern Biology II (1195) (C and above) OR BIOL 120L Modern Biology II Laboratory (5443) (C and above)	BIOL 305 Introduction to Microbiology (5789) (C and above)		2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences		
76	BIOL 310	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)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences		
77	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)			2 year UG SOM Medical Sciences, 4 year UG SSH Biological Sciences	3 year UG SSH Biological Sciences		
78	BIOL 321	Bioethics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences		
79	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)			2 year UG SOM Medical Sciences, Biological Sciences			
80	BIOL 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			2 year UG SOM Medical Sciences, Biological Sciences			
81	BIOL 355	Critical Research Reasoning	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, Medical Sciences	Biological Sciences		

82	BIOL 363	Structural Bioinformatics	4	8	BIOL 341 Biochemistry I (2002) (C and above) OR CHEM 341 Biochemistry I (1058) (C and above) OR CSCI 235 Programming Languages (638) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences	
83	BIOL 370	Genetics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences	
84	BIOL 380	Biology of Behavior	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences	
85	BIOL 385	Cell signaling: principles and mechanisms	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, Biological Sciences		
86	BIOL 450L	Food Microbiology Lab	1	2	BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above)	BIOL 450 Food Microbiology (4609) (C and above)				
87	BIOL 452	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)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences	
88	BIOL 456	Biology Research Design	3	6		BIOL 355 Critical Research Reasoning (1000) (C and above)		4 year UG SSH Biological Sciences	Biological Sciences	

89	BIOL 460	Human Parasitology	3	6	BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above)			2 year UG SOM Medical Sciences, Biological Sciences		
90	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))			4 year UG SSH Biological Sciences	Biological Sciences, Medical Sciences	
91	BIOL 490	Honors Thesis Research	3	6	BIOL 355 Critical Research Reasoning (1000) (B and above)			Instructor's Permission Required. Registration through Add Course form only!		
92	BIOL 491	Honors Thesis	9	18	BIOL 490 Honors Thesis Research (1581) (C and above)					
Chemistry										
93	CHEM 100	Introduction to Chemistry	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SMG (pending graduation), 6 year UG SSH (pending graduation)	SSH	Business Administration (UG), SEDS, SMG, SoM
94	CHEM 101	General Chemistry I	3	6				Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
95	CHEM 101L	General Chemistry I lab	1	2		CHEM 101 General Chemistry I (113) (C and above)		Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH

#	Code	Title	Cr	CH	Prerequisite	Corequisite	Equivalent			
96	CHEM 104	Introduction to Physical and Chemical Sciences	3	6			CHEM 091 Survey of Physical Science (149) (D+ and above)	Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SSH, World Languages, Literature and Culture	SSH	SEDS, SMG, SoM
97	CHEM 211	Organic Chemistry I	3	6	CHEM 102 General Chemistry II (232) (C and above)			Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
98	CHEM 211L	Organic Chemistry I Lab	1	2	CHEM 101L General Chemistry I lab (179) (C and above)	CHEM 211 Organic Chemistry I (154) (C and above)		Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
99	CHEM 212	Organic Chemistry II	3	6	CHEM 211 Organic Chemistry I (154) (C and above) OR CHEM 191 Chemistry I for Engineers (1908) (C and above)			Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
100	CHEM 212L	Organic Chemistry II Lab	1	2	CHEM 211L Organic Chemistry I Lab (156) (C and above)	CHEM 212 Organic Chemistry II (443) (C and above) OR CHEM 292 Organic Chemistry for Biologists II (1901) (C and above)		Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
101	CHEM 220	Quantitative Chemical Analysis	3	6	CHEM 102 General Chemistry II (232) (C and above)			Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
102	CHEM 220L	Quantitative Chemical Analysis Lab	1	2	CHEM 101L General Chemistry I lab (179) (C and above)	CHEM 220 Quantitative Chemical Analysis (555) (C and above)		Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
103	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, SoM	SEDS, SMG, SSH

104	CHEM 331L	Physical Chemistry Lab	1	2		CHEM 331 Physical Chemistry I (634) (C and above)		Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
105	CHEM 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
106	CHEM 350	Advanced Inorganic Chemistry	3	6	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	SEDS, SMG, SSH, SoM
107	CHEM 350L	Advanced Inorganic Chemistry Laboratory	1	2	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)	CHEM 350 Advanced Inorganic Chemistry (1905) (C and above)		Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM
108	CHEM 410	Structural Spectroscopy	4	8	CHEM 212 Organic Chemistry II (443) (C and above)			Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
109	CHEM 432	Introduction to Cheminformatics and Computer aided drug design	3	6	CHEM 341 Biochemistry I (1058) (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, SEDS, SMG, SSH	SoM
110	CHEM 440	Pharmaceutical and Medicinal Chemistry	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			Chemistry	Biological Sciences, SoM	SEDS, SMG, SSH
111	CHEM 471	Environmental Chemistry	3	6	CHEM 102 General Chemistry II (232) (C and above)			Chemistry	SEDS, SMG, SSH, SoM	
112	CHEM 488	Directed Research I	3	6	CHEM 380 Research Methods (636) (C and above)			Chemistry		

Communication and Composition

#	Code	Title			Prerequisite						
113	WCS 101	Communication and Society	3	6				1 year UG SEDS, 1 year UG SMG, 1 year UG SSH, SoM	2 year UG SEDS, 2 year UG SMG, 2 year UG SSH		
114	WCS 150	Rhetoric and Composition	3	6				Business Administration (UG), SEDS, SMG, SSH, SoM			
115	WCS 200	Introduction to Public Speaking	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG GSB Business Administration (UG), 2 year UG SEDS, 2 year UG SMG, 2 year UG SSH, SoM	3 year UG SEDS, 3 year UG SMG, 3 year UG SSH		
116	WCS 201	Introduction to Journalism	3	6	WCS 101 Communication and Society (199) (C- and above) OR WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG GSB Business Administration (UG), 2 year UG SSH			
117	WCS 203	Interpersonal Communication	3	6	WCS 101 Communication and Society (199) (C- and above) OR WCS 200 Introduction to Public Speaking (175) (C- and above)			2 year UG GSB Business Administration (UG), 2 year UG SSH	3 year UG SSH, 4 year UG SEDS		
118	WCS 210	Technical and Professional Writing	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)		WCS 220 Science Writing (5686) (C- and above)	Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics Engineering	SEDS	Business Administration (UG), SSH, SoM	
119	WCS 230	Say What you Mean: Clarity, Precision, and Style in Academic Writing	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG GSB Business Administration (UG), 2 year UG SEDS, 2 year UG SMG, 2 year UG SSH, SoM	3 year UG SEDS, 3 year UG SMG, 3 year UG SSH		
120	WCS 240	Writing for Digital Media	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG GSB Business Administration (UG), 2 year UG SEDS, 2 year UG SMG, 2 year UG SSH, SoM	3 year UG SEDS, 3 year UG SMG, 3 year UG SSH		
121	WCS 250	Advanced Rhetoric and Composition	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			Business Administration (UG), SEDS, SSH, SoM			

122	WCS 270	Academic and Professional Presentations	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)		WCS 210 Technical and Professional Writing (4881) (C- and above)	2 year UG GSB Business Administration (UG), 2 year UG SEDS, 2 year UG SMG, 2 year UG SSH, SoM	3 year UG SEDS, 3 year UG SMG, 3 year UG SSH	
123	WCS 300	Internship: Undergraduate Speaker Consultant I	3	6	WCS 200 Introduction to Public Speaking (175) (A- and above) OR WCS 270 Academic and Professional Presentations (8409) (A- and above)			Instructor's Permission Required. Registration through Add Course form only!		
124	WCS 301	Internship: Undergraduate Speaker Consultant II	3	6	WCS 300 Internship: Undergraduate Speaker Consultant I (8538) (P)			Instructor's Permission Required. Registration through Add Course form only!		
125	WCS 390	Writing Fellows I – Composition and Collaboration in Theory and Practice	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))			3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH		
126	WCS 393	Internship: Undergraduate Writing Tutor I	3	6	WCS 392 Writing Fellows III - Research & Practice in Writing & Peer Mentorship (4472) (B and above)			Business Administration (UG), SEDS, SMG, SSH, SoM		
127	WCS 394	Internship: Undergraduate Writing Tutor II	3	6	WCS 393 Internship: Undergraduate Writing Tutor I (7346) (P)			Business Administration (UG), SEDS, SMG, SSH, SoM		
Communication and Composition, Languages, Literature and Linguistics										
128	WLL 235/WCS 260	Creative Writing: Introduction to Fiction Writing I	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SEDS, 2 year UG SMG, 2 year UG SSH, SoM	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH
129	WLL 462/WCS 462	Creative Nonfiction	3	6	WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (C and above)			World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM

130	WLL 465/WCS 465	Creative Writing: Autofiction	3	6	WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (C- and above)			World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM	
Economics										
131	ECON 101	Introduction to Microeconomics	3	6				5 year UG SSH (pending graduation), Business Administration (UG), Undeclared SSH	SSH	SEDS, SMG, SoM	
132	ECON 102	Introduction to Macroeconomics	3	6				5 year UG SSH (pending graduation), Undeclared SSH	Business Administration (UG), SSH	SEDS, SMG, SoM	
133	ECON 120	Managerial Economics	3	6				SEDS	Business Administration (UG), SMG, SSH, SoM		
134	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))			Economics	2 year UG SSH Undeclared	SSH	
135	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)			Economics	2 year UG SSH Undeclared	SSH	
136	ECON 300	Research Assistance in Economics	1	2	ECON 101 Introduction to Microeconomics (379) (C- and above) AND ECON 102 Introduction to Macroeconomics (503) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR CSCI 235 Programming Languages (638) (C- and above) OR CSCI 390 Artificial Intelligence (643) (C- and above) OR MATH 321 Probability (482) (C- and above) OR MATH 322 Mathematical Statistics (1165) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!			

137	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)))			Economics		SSH	
138	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)	3 year UG SSH Economics, 5 year UG SSH (pending graduation), 6 year UG SSH (pending graduation)	4 year UG SSH Economics	SSH	
139	ECON 305	Advanced Microeconomics	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)	ECON 211 Economic Statistics (2280) (D and above)	ECON 398 General Special Topics in Economics (2184) (C- and above)	3 year UG SSH Economics, 5 year UG SSH (pending graduation), 6 year UG SSH (pending graduation)	4 year UG SSH Economics	SSH	
140	ECON 325	International Trade	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH (pending graduation), 6 year UG SSH (pending graduation)	4 year UG SSH Economics	SSH	
141	ECON 326	The Economics of Financial Markets	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH (pending graduation), 6 year UG SSH (pending graduation)	4 year UG SSH Economics	SSH	
142	ECON 333	Political Economy	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH (pending graduation), 6 year UG SSH (pending graduation)	4 year UG SSH Economics	SSH	
143	ECON 400	Research Assistance in Economics 2	1	2	ECON 300 Research Assistance in Economics (3080) (P)			Instructor's Permission Required. Registration through Add Course form only!			
144	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)			Economics		SSH	

145	ECON 414	Advanced Monetary Policy	3	6	(ECON 202 Intermediate Macroeconomics (207) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)) OR (ECON 202 Intermediate Macroeconomics (207) (C- and above) AND MATH 322 Mathematical Statistics (1165) (C- and above))			Economics		SSH	
146	ECON 418	Corporate Finance and Governance	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) AND (ECON 301 Econometrics I (664) (C- and above) OR MATH 322 Mathematical Statistics (1165) (C- and above))			Economics		SSH	
147	ECON 433	Econometrics II Panel Data	3	6	ECON 301 Econometrics I (664) (C- and above)			Economics		SSH	
148	ECON 449	Quantitative Macroeconomics	3	6	ECON 202 Intermediate Macroeconomics (207) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)			Economics		SSH	
History, Philosophy and Religious Studies											
149	HST 100	History of Kazakhstan	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SSH (pending graduation)	1 year UG GSB Business Administration (UG), 1 year UG SEDS, 1 year UG SMG, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	
150	HST 104	Central Asian History II (1700 - 1991)	3	6				1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	

151	HST 121	World History I (to 1500)	3	6				1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	
152	HST 124	Introduction to the History of Medicine	3	6				1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	
153	HST 212	Coins, cotton, and cocoons: Global trade and Eurasian materiality (ca. 1500-1850)	3	6	Subject "HST" BETWEEN 100 and 199			1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	
154	HST 435	Stalinist Central Asia	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SOM, 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SMG (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation), History	SSH	Business Administration (UG), SEDS, SMG, SoM	
155	HST 498	Directed Reading	3	6				Instructor's Permission Required. Registration through Add Course form only!			
156	PHIL 131	Introduction to Contemporary Political Philosophy	3	6				1 year UG SSH Undeclared	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	
157	PHIL 160	Philosophy of Religion	3	6				1 year UG SSH Undeclared	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	

158	PHIL 210	Ethics	3	6				3 year UG SOM Medical Sciences, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SSH (pending graduation)	1 year UG GSB Business Administration (UG), 2 year UG SEDS, 2 year UG SMG, 2 year UG SSH Biological Sciences, 3 year UG SEDS, 3 year UG SMG	Business Administration (UG), SEDS, SMG, SSH, SoM	
159	PHIL 232	Philosophy of Law	3	6				1 year UG SSH Undeclared	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	
160	PHIL 362	Philosophy of Mind	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SOM, 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SMG (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation), History	SSH	Business Administration (UG), SEDS, SMG, SoM	
161	PHIL 383	Kant's Critique of Pure Reason	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SOM, 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SMG (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation)	SSH	Business Administration (UG), SEDS, SMG, SoM	

#	Code	Title	Cr	ECTS	Prerequisites						
162	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)			4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SOM, 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SMG (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation)	SSH	Business Administration (UG), SEDS, SMG, SoM	
163	REL 212	Buddhist Religious Traditions	3	6				1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	
History, Philosophy and Religious Studies, History, Philosophy and Religious Studies											
164	HST 110/REL 110	Introduction to World Religions	3	6				1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	Business Administration (UG), SEDS, SMG, SSH, SoM	
History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies											
165	HST 271/TUR 271	History of the Ottoman Empire	3	6	HST 100 History of Kazakhstan (172) (C- and above)			History	SSH	Business Administration (UG), SEDS, SMG, SoM	
History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies, Sociology and Anthropology, Sociology and Anthropology											
166	HST 375/TUR 375/ANT 375/SOC 375	Inner Asian Frontiers of China: A Cultural Perspective	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, History, Sociology	Business Administration (UG), SEDS, SMG, SSH, SoM	
History, Philosophy and Religious Studies, Languages, Literature and Linguistics											
167	HST 274/WLL 274	Texts and Contexts	3	6				History	World Languages, Literature and Culture	SSH	

168	WLL 377/PHIL 377	Philosophy and Tragedy	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS (pending graduation), 5 year UG SMG (pending graduation), 5 year UG SOM, 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SMG (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation), World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM	
					Kazakh Language and Turkic Studies					
169	KAZ 001	Kazakh Language Placement Test	0	0				Business Administration (UG), SEDS, SMG, SSH, SoM		
170	KAZ 201	Academic Kazakh I	3	6	KAZ 150 Basic Kazakh (1215) (C- and above) OR KLL "[B1.2] Intermediate"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, Business Administration (UG)	SEDS, SMG, SSH, SoM	
171	KAZ 202	Academic Kazakh II	3	6	KAZ 201 Academic Kazakh I (4561) (C- and above) OR KLL "[B2.2] Upper-Interm."			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, Business Administration (UG)	SEDS, SMG, SSH, SoM	

| 172 | KAZ 313 | Kazakh for Business | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 173 | KAZ 349 | Kazakh Mythology | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 174 | KAZ 350 | Kazakh Literature | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 175 | KAZ 351 | Kazakh Short Stories | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 176 | KAZ 356 | Kazakh Music History | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 177 | KAZ 357 | Literature of Alash | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 178 | KAZ 359 | Professional Kazakh for Medicine | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 179 | KAZ 363 | Language and Globalization | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 180 | 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 SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

| 181 | 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 SOM Medical Sciences, 2 year UG GSB Business Administration (UG), 2 year UG SMG Geology, 2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences, 2 year UG SSH Mathematics, 3 year UG SEDS Computer Science, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH Economics, 3 year UG SSH History and Culture, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SSH Physics | SEDS, SMG, SSH, SoM | | |

182	KAZ 371	Contemporary Kazakh Literature	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			2 year UG SOM Medical Sciences, 4 year UG SEDS Computer Science, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Robotics Engineering, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SSH Anthropology, 4 year UG SSH Biological Sciences, 4 year UG SSH Chemistry, 4 year UG SSH Economics, 4 year UG SSH History and Culture, 4 year UG SSH Mathematics, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SSH World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM		
183	KAZ 372	Language and ethnicity	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			2 year UG SOM Medical Sciences, 4 year UG SEDS Computer Science, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Robotics Engineering, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SSH Anthropology, 4 year UG SSH Biological Sciences, 4 year UG SSH Chemistry, 4 year UG SSH Economics, 4 year UG SSH History and Culture, 4 year UG SSH Mathematics, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SSH World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM		

184	KAZ 373	Kazakh Terminology	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			2 year UG SOM Medical Sciences, 4 year UG SEDS Computer Science, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Robotics Engineering, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SSH Anthropology, 4 year UG SSH Biological Sciences, 4 year UG SSH Chemistry, 4 year UG SSH Economics, 4 year UG SSH History and Culture, 4 year UG SSH Mathematics, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SSH World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM		
185	KAZ 374	Kazakh Diplomacy	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			2 year UG SOM Medical Sciences, 4 year UG SEDS Computer Science, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Robotics Engineering, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SSH Anthropology, 4 year UG SSH Biological Sciences, 4 year UG SSH Chemistry, 4 year UG SSH Economics, 4 year UG SSH History and Culture, 4 year UG SSH Mathematics, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SSH World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM		

| 186 | KAZ 376 | Language and Culture | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 2 year UG SOM Medical Sciences, 4 year UG SEDS Computer Science, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Robotics Engineering, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SSH Anthropology, 4 year UG SSH Biological Sciences, 4 year UG SSH Chemistry, 4 year UG SSH Economics, 4 year UG SSH History and Culture, 4 year UG SSH Mathematics, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SSH World Languages, Literatures and Cultures | SEDS, SMG, SSH, SoM | | |
| 187 | KAZ 377 | Intercultural Communication through Film | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 2 year UG SOM Medical Sciences, 4 year UG SEDS Computer Science, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Robotics Engineering, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SSH Anthropology, 4 year UG SSH Biological Sciences, 4 year UG SSH Chemistry, 4 year UG SSH Economics, 4 year UG SSH History and Culture, 4 year UG SSH Mathematics, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SSH World Languages, Literatures and Cultures | SEDS, SMG, SSH, SoM | | |

188	KAZ 378	Kazakh for Social Science	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			2 year UG SOM Medical Sciences, 4 year UG SEDS Computer Science, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Robotics Engineering, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SSH Anthropology, 4 year UG SSH Biological Sciences, 4 year UG SSH Chemistry, 4 year UG SSH Economics, 4 year UG SSH History and Culture, 4 year UG SSH Mathematics, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SSH World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	
189	KAZ 410	Kazakh literature of the XV-XIX centuries	3	6	Subject "KAZ" BETWEEN 300 and 399 OR Subject "KAZ" BETWEEN 300 and 399			2 year UG SOM Medical Sciences, 4 year UG SEDS Computer Science, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Robotics Engineering, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SSH Anthropology, 4 year UG SSH Biological Sciences, 4 year UG SSH Chemistry, 4 year UG SSH Economics, 4 year UG SSH History and Culture, 4 year UG SSH Mathematics, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SSH World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	

190	KFL 101	Elementary Kazakh as a Foreign Language I	4	8				Instructor's Permission Required. Registration through Add Course form only!			
191	TUR 230	Literatures of Central Asia	3	6				Business Administration (UG), SEDS, SMG, SSH, SoM			
192	TUR 231	Istanbul in Literature and Culture	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	
193	TUR 411	Advanced Readings in Turkish Literature	3	6				Business Administration (UG), SEDS, SMG, SSH, SoM			
194	TUR 451	The Turkish Novel	3	6							
Kazakh Language and Turkic Studies, Languages, Literature and Linguistics											
195	TUR 280/LING 280	Introduction to Turkic Historical and Comparative Linguistics	3	6				Business Administration (UG), SEDS, SMG, SSH, SoM			

196	TUR 480/LING 480	Selective reading of historical Turkic literature	3	6	LING 131 Introduction to Linguistics (1394) (C and above) OR LING 130 Introduction to Language and Communication (4014) (C and above) OR LING 140 Language Variation and Change: the Story of English (4835) (C and above) OR LING 240 Introduction to Sociolinguistics (6838) (C and above) OR LING 270 Languages of Eurasia (2485) (C and above) OR LING 273 Survey of Research Methods in Linguistics (2158) (C and above) OR LING 277 Language Diversity and Language Universals (3834) (C and above) OR LING 278 Sounds of the World's Languages (3850) (C and above) OR LING 280/TUR 280 Introduction to Turkic Historical and Comparative Linguistics (3175) (C and above) OR LING 375 The Art and Science of Analyzing Languages: Morphosyntax of the World's Languages (6237) (C and above) OR LING 374 Language Contact in Central Asia (3047) (C and above) OR LING 470 Multilingualism and Language Contact (3339) (C and above)						
					Languages, Literature and Linguistics					
197	CHN 101	Beginning Mandarin I	4	8				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	

198	CHN 202	Intermediate Mandarin II	4	8	CHN 201 Intermediate Mandarin I (2181) (C and above)			SSH	Business Administration (UG), SEDS, SMG, SoM		
199	DUT 101	Beginning Dutch I	4	8				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	
200	DUT 102	Beginning Dutch II	4	8	DUT 101 Beginning Dutch I (7642) (C- and above)			SSH	Business Administration (UG), SEDS, SMG, SoM		
201	GER 101	Beginning German	4	8				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	
202	GER 201	Intermediate German I	4	8	GER 102 Beginning German II (3335) (C- and above)			SSH	Business Administration (UG), SEDS, SMG, SoM		
203	KOR 101	Beginning Korean I	4	8				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	
204	KOR 201	Intermediate Korean I	4	8	KOR 102 Beginning Korean II (4791) (C- and above)			SSH	SEDS, SMG, SoM		
205	LING 131	Introduction to Linguistics	3	6				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	1 year UG GSB Business Administration (UG), 1 year UG SEDS, 1 year UG SOM, 2 year UG SMG, 2 year UG SSH Undeclared, World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	
206	LING 240	Introduction to Sociolinguistics	3	6	LING 130 Introduction to Language and Communication (4014) (C- and above) OR LING 131 Introduction to Linguistics (1394) (C- and above)			2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	

207	LING 270	Languages of Eurasia	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	
208	LING 273	Survey of Research Methods in Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)			World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM	
209	LING 277	Language Diversity and Language Universals	3	6	LING 131 Introduction to Linguistics (1394) (C and above)			2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	
210	LING 278	Sounds of the World's Languages	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	
211	LING 350	Introduction to Generative Syntax	3	6	LING 131 Introduction to Linguistics (1394) (C and above)			World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM	
212	LING 371	Practicum in Teaching Foreign Languages	2	4				Instructor's Permission Required. Registration through Add Course form only!			
213	LING 431	Statistics and computational methods in Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C- and above) AND Subject "LING" BETWEEN 200 and 299			World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM	
214	LING 479	Tense, Aspect, Modality and Evidentiality	3	6	LING 273 Survey of Research Methods in Linguistics (2158) (C- and above) AND (LING 375 The Art and Science of Analyzing Languages: Morphosyntax of the World's Languages (6237) (C- and above) OR LING 377 Historical Linguistics (7972) (C- and above) OR LING 461 Experimental semantics (7196) (C- and above) OR LING 473 Advanced Empirical Methods in Linguistics (6244) (C- and above))			World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM	
215	PER 101	Beginning Persian I	4	8				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	

216	PER 102	Beginning Persian II	4	8	PER 101 Beginning Persian I (4474) (C- and above)			SSH	Business Administration (UG), SEDS, SMG, SoM	
217	POL 101	Beginning Polish	4	8				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	
218	POL 102	Beginning Polish II	4	8	POL 101 Beginning Polish (7641) (C- and above)			1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	
219	SPA 101	Beginning Spanish I	4	8				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	
220	SPA 201	Intermediate Spanish I	4	8	SPA 102 Beginning Spanish II (1128) (C- and above)			SSH	SEDS, SMG, SoM	
221	SPA 314	Advanced Spanish Grammar and Composition	3	6	SPA 202 Intermediate Spanish II (1842) (C- and above)			SSH	SEDS, SMG, SoM	
222	WLL 110	Introduction to Literary Studies	3	6				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	1 year UG GSB Business Administration (UG), 1 year UG SEDS, 1 year UG SOM, 2 year UG SMG, 2 year UG SSH Undeclared, World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	
223	WLL 201	World Literature I	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	
224	WLL 209	Introduction to Translation Studies	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	
225	WLL 218	Renaissance in Italy and Beyond	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM	

226	WLL 244	Survey of Nineteenth-Century Russian Literature	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	Business Administration (UG), SEDS, SMG, SSH, SoM
227	WLL 333	Literary Modernism: Writing the Futility and Anarchy of Contemporary History	3	6	Subject "WLL" BETWEEN 200 and 299			World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM
228	WLL 340	The image of the East in Russophone literature and culture: genesis and meaning	3	6				World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM
229	WLL 400	Research Assistance in Linguistics and Literature	1	2				Instructor's Permission Required. Registration through Add Course form only!		
230	WLL 410	Literary Theory	3	6				World Languages, Literature and Culture	SSH	Business Administration (UG), SEDS, SMG, SoM
231	WLL 498	Languages, Linguistics, and Literatures Capstone I	3	6				Instructor's Permission Required. Registration through Add Course form only!		
Languages, Literature and Linguistics, Sociology and Anthropology										
232	WLL 171/ANT 175	Introduction to Linguistic Anthropology	3	6			ANT 277/WLL 271 Language and Society (1027) (C- and above)	5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), Anthropology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences, SoM, Sociology	Business Administration (UG), SEDS, SMG, SSH
233	WLL 385/ANT 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	Business Administration (UG), SEDS, SMG, SSH, SoM
Mathematics										

234	MATH 161	Calculus I	4	8				Biological Sciences, Business Administration (UG), Chemistry, Mathematics, Physics, SEDS, SMG	SSH, SoM		
235	MATH 162	Calculus II	4	8	MATH 161 Calculus I (118) (C and above)			5 year UG SSH (pending graduation), Chemistry, Mathematics, Physics, SEDS, SMG	Undeclared SSH	Business Administration (UG), SSH, SoM	
236	MATH 251	Discrete Mathematics	3	6	MATH 161 Calculus I (118) (C and above)			Computer Science, Mathematics	Business Administration (UG), SEDS, SMG, SSH, SoM		
237	MATH 263	Calculus III	4	8	MATH 162 Calculus II (170) (C and above)			Mathematics, Physics	Business Administration (UG), SEDS, SMG, SSH, SoM		
238	MATH 273	Linear Algebra with Applications	4	8	MATH 161 Calculus I (118) (C and above)	MATH 162 Calculus II (170) (C and above)		Computer Science, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics	Business Administration (UG), SEDS, SMG, SSH, SoM		
239	MATH 274	Introduction to Differential Equations	3	6	MATH 162 Calculus II (170) (C and above)			Mathematics, Physics	Chemistry, Robotics Engineering, Robotics and Mechatronics	Business Administration (UG), SEDS, SMG, SSH, SoM	
240	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		Business Administration (UG), SEDS, SMG, SSH, SoM	
241	MATH 302	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		Business Administration (UG), SEDS, SMG, SSH, SoM	
242	MATH 310	Applied Statistical Methods	3	6	MATH 161 Calculus I (118) (C and above)		MATH 321 Probability (482) (C and above)	Biological Sciences, Petroleum Engineering	Mining Engineering	Business Administration (UG), SEDS, SMG, SSH, SoM	
243	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)	Mathematics, Robotics Engineering, Robotics and Mechatronics	Computer Science	Business Administration (UG), SEDS, SMG, SSH, SoM	

244	MATH 322	Mathematical Statistics	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	
245	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		Business Administration (UG), SEDS, SMG, SSH, SoM	
246	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		Business Administration (UG), SEDS, SMG, SSH, SoM	
247	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		Business Administration (UG), SEDS, SMG, SSH, SoM	
248	MATH 371	Introduction to Mathematical Biology	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above)			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	
249	MATH 417	Cryptography	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND (MATH 251 Discrete Mathematics (85) (C and above) OR MATH 301 Introduction to Number Theory (613) (C and above) OR MATH 355 Introduction to Proofs (86) (C and above))			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	
250	MATH 424	Mathematical Finance	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	

251	MATH 425	Stochastic Processes	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	
252	MATH 446	Time Series Analysis	3	6	MATH 322 Mathematical Statistics (1165) (C and above)			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	
253	MATH 449	Statistical Programming	3	6	MATH 322 Mathematical Statistics (1165) (C and above)			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	
254	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		Business Administration (UG), SEDS, SMG, SSH, SoM	
255	MATH 477	Applied Finite Element Methods	3	6	MATH 351 Numerical Methods with Applications (1166) (C and above)			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	
256	MATH 480	Complex Analysis	3	6	MATH 263 Calculus III (81) (C and above)			Mathematics		Business Administration (UG), SEDS, SMG, SSH, SoM	
257	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		Business Administration (UG), SEDS, SMG, SSH, SoM	
258	MATH 490	Special Topics in Mathematics I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
259	MATH 491	Special Topics in Mathematics II	3	6				Instructor's Permission Required. Registration through Add Course form only!			
260	MATH 492	Special Topics in Mathematics III	3	6				Instructor's Permission Required. Registration through Add Course form only!			
Physics											

261	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)	1 year UG SEDS, 1 year UG SMG, 1 year UG SSH Biological Sciences, 1 year UG SSH Chemistry, 1 year UG SSH Mathematics, 1 year UG SSH Physics	Business Administration (UG), SEDS, SMG, SSH, SoM		
262	PHYS 201	Introductory Astronomy I	3	6				5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), Physics	Business Administration (UG), SEDS, SMG, SSH, SoM		
263	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	Business Administration (UG), SEDS, SMG, SSH, SoM		
264	PHYS 250	Introduction to Nuclear Science and Technology	3	6				Physics, SSH	GSB, SEDS, SMG, SoM		
265	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	Business Administration (UG), SEDS, SMG, SSH, SoM		
266	PHYS 315	Applied Mathematical Methods	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	Business Administration (UG), SEDS, SMG, SSH, SoM		

267	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)		Physics	Business Administration (UG), SEDS, SMG, SSH, SoM		
268	PHYS 395	Research Methods	3	6				Physics	SEDS, SMG, SSH		
269	PHYS 421	Parallel Computing	4	8	PHYS 270 Introduction to Scientific Computing and Data Analysis (488) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR CSCI 115 Programming Fundamentals (5257) (C- and above)			Physics			
270	PHYS 452	Quantum Mechanics II	3	6	PHYS 451 Quantum Mechanics I (1415) (C- and above)			Physics	Business Administration (UG), SEDS, SMG, SSH, SoM		
271	PHYS 463	Astrophysics and General Relativity	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 221 Classical Mechanics I (652) (C- and above) AND MATH 274 Introduction to Differential Equations (484) (C- and above)			Physics	Business Administration (UG), SEDS, SMG, SSH, SoM		
272	PHYS 498	Honors Thesis Research	0	0				Instructor's Permission Required. Registration through Add Course form only!			
Political Science and International Relations											

273	PLS 100	Introduction to the Politics of Central Asia	3	6				5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SSH (pending graduation), Undeclared SSH	Anthropology, Biological Sciences, Business Administration (UG), Chemistry, Economics, History, Mathematics, Physics, SEDS, SMG, SoM, Sociology, World Languages, Literature and Culture	Political Science and International Relations	
274	PLS 101	Introduction to Political Science	3	6				5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SSH (pending graduation), Undeclared SSH	Anthropology, Biological Sciences, Business Administration (UG), Chemistry, Economics, History, Mathematics, Physics, SEDS, SMG, SoM, Sociology, World Languages, Literature and Culture	Political Science and International Relations	
275	PLS 120	Introduction to Political Theory	3	6				5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SSH (pending graduation), Political Science and International Relations, Undeclared SSH	Business Administration (UG), SEDS, SMG, SSH, SoM		
276	PLS 140	Introduction to Comparative Politics	3	6				5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SSH (pending graduation), Political Science and International Relations, Undeclared SSH	Business Administration (UG), SEDS, SMG, SSH, SoM		

277	PLS 150	Introduction to International Relations	3	6					5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), 6 year UG SEDS (pending graduation), 6 year UG SSH (pending graduation), Political Science and International Relations, Undeclared SSH	Business Administration (UG), SEDS, SMG, SSH, SoM		
278	PLS 210	Political Science Research Methods	3	6					2 year UG SSH Political Sciences and International Relations	3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	
279	PLS 211	Quantitative Methods	3	6				ECON 211 Economic Statistics (2280) (C- and above)	2 year UG SSH Political Sciences and International Relations	3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	
280	PLS 330	Politics and Governance of Eurasia	3	6	PLS 210 Political Science Research Methods (129) (C- and above)				3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	SSH	
281	PLS 338	U.S. Government and Politics	3	6	(PLS 140 Introduction to Comparative Politics (223) (C- and above) OR PLS 101 Introduction to Political Science (513) (C- and above)) AND PLS 210 Political Science Research Methods (129) (C- and above)				3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	SSH	
282	PLS 341	Politics of Development	3	6	PLS 210 Political Science Research Methods (129) (C- and above)				3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	SSH	
283	PLS 352	International Relations Theory	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)				3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	SSH	
284	PLS 354	Introduction to International Law	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)				3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	SSH	

285	PLS 360	Foreign Policy Analysis	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	SSH	
286	PLS 370	Law, Politics and Society	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	SSH	
287	PLS 391	Intermediate Special Topics in Comparative Politics	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			3 year UG SSH Political Sciences and International Relations	Political Science and International Relations	SSH	
288	PLS 395	Independent Study	3	6	PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!			
289	PLS 416	Experimental Political Science	3	6	PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			Political Science and International Relations		SSH	
290	PLS 424	Issues in the Philosophy of Social Science	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		SSH	
291	PLS 426	Hannah Arendt on Power, Violence, and Revolution	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		SSH	
292	PLS 431	Politics and Governance of the Russian Federation	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations		SSH	
293	PLS 432	Comparative Democratization	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			Political Science and International Relations		SSH	

294	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		SSH	
295	PLS 451	Advanced Topics 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		SSH	
296	PLS 460	Environmental Politics	3	6				Political Science and International Relations		SSH	
297	PLS 463	NGO Politics	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		SSH	
298	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)			Instructor's Permission Required. Registration through Add Course form only!			
SSH											
299	SSH 300	School of Sciences and Humanities Internship	3	6				Instructor's Permission Required. Registration through Add Course form only!			
300	SSH 301	School of Sciences and Humanities Internship: Second Experience	3	6				Instructor's Permission Required. Registration through Add Course form only!			
Sociology and Anthropology											
301	ANT 101	Being Human: An Introduction to Four Field Anthropology	3	6				5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), Anthropology, Undeclared SEDS, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences, SoM, Sociology	Business Administration (UG), SEDS, SMG, SSH	

302	ANT 160	Introduction to Biological Anthropology	3	6			ANT 361 Human Evolution: Bones, Stones and Genomes (160) (C- and above)	5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), Anthropology, Undeclared SEDS, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences, SoM	Business Administration (UG), SEDS, SMG, SSH	
303	ANT 240	Laboratory Methods in Archaeology	3	6				Anthropology	Sociology	Business Administration (UG), SEDS, SMG, SSH	
304	ANT 333	Anthropology of Space	3	6				Anthropology	Sociology	Business Administration (UG), SEDS, SMG, SSH	
305	ANT 400	Research Assistance in Anthropology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
306	ANT 401	Research Assistance in Anthropology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
307	ANT 402	Research Assistance in Anthropology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
308	ANT 475	Digital Ethnographies	3	6	ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above) OR PLS 210 Political Science Research Methods (129) (C- and above) OR SOC 201 Social Science Research Methods (1341) (C- and above) OR ANT 214/SOC 214 Qualitative Methods (1033) (C- and above)			Anthropology			
309	ANT 498	Capstone Seminar I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
310	SOC 101	Introduction to Sociology	3	6				5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), Sociology, Undeclared SEDS, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences, Anthropology, SoM	Business Administration (UG), SEDS, SMG, SSH	

311	SOC 201	Social Science Research Methods	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SEDS (pending graduation), 5 year UG SSH (pending graduation), 5 year UG SSH Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences, Anthropology, SoM	Business Administration (UG), SEDS, SMG, SSH	
312	SOC 203	Quantitative Methods in Sociology	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	Business Administration (UG), SEDS, SMG, SSH, SoM	
313	SOC 210	Gender and Society	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	Business Administration (UG), SEDS, SMG, SSH, SoM	
314	SOC 220	Science, Technology, and Society	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	Business Administration (UG), SEDS, SMG, SSH, SoM	
315	SOC 221	International Migration	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	Business Administration (UG), SEDS, SMG, SSH, SoM	
316	SOC 223	Social Movements: How People Make Change	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	Business Administration (UG), SEDS, SMG, SSH, SoM	

317	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)			4 year UG SSH Sociology, 5 year UG SSH Sociology	3 year UG SSH Sociology	Anthropology, Sociology	
318	SOC 310	Social Inequality	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above)			3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	SSH	
319	SOC 313	Social Foundations of Education	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above)			3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	SSH	
320	SOC 320	Organized Crime and Corruption	3	6	SOC 101 Introduction to Sociology (508) (C- and above)			3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	SSH	

321	SOC 350	Digital Deviance	3	6	SOC 201 Social Science Research Methods (1341) (C- and above) OR SOC 203 Quantitative Methods in Sociology (1377) (C- and above) OR SOC 210 Gender and Society (226) (C- and above) OR SOC 211 Social Justice in a Global Society (162) (C- and above) OR SOC 213 Work and Society (453) (C- and above) OR SOC 215 Sociology of Race and Ethnicity (3647) (C- and above) OR SOC 217 Sociology of the Family (1324) (C- and above) OR SOC 220 Science, Technology, and Society (2512) (C- and above) OR SOC 221 International Migration (2516) (C- and above) OR SOC 223 Social Movements: How People Make Change (3357) (C- and above) OR SOC 301 Classical Sociological Theory (683) (C- and above) OR SOC 310 Social Inequality (1031) (C- and above) OR SOC 314 Organizations and Society (1328) (C- and above) OR SOC 317 Economy and Society (2513) (C- and above) OR SOC 318 Sexuality and Gender in a Transnational World (3648) (C- and above)			3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
322	SOC 399	Special Topics in Sociology	3	6							
323	SOC 400	Research Assistance in Sociology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
324	SOC 401	Research Assistance in Sociology	1	2				Instructor's Permission Required. Registration through Add Course form only!			

325	SOC 402	Research Assistance in Sociology	1	2							
326	SOC 420	Applied Policy Analysis: Tools and Perspectives	3	6	SOC 101 Introduction to Sociology (508) (C and above)			3 year UG SSH Sociology, 4 year UG SSH Sociology, 5 year UG SSH Sociology	Anthropology, Sociology	SSH	
327	SOC 475	Sociology of Consumption	3	6	Subject "SOC" BETWEEN 200 and 299			3 year UG SSH Sociology, 4 year UG SSH Sociology, 5 year UG SSH Sociology	Anthropology, Sociology	SSH	
328	SOC 485	Statistics and Machine Learning for Social Reform	3	6	(SOC 201 Social Science Research Methods (1341) (C- and above) AND SOC 203 Quantitative Methods in Sociology (1377) (C- and above)) OR (PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)) OR (SOC 101 Introduction to Sociology (508) (C- and above) AND ECON 301 Econometrics I (664) (C- and above))		CSCI 235 Programming Languages (638) (C- and above) OR ECON 318 Applied Econometrics (6078) (C- and above) OR CSCI 344 Data Mining and Decision Support (1916) (C- and above) OR PETE 410 Introduction to Data Science and Machine Learning (8128) (C- and above) OR CSCI 447 Machine Learning: Theory and Practice (4828) (C- and above) OR MATH 449 Statistical Programming (2104) (C- and above) OR ELCE 455 Machine Learning with Python (6365) (C- and above)				
329	SOC 498	Capstone Seminar Part I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
Sociology and Anthropology, Sociology and Anthropology											

#	Code	Title			Prerequisites			Programs	Department		
330	ANT 214/SOC 214	Qualitative Methods	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	Business Administration (UG), SEDS, SMG, SSH	
331	ANT 285/SOC 212	Food and Society	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology	Anthropology, Sociology	Business Administration (UG), SEDS, SMG, SSH	
332	ANT 482/SOC 482	Climate Change, Future Energy and Sustainability	3	6	ANT 214/SOC 214 Qualitative Methods (1033) (C- and above) OR SOC 203 Quantitative Methods in Sociology (1377) (C- and above)			3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology, 5 year UG SSH Sociology			
					SEDS						
					Chemical and Materials Engineering						
333	CHME 200	Basic Principles and Calculations in Chemical Engineering	3	6				2 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
334	CHME 201	Chemical Engineering Thermodynamics	3	6				2 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
335	CHME 222	Inorganic and Analytical Chemistry	3	6				2 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
336	CHME 300	Heat and Mass Transfer	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
337	CHME 301	Applied Mathematics for Process Design	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
338	CHME 302	Instrumental Methods of Analysis for Engineers	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
339	CHME 351	Environment and Development	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
340	CHME 353	Electrochemical Engineering	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		

#	Code	Name			Prerequisite						
341	CHME 354	Introduction to Metallurgy	3	6				3 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
342	CHME 400	Process Design and Simulation	3	6	CHME 300 Heat and Mass Transfer (5952) (D and above) AND CHME 304 Chemical Reaction Engineering (6168) (D and above)			4 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
343	CHME 401	Chemical Engineering Lab II	3	6				4 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
344	CHME 453	Multiphase Systems	3	6	CHME 202 Fluid Mechanics (5543) (D and above)			4 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
Civil and Environmental Engineering											
345	CEE 200	Structural Mechanics I	3	6				2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Civil and Environmental Engineering	
346	CEE 201	Environmental Chemistry	3	6				2 year UG SEDS Civil and Environmental Engineering	3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering	
347	CEE 204	Civil Engineering CAD and Surveying	3	6				2 year UG SEDS Civil and Environmental Engineering	3 year UG SEDS Civil and Environmental Engineering		
348	CEE 300	Structural Design – Concrete	3	6	CEE 203 Structural Analysis (5500) (D and above)			3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		

349	CEE 302	Geotechnical Engineering	3	6				3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
350	CEE 304	Fluid Mechanics	3	6				3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
351	CEE 306	Civil Engineering Materials	3	6	ENG 102 Engineering Materials I (4708) (D and above)			3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
352	CEE 401	Construction Technology and Management	3	6	CEE 306 Civil Engineering Materials (5897) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
353	CEE 450	Behavior and Design of Structural System	3	6	CEE 300 Structural Design – Concrete (5895) (D and above) AND CEE 301 Structural Design – Steel (6157) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
354	CEE 460	Water Supply and Distribution Management	3	6	CEE 305 Hydraulics and Hydrology (6177) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
355	CEE 462	Pavement Design and Performance	3	6	CEE 306 Civil Engineering Materials (5897) (D and above) AND CEE 303 Geotechnical Design (6158) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
356	CEE 463	Individual Research Project in Civil & Environmental Engineering 1	3	6				4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		

357	CEE 467	Building Information Modelling for Geotechnical Engineering	3	6	CEE 303 Geotechnical Design (6158) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
Computer Science											
358	CSCI 111	Web Programming and Problem Solving	3	6			CSCI 101 Introduction to Computational Sciences (147) (D and above) OR CSCI 115 Programming Fundamentals (5257) (D and above) OR CSCI 151 Programming for Scientists and Engineers (192) (D and above) OR ENG 101 Programming for Engineers (4517) (D and above)	SSH, SoM			
359	CSCI 115	Programming Fundamentals	4	8			CSCI 101 Introduction to Computational Sciences (147) (D and above) OR CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 151 Programming for Scientists and Engineers (192) (D and above) OR ENG 101 Programming for Engineers (4517) (D and above)	Biological Sciences, Chemistry, Mathematics, SoM	SSH		

360	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)	Computer Science, Robotics Engineering, Robotics and Mechatronics	1 year UG SSH Physics, Undeclared SEDS	SEDS, SMG, SSH	
361	CSCI 231	Computer Systems and Organization	3	6	CSCI 151 Programming for Scientists and Engineers (192) (C- and above)			Computer Science			
362	CSCI 235	Programming Languages	4	8	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
363	CSCI 281	Human-Computer Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
364	CSCI 341	Database Systems	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
365	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)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
366	CSCI 355	Compiler Construction	3	6	CSCI 235 Programming Languages (638) (C and above) AND CSCI 272 Formal Languages (4689) (C and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
367	CSCI 361	Software Engineering	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
368	CSCI 364	Software Architecture and Design	3	6	CSCI 361 Software Engineering (640) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			

369	CSCI 390	Artificial Intelligence	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
370	CSCI 393	Introduction to Natural Language Processing	3	6	CSCI 390 Artificial Intelligence (643) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
371	CSCI 408	Senior Project I	3	6				3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
372	CSCI 423	Introduction to Parallel Systems and GPU Programming	3	6	CSCI 332 Operating Systems (490) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
373	CSCI 434	Information Security	3	6		CSCI 333 Computer Networks (1145) (D and above)		3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
374	CSCI 437	Internet of Things: Technologies and Applications	3	6	CSCI 333 Computer Networks (1145) (C- and above) AND ROBT 206 Microcontrollers with Lab (476) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
375	CSCI 471	Complexity and Computability	3	6	MATH 251 Discrete Mathematics (85) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
376	CSCI 494	Deep Learning	3	6	CSCI 390 Artificial Intelligence (643) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
Electrical and Computer Engineering											
377	ELCE 200	Circuits Theory I	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			2 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		

378	ELCE 203	Signals and Systems	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			2 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
379	ELCE 203L	Signals and Systems Laboratory	1	2		ELCE 203 Signals and Systems (4993) (D and above)		2 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
380	ELCE 204	Solid State Devices	3	6	ENG 103 Engineering Materials II (4818) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
381	ELCE 204L	Solid State Devices Laboratory	1	2	ENG 103 Engineering Materials II (4818) (C- and above)	ELCE 204 Solid State Devices (5508) (D and above)		3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
382	ELCE 205	Discrete Mathematics	3	6	MATH 162 Calculus II (170) (C- and above)			2 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
383	ELCE 301	Electronic Circuits	3	6	ELCE 201 Circuit Theory (5507) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
384	ELCE 301L	Electronic Circuits Laboratory	1	2	ELCE 201L Circuit Theory Laboratory (6179) (C- and above)	ELCE 301 Electronic Circuits (5918) (C- and above)		3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
385	ELCE 304	Computer Networks	3	6	ENG 101 Programming for Engineers (4517) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
386	ELCE 304L	Computer Networks Laboratory	1	2		ELCE 304 Computer Networks (5920) (D and above)		3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
387	ELCE 306	Linear Control Theory	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
388	ELCE 307	Digital Signal Processing	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
389	ELCE 307L	Digital Signal Processing Laboratory	1	2	ELCE 203 Signals and Systems (4993) (C- and above) AND ELCE 203L Signals and Systems Laboratory (6182) (C- and above)	ELCE 307 Digital Signal Processing (5921) (D and above)		3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		

390	ELCE 352	Applied Simulation Laboratory	2	4	ELCE 200 Introduction to Electrical Circuits (4991) (D+ and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	5 year UG SEDS Electrical and Computer Engineering	
391	ELCE 354	Power Electronics	3	6	ELCE 201 Circuit Theory (5507) (D and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
392	ELCE 355	Power Systems Protection	3	6	ELCE 303 Power System Analysis (6180) (D and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
393	ELCE 455	Machine Learning with Python	3	6	ENG 101 Programming for Engineers (4517) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
394	ELCE 462	Wireless Networks	3	6	ENG 201 Applied Probability and Statistics (5505) (C- and above) AND (ELCE 308 Communication Systems (5922) (C- and above) OR ELCE 304 Computer Networks (5920) (C- and above))			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
395	ELCE 463	Network Science: Methods and Applications	3	6	ENG 101 Programming for Engineers (4517) (C- and above) AND MATH 162 Calculus II (170) (C- and above) AND ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
396	ELCE 466	RF and Microwave Circuits	3	6				4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		

397	ENG 101	Programming for Engineers	3	6			CSCI 151 Programming for Scientists and Engineers (192) (F) OR CSCI 111 Web Programming and Problem Solving (110) (F) OR CSCI 115 Programming Fundamentals (5257) (F) OR CSCI 152 Performance and Data Structures (489) (F) OR CSCI 408 Senior Project I (1481) (F) OR CSCI 409 Senior Project II (1483) (F)	1 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Chemical and Materials Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering		
Mechanical and Aerospace Engineering											
398	ENG 100	Introduction to Engineering	3	6				1 year UG SEDS Chemical and Materials Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering			

399	ENG 200	Engineering Mathematics III (Differential Equations and Linear Algebra)	3	6	MATH 162 Calculus II (170) (C and above)			2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering, Chemical and Materials Engineering, Electrical and Computer Engineering	4 year UG SEDS Civil and Environmental Engineering
400	ENG 400	Capstone Project	3	6				4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Electrical and Computer Engineering, Chemical and Materials Engineering	
401	MAE 201	Computer Aided Design	3	6				2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering
402	MAE 202	Environmental Science	3	6				2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering
403	MAE 300	Fluid Mechanics I	3	6	PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering
404	MAE 301	Engineering Thermodynamics	3	6				3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering
405	MAE 303	Control Systems	3	6				3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering

406	MAE 307	Engineering Dynamics II	3	6	MAE 206 Engineering Dynamics I (5535) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering	
407	MAE 400	Heat Transfer	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) AND MAE 301 Engineering Thermodynamics (5927) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering		
408	MAE 401	Mechanical Systems Design	3	6	MAE 302 Machine Elements Design (5928) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering		
409	MAE 450	Additive Manufacturing	3	6	MAE 205 Material and Manufacturing I (5534) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering		
410	MAE 455	Flight Performance and Mechanics	3	6	MAE 340 Aerodynamics (6576) (D and above) OR MAE 305 Fluid Mechanics II (6173) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering		
411	MAE 462	Multiphase Systems	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) AND MAE 305 Fluid Mechanics II (6173) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering		
412	MAE 466	Application of Optimization in Mechanical and Aerospace Engineering.	3	6	ENG 202 Numerical Methods in Engineering (5506) (D and above) AND MATH 162 Calculus II (170) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering		
413	MAE 467	Heating, Ventilating and Air Conditioning	3	6	MAE 301 Engineering Thermodynamics (5927) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering		
414	MAE 468	Introduction to Aerospace Propulsion.	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) AND MAE 301 Engineering Thermodynamics (5927) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering		
Robotics and Mechatronics											

415	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 Engineering, Robotics and Mechatronics	SMG
416	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 Engineering, Robotics and Mechatronics	
417	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 Engineering, Robotics and Mechatronics	Computer Science
418	ROBT 301	Mechanical Design with CAD and Machining Laboratory	4	8	ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above)			Robotics Engineering, Robotics and Mechatronics	Computer Science
419	ROBT 303	Linear Control Theory with Lab	4	8	ROBT 202 System Dynamics and Modeling (68) (C- and above)			Robotics Engineering, Robotics and Mechatronics	
420	ROBT 308	Industrial Automation	3	6				Robotics Engineering, Robotics and Mechatronics	Computer Science, Mathematics
421	ROBT 310	Image Processing	3	6	MATH 162 Calculus II (170) (C- and above) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			Robotics Engineering, Robotics and Mechatronics	Computer Science, Mathematics

422	ROBT 403	Robotics II: Control, Modeling and Learning with Laboratory	4	8	ROBT 303 Linear Control Theory with Lab (623) (C- and above) AND ROBT 312 Robotics I: Kinematics and Dynamics (5263) (C- and above)			Robotics Engineering, Robotics and Mechatronics		
423	ROBT 407	Machine Learning with Applications	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 Engineering, Robotics and Mechatronics	Computer Science, Mathematics	
424	ROBT 491	Capstone Project I	3	6	ROBT 391 Research methods (7418) (C- and above)			4 year UG SEDS Robotics Engineering		