Course Requirements and Registration Priorities
(Undergraduate), Spring 2024

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
						GSB					
						GSB					
1	ACCT 201	Introduction to Accounting	3	6				4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
2	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 SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SSH	2 year UG SEDS, 2 year UG SMG, 2 year UG SSH	
3	BUS 420	Business Law	3	6	BUS 101 Core Course in Business (5889) (C- and above)			4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
4	FIN 201	Principles of Finance	3	6	BUS 101 Core Course in Business (5889) (B- and above)			4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
						SoM					
						Medical Sciences					

5	NUSM 310	Capstone Project	15	30	NUSM 301 Introduction to Immunology, Microbiology and Genetics (6958) (C- and above) OR NUSM 302 Introduction to Statistics for Evidence-Based Practice (6959) (C- and above) OR NUSM 303 Introduction to Anatomy and Histology (6957) (C- and above)			3 year UG SOM Medical Sciences		
6	NUSM 404	Cellular and Pathological Basis of Disease	4	8	NUSM 310 Capstone Project (7138) (C- and above)			4 year UG SOM Medical Sciences		
7	NUSM 406	Immunology in Health and Disease	4.5	9	NUSM 310 Capstone Project (7138) (C- and above)			4 year UG SOM Medical Sciences		
8	NUSM 407	Medical Microbiology	4.5	9	NUSM 310 Capstone Project (7138) (C- and above)			4 year UG SOM Medical Sciences		
Nursing										
9	NUR 101	Human Anatomy and Physiology I and Lab	4	8				1 year UG SOM Nursing		
10	NUR 102L	Human Anatomy and Physiology II with Lab	4	8				1 year UG SOM Nursing		
11	NUR 121	Introduction to Basic Statistics for Evidence-Based Practice	3	6				3 year UG SOM Nursing		
12	NUR 122	English-Russian-Kazakh Medical Terminology	2	4				2 year UG SOM Nursing		
13	NUR 202	Introduction to Genetics & Molecular Therapeutics	3	6				2 year UG SOM Nursing		
14	NUR 212/L	Foundations of Nursing Practice II	2	4				2 year UG SOM Nursing		
15	NUR 213/C	Medical-Surgical Nursing I: Clinical	7	14				2 year UG SOM Nursing		
16	NUR 305	Research Methods for Nursing	3	6				1 year UG SOM Nursing		
17	NUR 306	Medical-Surgical Nursing: Complex Medical Management for Acute and Chronic Patient	4	8				1 year UG SOM Nursing		
18	NUR 307	Health Promotion and Disease Prevention in Culturally Diverse Populations	4	8				1 year UG SOM Nursing		
19	NUR 308	Enhanced Communication in Professional Nursing	4	8				1 year UG SOM Nursing		

20	NUR 313C	Medical-Surgical Nursing II: Complex Surgical Management and Clinical	7	14				3 year UG SOM Nursing			
21	NUR 314C	Psychiatric Nursing and Clinical	4	8				3 year UG SOM Nursing			
22	NUR 321	Ethics in Healthcare	2	4				3 year UG SOM Nursing			
23	NUR 322	Nursing Clinical Informatics	2	4				2 year UG SOM Nursing			
24	NUR 402	Principles of Healthcare Administration	4	8				2 year UG SOM Nursing			
25	NUR 405	Issues and Trends in Nursing	4	8				2 year UG SOM Nursing			
26	NUR 406.2	Medical-Surgical Nursing: Complex Management	4	8				2 year UG SOM Nursing			
27	NUR 407	Capstone: Clinical and EBP Quality Improvement Research	4	8				2 year UG SOM Nursing			
28	NUR 415C	Clinical Transitions	9	18				4 year UG SOM Nursing			
29	NUR 422	Capstone II: Evidence-Based Quality Improvement/Research Project Completion	3	6				4 year UG SOM Nursing			
SMG											
Geosciences											
30	GEOL 101	Fundamentals of Geology	3	6				1 year UG SMG, 3 year UG SEDS, 3 year UG SMG, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH			
31	GEOL 204	Sedimentology and strartigraphy	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)			2 year UG SMG Geology	2 year UG SMG Mining Engineering, 3 year UG SMG Mining Engineering		
32	GEOL 205	Paleontology	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			

#	Code	Name			Prerequisites						
33	GEOL 301	Igneous and metamorphic petrology	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, 3 year UG SMG Mining Engineering, 4 year UG SMG Mining Engineering		
34	GEOL 304	Geophysics	3	6	GEOL 204 Sedimentology and strartigraphy (5475) (D and above)			3 year UG SMG Geology	3 year UG SMG Mining Engineering, 3 year UG SMG Petroleum Engineering, 4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering		
35	GEOL 306	Geodynamics	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			
36	GEOL 307	Geographic Information Systems	3	6				3 year UG SMG Geology			
37	GEOL 402	Water Resource Management	3	6				4 year UG SMG	4 year UG SEDS, 4 year UG SSH		
38	GEOL 403	Geostatistics	3	6	MATH 161 Calculus I (118) (C- and above)			4 year UG SMG Geology	4 year UG SMG Petroleum Engineering		
39	GEOL 405	Research Project II	3	6	GEOL 404 Research Project I (6423) (C- and above)			4 year UG SMG Geology			
40	GEOL 407	Exploration Geology & Geophysics	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			3 year UG SMG Geology, 4 year UG SMG Geology	4 year UG SMG Mining Engineering		
41	GEOL 411	Photography for Geosciences	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above)			4 year UG SMG Geology			
Mining Engineering											
42	MINE 201	Mineral Processing	3	6				2 year UG SMG Mining Engineering	4 year UG SMG Geology		

43	MINE 303	Mine Services and Materials Handling	3	6	SMG 100 Introduction to Natural Resources Extraction (4773) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) AND ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above)			3 year UG SMG Mining Engineering			
44	MINE 304	Resource Estimation	3	6				3 year UG SMG Mining Engineering			
45	MINE 306	Underground Mining Systems and Design	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering			
46	MINE 307	Surface Mining System and Design	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering			
47	MINE 310	Rock Breakage	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering			
48	MINE 403	Mine Risk Management	3	6				4 year UG SMG Mining Engineering			
49	MINE 480	Mine Design Project	3	6	MINE 307 Surface Mining System and Design (6150) (C- and above) OR MINE 306 Underground Mining Systems and Design (6151) (C- and above)			4 year UG SMG Mining Engineering			
50	MINE 490	Research project II	3	6	MINE 489 Research Project I (6419) (P)			4 year UG SMG Mining Engineering			
Petroleum Engineering											
51	PETE 202	Transport Phenomena	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) OR CHEM 101 General Chemistry I (113) (C- and above) OR CHEM 101L General Chemistry I lab (179) (C- and above)			2 year UG SMG Petroleum Engineering	3 year UG SMG Petroleum Engineering		
52	PETE 203	Drilling Engineering with Laboratories	4	8	PETE 201 Fluid Mechanics and Thermodynamics (5120) (C- and above)			2 year UG SMG Petroleum Engineering	3 year UG SMG Petroleum Engineering		
53	PETE 204	Reservoir Rock and Fluid Properties with Lab	4	8	PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			2 year UG SMG Petroleum Engineering	3 year UG SMG Petroleum Engineering		

54	PETE 305	Well Test Analysis	3	6	PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering	
55	PETE 306	Reservoir Engineering II	3	6	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above) OR PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering	
56	PETE 307	Production Engineering	3	6	PETE 201 Fluid Mechanics and Thermodynamics (5120) (C- and above) OR PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering	
57	PETE 311	Reservoir Simulation	3	6	PETE 301 Numerical Methods for Petroleum Engineers (5881) (C- and above) AND PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above) AND PETE 304 Well Completion and Stimulation (5883) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering	
58	PETE 404	Petroleum Geomechanics	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above) OR GEOL 102 Fundamentals of Geology (4772) (C- and above)			4 year UG SMG Petroleum Engineering		
59	PETE 407	Capstone Design Project II	3	6	PETE 400 Capstone Design Project I (6424) (P)			4 year UG SMG Petroleum Engineering		
60	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 Petroleum Engineering		
SMG										
61	SMG 400	Engineering Economics	3	6	SMG 200/ECON 220 Resource Economics (6197) (C- and above)			4 year UG SMG Petroleum Engineering, Geology, Mining Engineering	4 year UG SEDS, 4 year UG SSH	
SSH										

Biological Science										
62	BIOL 101	Biology for non-Science majors	3	6			BIOL 110 Modern Biology I (1070) (C- and above)	Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SSH, World Languages, Literatures and Cultures		
63	BIOL 105	General Biology	3	6				SEDS, SMG, SoM	Anthropology, Chemistry, Economics, History, Mathematics, Physics, Political Science and International Relations, Sociology, Undeclared SSH, World Languages, Literatures and Cultures	
64	BIOL 110	Modern Biology I	3	6				1 year UG SSH Biological Sciences, 2 year UG SSH Biological Sciences, 5 year UG SSH	Chemistry, Medical Sciences	SEDS, SMG, SSH, SoM
65	BIOL 110L	Modern Biology I Laboratory	1	2		BIOL 110 Modern Biology I (1070) (C and above)		1 year UG SSH Biological Sciences, 2 year UG SSH Biological Sciences, 5 year UG SSH	Chemistry, Medical Sciences	SEDS, SMG, SSH, SoM
66	BIOL 120	Modern Biology II	3	6	BIOL 110 Modern Biology I (1070) (C and above)			1 year UG SSH Biological Sciences, 2 year UG SSH Biological Sciences, Chemistry	Medical Sciences	SEDS, SMG, SSH, SoM
67	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)		1 year UG SSH Biological Sciences, 2 year UG SSH Biological Sciences, Chemistry	Medical Sciences	SEDS, SMG, SSH, SoM
68	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 SSH Biological Sciences, 3 year UG SSH Biological Sciences	Biological Sciences, Medical Sciences	

69	BIOL 301	Molecular Cell Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SSH Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences, Medical Sciences	
70	BIOL 301L	Molecular Cell Biology Laboratory	1	2	BIOL 120 Modern Biology II (1195) (C and above) OR BIOL 120L Modern Biology II Laboratory (5443) (C and above)	BIOL 301 Molecular Cell Biology (5809) (C and above)		2 year UG SSH Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences, Medical Sciences	
71	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	Chemistry, Mathematics, Physics	Biological Sciences
72	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	Chemistry, Mathematics, Physics	Biological Sciences
73	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	3 year UG SOM Medical Sciences, Biological Sciences	
74	BIOL 321	Bioethics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 2 year UG SSH Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Chemistry, Mathematics, Physics	
75	BIOL 331	Human Anatomy and Physiology II	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)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	3 year UG SOM Medical Sciences, Biological Sciences	

76	BIOL 333	Environmental Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences, Medical Sciences		
77	BIOL 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	Biological Sciences, Medical Sciences		
78	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	3 year UG SOM Medical Sciences, Biological Sciences		
79	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)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	3 year UG SOM Medical Sciences, Biological Sciences		
80	BIOL 370	Genetics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	3 year UG SOM Medical Sciences, Biological Sciences		
81	BIOL 370L	Genetics Laboratory	1	2		BIOL 370 Genetics (1174) (C and above)		3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences	3 year UG SOM Medical Sciences, Biological Sciences		
82	BIOL 425	Biomedical Research Methods	3	6	BIOL 110 Modern Biology I Lab (1444) (C and above) OR BIOL 110 Modern Biology I (1070) (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, Chemistry, Mathematics, Physics	SEDS	
83	BIOL 440	Neuroscience	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)			4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	
84	BIOL 445	Medical Microbiology	3	6	BIOL 305 Introduction to Microbiology (5789) (C and above) OR BIOL 305 Introduction to Microbiology with Lab (1642) (C and above)			4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	

85	BIOL 450	Food Microbiology	3	6	BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above)			4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	
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)		4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	
87	BIOL 468	Integrated Cell Biology	3	6	(BIOL 110 Modern Biology I (107) (C and above) OR BIOL 110 Modern Biology I (1070) (C and above)) AND BIOL 120 Modern Biology II (1195) (C and above)			4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	
88	BIOL 471	Light and Electron microscopy concepts and techniques	3	6	BIOL 110 Modern Biology I (1070) (C and above) AND BIOL 120 Modern Biology II (1195) (C and above) AND CHEM 101 General Chemistry I (113) (C and above) AND PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C and above)			4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	
89	BIOL 471L	Light and Electron Microscopy Concepts and Techniques-Lab	1	2		BIOL 471 Light and Electron microscopy concepts and techniques (4686) (C and above)		4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	
90	BIOL 481	Neuroimmunology	3	6	BIOL 310 Immunology (628) (C and above)			4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	
91	BIOL 491	Honors Thesis	9	18	BIOL 490 Honors Thesis Research (1581) (P)			4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	

92	BIOL 492	Research Experience in Biology	3	6	BIOL 456 Biology Research Design (1217) (C- and above)			4 year UG SSH Biological Sciences	Biological Sciences, Chemistry, Mathematics, Physics	SEDS	
Chemistry											
93	CHEM 092	Survey of Environmental Sciences for Non-Science Majors	3	6				Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, World Languages, Literatures and Cultures			
94	CHEM 101	General Chemistry I	3	6				1 year UG SMG, Biological Sciences, Chemistry, SoM	Undeclared SSH	SEDS, SMG, SSH	
95	CHEM 101L	General Chemistry I lab	1	2		CHEM 101 General Chemistry I (113) (C and above)		1 year UG SMG, Biological Sciences, Chemistry, SoM	Undeclared SSH	SSH	
96	CHEM 102	General Chemistry II	3	6	CHEM 101 General Chemistry I (113) (C and above)			5 year UG SSH, Biological Sciences, Chemistry, Medical Sciences	Undeclared SSH	SEDS, SMG, SSH, SoM	
97	CHEM 211	Organic Chemistry I	3	6	CHEM 102 General Chemistry II (232) (C and above)			Biological Sciences, Chemistry, Medical Sciences	SSH	SEDS, SoM	
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)		Biological Sciences, Chemistry, Medical Sciences	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)			Biological Sciences, Chemistry		SEDS, SMG, SSH, SoM	

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)		Biological Sciences, Chemistry	Undeclared SSH	SSH
101	CHEM 250	Descriptive Inorganic Chemistry	3	6	CHEM 101 General Chemistry I (113) (C and above)			Chemistry	SSH	
102	CHEM 320	Instrumental Analysis	3	6	CHEM 220 Quantitative Chemical Analysis (555) (C and above)			Chemistry	SSH	
103	CHEM 320L	Instrumental Analysis Lab	1	2	(CHEM 220 Quantitative Chemical Analysis (555) (C and above) AND CHEM 220L Quantitative Chemical Analysis Lab (5271) (C and above)) OR CHEM 220 Quantitative Chemical Analysis (555) (C and above)	CHEM 320 Instrumental Analysis (1055) (C and above)		Chemistry	SSH	
104	CHEM 332	Physical Chemistry II	3	6	CHEM 331 Physical Chemistry I (634) (C and above)	MATH 274 Introduction to Differential Equations (484) (C and above)		Chemistry	SSH	
105	CHEM 332L	Physical Chemistry II Lab	1	2		CHEM 332 Physical Chemistry II (1056) (C and above) AND CHEM 331L Physical Chemistry Lab (1060) (C and above)		Chemistry	SSH	
106	CHEM 380	Research Methods	3	6				Chemistry	SSH	
107	CHEM 411	Advanced Organic Chemistry I	3	6	CHEM 212 Organic Chemistry II (443) (C and above) AND MATH 161 Calculus I (118) (C and above)			Chemistry	SSH	

108	CHEM 431	Computational Chemistry	3	6	CHEM 332 Physical Chemistry II (1056) (C and above) AND (CSCI 111 Web Programming and Problem Solving (110) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above))			Chemistry	SSH	
109	CHEM 433	Surfactants and Colloids	3	6	CHEM 102 General Chemistry II (232) (C and above)			Chemistry	SSH	
110	CHEM 442	Biochemistry II with Lab- Metabolic Biochemistry	3	6	CHEM 341 Biochemistry I (1058) (C and above) AND CHEM 212 Organic Chemistry II (443) (C and above)			Chemistry	SSH	
111	CHEM 451	Applied Homogenous Catalysis	3	6	CHEM 350 Advanced Inorganic Chemistry (1905) (C and above)			Chemistry	SSH	
112	CHEM 489	Directed Research II	3	6	CHEM 488 Directed Research I (7174) (C and above)			Chemistry	SSH	
113	CHEM 490	Nanochemistry	3	6	CHEM 331 Physical Chemistry I (634) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)			Chemistry	SSH	
Communication and Composition										
114	WCS 150	Rhetoric and Composition	3	6				1 year UG SEDS, 1 year UG SMG, 1 year UG SSH, 4 year UG SSH, SoM		SEDS, SMG, SSH	
115	WCS 200	Introduction to Public Speaking	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SEDS, 2 year UG SSH, SoM		SEDS, SMG, SSH	
116	WCS 205	Intercultural Communication	3	6				2 year UG SEDS, 2 year UG SSH, SoM		SEDS, SMG, SSH	
117	WCS 210	Technical and Professional Writing	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)		() (and above)	Chemistry, SEDS, SMG		SSH, SoM	
118	WCS 220	Science Writing	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)		WCS 210 Technical and Professional Writing (4881) (C- and above)	2 year UG SEDS, 2 year UG SSH, SoM		SEDS, SMG, SSH	

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 SEDS, 2 year UG SSH, SoM		SEDS, SMG, SSH
120	WCS 240	Writing for Digital Media	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SEDS, 2 year UG SSH, SoM		SEDS, SMG, SSH
121	WCS 250	Advanced Rhetoric and Composition	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SEDS, 2 year UG SSH, SoM		SEDS, SMG, SSH
122	WCS 390	Writing Fellows I – Composition and Collaboration in Theory and Practice	3	6	WCS 150 Rhetoric and Composition (2183) (B and above) AND () (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)			2 year UG SEDS, 2 year UG SSH	3 year UG SEDS, 3 year UG SSH	SEDS, SMG, SSH, SoM
123	WCS 391	Writing Fellows II – Practicum in Composition & Collaboration	3	6	WCS 390 Writing Fellows I – Composition and Collaboration in Theory and Practice (1969) (B and above)			SEDS, SMG, SSH, SoM		
124	WCS 392	Writing Fellows III - Research & Practice in Writing & Peer Mentorship	3	6	WCS 391 Writing Fellows II – Practicum in Composition & Collaboration (3425) (B and above)			SEDS, SMG, SSH, SoM		
125	WCS 393	Internship: Undergraduate Writing Tutor I	3	6	WCS 392 Writing Fellows III - Research & Practice in Writing & Peer Mentorship (4472) (B and above)			Instructor's Permission Required. Registration through Add Course form only!		
126	WCS 394	Internship: Undergraduate Writing Tutor II	3	6	WCS 393 Internship: Undergraduate Writing Tutor I (7346) (P)			Instructor's Permission Required. Registration through Add Course form only!		
Communication and Composition, Languages, Literature and Linguistics										
127	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 SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures	SSH	SEDS, SoM

128	WLL 363/WCS 363	Writing Speculative Fiction	3	6	WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (C and above)			World Languages, Literatures and Cultures	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, Literatures and Cultures			
Economics										
130	ECON 101	Introduction to Microeconomics	3	6				1 year UG SSH Undeclared, 2 year UG SSH Undeclared, 5 year UG SSH	SSH	SEDS, SMG, SoM
131	ECON 102	Introduction to Macroeconomics	3	6				1 year UG SSH Undeclared, 2 year UG SSH Undeclared, 5 year UG SSH	SSH	SEDS, SMG, SoM
132	ECON 120	Managerial Economics	3	6				SEDS	SMG, SSH, SoM	
133	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
134	ECON 202	Intermediate Macroeconomics	3	6	ECON 102 Introduction to Macroeconomics (503) (B- and above) AND (MATH 161 Calculus I (118) (B- and above) OR MATH 162 Calculus II (170) (B- and above))			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)			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	2 year UG SSH Undeclared	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, 6 year UG SSH	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, 6 year UG SSH	4 year UG SSH Economics	SSH
140	ECON 318	Applied Econometrics	3	6	ECON 301 Econometrics I (664) (C- and above)			3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH	4 year UG SSH Economics	SSH
141	ECON 319	Matching Theory and Applications	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH	4 year UG SSH Economics	SSH
142	ECON 341	Economic Simulation Modeling	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH	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 415	Industrial Organization	3	6	ECON 301 Econometrics I (664) (C- and above)			Economics		SSH
145	ECON 428	Wages and the Labor Market	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)			Economics		SSH
146	ECON 443	Topics in Macroeconomic Theory	3	6	ECON 202 Intermediate Macroeconomics (207) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)			Economics		SSH
147	ECON 446	Empirical Finance	3	6	ECON 211 Economic Statistics (2280) (C- and above) OR MATH 322 Mathematical Statistics (1165) (C- and above)			Economics		SSH

148	ECON 498	Advanced Special Topics in Economics	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 202 Intermediate Macroeconomics (207) (C- and above)			Economics	SEDS, SMG, SSH	
History, Philosophy and Religious Studies										
149	HST 100	History of Kazakhstan	3	6				2 year UG SOM, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH	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	SEDS, SMG, SSH, SoM
151	HST 123	Introduction to the History of Science and Technology	3	6				1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	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	SEDS, SMG, SSH, SoM
153	HST 206	The Age of the Dragon Throne: Chinese Civilizations from the Mongols through the Qing	3	6				1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	SEDS, SMG, SSH, SoM
154	HST 236	Eurasian revolutions, 1905-1949	3	6				1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	SEDS, SMG, SSH, SoM
155	HST 433	Empire, Nation and Identity in Nineteenth-Century Eurasia	3	6	HST 100 History of Kazakhstan (172) (C- and above)			4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS, 5 year UG SMG, 5 year UG SOM, 6 year UG SEDS, 6 year UG SMG, 6 year UG SOM, History	SSH	SEDS, SMG, SoM
156	HST 499	History Capstone: Undergraduate Dissertation	4	8	HST 498 Directed Reading (1365) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!		
157	PHIL 112	Classical Chinese and Indian Ethic	3	6				1 year UG SSH Undeclared	1 year UG SSH, 2 year UG SSH	SEDS, SMG, SSH, SoM
158	PHIL 141	Critical Thinking	3	6				1 year UG SSH Undeclared	1 year UG SSH, 2 year UG SSH	SEDS, SMG, SSH, SoM
159	PHIL 210	Ethics	3	6				3 year UG SOM Medical Sciences, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH	2 year UG SEDS, 2 year UG SMG, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SSH, Biological Sciences	SEDS, SMG, SSH, SoM

160	PHIL 240	Formal Logic	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS, 5 year UG SMG, 5 year UG SOM, 6 year UG SEDS, 6 year UG SMG, 6 year UG SOM	SSH	SEDS, SMG, SoM	
161	PHIL 314	Free Will and Moral Responsibility	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS, 5 year UG SMG, 5 year UG SOM, 6 year UG SEDS, 6 year UG SMG, 6 year UG SOM	SSH	SEDS, SMG, SoM	
162	PHIL 323	Does Equality Matter?	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS, 5 year UG SMG, 5 year UG SOM, 6 year UG SEDS, 6 year UG SMG, 6 year UG SOM	SSH	SEDS, SMG, SoM	
163	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, 5 year UG SMG, 5 year UG SOM, 6 year UG SEDS, 6 year UG SMG, 6 year UG SOM	SSH	SEDS, SMG, 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	SEDS, SMG, SSH, SoM	
165	HST 261/REL 261	History of Islam (570s to 1258)	3	6	Subject "HST" BETWEEN 100 and 199 OR Subject "REL" BETWEEN 100 and 199			1 year UG SSH Undeclared, History	1 year UG SSH, 2 year UG SSH	SEDS, SMG, SSH, SoM	

166	HST 440/REL 440	Religions in the Soviet and Post-Soviet Eras	3	6	Subject "REL" BETWEEN 100 and 200 OR Subject "REL" BETWEEN 100 and 200 OR Subject "HST" BETWEEN 100 and 200			4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS, 5 year UG SMG, 5 year UG SOM, 6 year UG SEDS, 6 year UG SMG, 6 year UG SOM, History	SSH	SEDS, SMG, SoM

History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies

| 167 | HST 272/TUR 272 | Modern Turkey: from the Ottoman Empire to the Turkish Republic | 3 | 6 | | | | 1 year UG SSH Undeclared, History | 1 year UG SSH, 2 year UG SSH | SEDS, SMG, SSH, SoM |

History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies, Sociology and Anthropology

| 168 | HST 380/TUR 380/ANT 380 | Linguistic and Cultural Diversity in Contemporary China: From Beijing to Xinjiang | 3 | 6 | | | | Anthropology | 3 year UG SSH, 4 year UG SSH | SEDS, SMG, SSH, SoM |

History, Philosophy and Religious Studies, Languages, Literature and Linguistics

| 169 | HST 245/WLL 245 | Global History of Travel and Travel Literature | 3 | 6 | | | | 1 year UG SSH Undeclared, History | 1 year UG SSH, 2 year UG SSH | SEDS, SMG, SSH, SoM |
| 170 | HST 274/WLL 274 | Texts and Contexts | 3 | 6 | | | | History, World Languages, Literatures and Cultures | | SSH |

History, Philosophy and Religious Studies, Sociology and Anthropology

| 171 | REL 435/ANT 435 | The Archaeology of Ritual | 3 | 6 | ANT 140 World Prehistory (227) (C- and above) OR ANT 231 Frauds and Fallacies in Archaeology (1129) (C- and above) OR ANT 232 Life, Death and Economy: Archaeology of Central Asia (1461) (C- and above) OR ANT 240 Laboratory Methods in Archaeology (5669) (C- and above) | | | Anthropology | 4 year UG SSH History and Culture, 4 year UG SSH Sociology | SEDS, SMG, SSH, SoM |

Kazakh Language and Turkic Studies

| 172 | KAZ 001 | Kazakh Language Placement Test | 0 | 0 | | | | SEDS, SMG, SSH, SoM | | |

173	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	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
174	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	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
175	KAZ 313	Kazakh for Business	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
176	KAZ 349	Kazakh Mythology	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
177	KAZ 351	Kazakh Short Stories	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
178	KAZ 353	Kazakh Poetry	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	

179	KAZ 356	Kazakh Music History	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
180	KAZ 357	Literature of Alash	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
181	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 SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
182	KAZ 362	Creative Writing in Kazakh Language	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
183	KAZ 363	Language and Globalization	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
184	KAZ 364	Kazakh for Civil Service	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	

185	KAZ 371	Contemporary Kazakh Literature	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
186	KAZ 372	Language and ethnicity	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
187	KAZ 373	Kazakh Terminology	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
188	KAZ 374	Kazakh Diplomacy	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			Political Science and International Relations	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
189	KAZ 376	Language and Culture	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
190	KAZ 377	Intercultural Communication through Film	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	

191	KAZ 378	Kazakh for Social Science	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
192	KAZ 410	Kazakh literature of the XV-XIX centuries	3	6	Subject "KAZ" BETWEEN 300 and 399 OR Subject "KAZ" BETWEEN 300 and 399			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SMG, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH	SEDS, SMG, SSH, SoM	
193	KFL 102	Elementary Kazakh as a Foreign Language II	4	8	KFL 101 Elementary Kazakh as a Foreign Language I (4889) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!			
194	TUR 230	Literatures of Central Asia	3	6				3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH		SEDS, SMG, SSH, SoM	
195	TUR 231	Istanbul in Literature and Culture	3	6				3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH		SEDS, SMG, SSH, SoM	
196	TUR 235	Turkish Poetry in Translation	3	6				3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH		SEDS, SMG, SSH, SoM	
197	TUR 412	Advanced Turkish in Media and Politics	3	6				3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH		SEDS, SMG, SSH, SoM	
Languages, Literature and Linguistics											

#	Code	Name	Cr	Hrs	Prerequisites						
198	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	
199	CHN 201	Intermediate Mandarin I	4	8	CHN 102 Beginning Mandarin II (1844) (C and above)			SSH	SEDS, SMG, SoM		
200	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	
201	FRE 101	Beginning French I	4	8				SSH	SEDS, SMG, SoM		
202	FRE 201	Intermediate French I	4	8	FRE 102 Beginning French II (454) (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, SSH	2 year UG SSH, 3 year UG SSH, SEDS, SMG, SoM	
203	FRE 312	Advanced Expression	3	6	FRE 201 Intermediate French I (667) (C- and above)			SSH	SEDS, SMG, SoM		
204	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	
205	GER 201	Intermediate German I	4	8	GER 102 Beginning German II (3335) (C- and above)				SSH	SEDS, SMG, SoM	
206	GER 202	Intermediate German II	4	8	GER 201 Intermediate German I (3722) (C- and above)			SSH	SEDS, SMG, SoM		
207	KOR 102	Beginning Korean II	4	8	KOR 101 Beginning Korean I (4672) (C- and above)			SSH	SEDS, SMG, SoM		
208	KOR 202	Intermediate Korean II	4	8	KOR 201 Intermediate Korean I (5059) (C- and above)			SSH	SEDS, SMG, SoM		
209	LING 130	Introduction to Language and Communication	3	6				2 year UG SSH World Languages, Literatures and Cultures, Undeclared SEDS, Undeclared SSH	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	

210	LING 131	Introduction to Linguistics	3	6				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	
211	LING 140	Language Variation and Change: the Story of English	3	6				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	
212	LING 270	Languages of Eurasia	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	
213	LING 271	Introduction to Cognitive Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C and above)			2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	
214	LING 273	Survey of Research Methods in Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)				World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM
215	LING 278	Sounds of the World's Languages	3	6					World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM
216	LING 375	The Art and Science of Analyzing Languages: Morphosyntax of the World's Languages	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)				World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM
217	LING 389	Discourse and Grammar	3	6	LING 131 Introduction to Linguistics (1394) (C and above)				World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM
218	LING 461	Experimental semantics	3	6	LING 130 Introduction to Language and Communication (4014) (C- and above) OR LING 131 Introduction to Linguistics (1394) (C- and above)				World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM
219	LING 491	Advanced Independent Study	3	6							
220	PER 102	Beginning Persian II	4	8	PER 101 Beginning Persian I (4474) (C- and above)				SSH	SEDS, SMG, SoM	
221	RFL 103	Intensive Beginning Russian	4	8					Instructor's Permission Required. Registration through Add Course form only!			

222	RFL 156	Kazakhstan - history, culture, traditions, society, modernity	6	3				Instructor's Permission Required. Registration through Add Course form only!			
223	RFL 203	Intensive Intermediate Russian	4	8				Instructor's Permission Required. Registration through Add Course form only!			
224	RFL 211	East in Soviet Russian-language culture: origin and fate	3	6				Instructor's Permission Required. Registration through Add Course form only!			
225	RFL 415	Social Problems and Issues of Eurasia	6	3				Instructor's Permission Required. Registration through Add Course form only!			
226	RFL 469	International relations of Eurasia	3	6				Instructor's Permission Required. Registration through Add Course form only!			
227	SPA 102	Beginning Spanish II	4	8	SPA 101 Beginning Spanish I (685) (C- and above)			SSH	SEDS, SMG, SoM	
228	SPA 202	Intermediate Spanish II	4	8	SPA 201 Intermediate Spanish I (1475) (C- and above)			SSH	SEDS, SMG, SoM	
229	WLL 110	Introduction to Literary Studies	3	6				1 year UG SSH Undeclared, 2 year UG SSH World Languages, Literatures and Cultures, Undeclared SEDS	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	
230	WLL 211	World Literature II: from the 18th to the 20th century	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	
231	WLL 218	Renaissance in Italy and Beyond	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	
232	WLL 248	Survey of Soviet Literature and Culture	3	6				2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literatures and Cultures	SEDS, SMG, SSH, SoM	

#	Code	Title	Cr	ECTS	Prerequisite		Corequisite			
233	WLL 340	The image of the East in Russophone literature and culture: genesis and meaning	3	6				World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM
234	WLL 400	Research Assistance in Linguistics and Literature	1	2	LING 273 Survey of Research Methods in Linguistics (2158) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!		
235	WLL 440	Oral Epic in Central Asia	3	6	Subject "WLL" BETWEEN 100 and 499			World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM
236	WLL 499	Languages, Linguistics, and Literatures Capstone II	3	6	WLL 498 Languages, Linguistics, and Literatures Capstone I (3048) (C- and above)			SSH	GSB, GSE, GSPP	

Languages, Literature and Linguistics, Languages, Literature and Linguistics										
237	SPA 351/WLL 351	Literature and Film of the Postcolonial World	3	6	Subject "WLL" BETWEEN 200 and 299			World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM
Languages, Literature and Linguistics, Sociology and Anthropology										
238	WLL 271/ANT 275	Language and Society	3	6				Anthropology, Sociology	SEDS, SMG, SSH, SoM	
Mathematics										
239	MATH 109	Mathematical Discovery	3	6			MATH 161 Calculus I (118) (C- and above)	Anthropology, History, Political Science and International Relations, Sociology, Undeclared SSH, World Languages, Literatures and Cultures		
240	MATH 161	Calculus I	4	8				1 year UG SEDS, 1 year UG SMG, 1 year UG SOM Medical Sciences, Biological Sciences, Chemistry, Mathematics, Physics	Undeclared SSH	SEDS, SMG, SSH, SoM
241	MATH 162	Calculus II	4	8	MATH 161 Calculus I (118) (C and above)			1 year UG SEDS, 1 year UG SMG, Chemistry, Mathematics, Physics	Biological Sciences, Undeclared SSH	SEDS, SMG, SSH, SoM
242	MATH 251	Discrete Mathematics	3	6	MATH 161 Calculus I (118) (C and above)			Computer Science, Mathematics	SEDS, SMG, SSH, SoM	
243	MATH 263	Calculus III	4	8	MATH 162 Calculus II (170) (C and above)			Mathematics, Physics	SEDS, SMG, SSH, SoM	

244	MATH 273	Linear Algebra with Applications	4	8	MATH 161 Calculus I (118) (C and above)	MATH 162 Calculus II (170) (C and above)		2 year UG SEDS Computer Science, 2 year UG SEDS Robotics Engineering, 2 year UG SEDS Robotics and Mechatronics, Mathematics, Physics	Computer Science, Robotics Engineering, Robotics and Mechatronics	SEDS, SMG, SSH, SoM
245	MATH 274	Introduction to Differential Equations	3	6	MATH 162 Calculus II (170) (C and above)			Chemistry, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
246	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	SEDS, SMG, SSH, SoM	
247	MATH 310	Applied Statistical Methods	3	6	MATH 161 Calculus I (118) (C and above)	MATH 321 Probability (482) (C and above)	2 year UG SMG Mining Engineering, 2 year UG SSH Biological Sciences	Biological Sciences, Mining Engineering, Petroleum Engineering	SEDS, SMG, SSH, SoM	
248	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)	Computer Science, Mathematics, Robotics Engineering, Robotics and Mechatronics	SEDS, SMG, SSH, SoM		
249	MATH 322	Mathematical Statistics	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics	SEDS, SMG, SSH, SoM	
250	MATH 350	Research Methods	3	6	MATH 321 Probability (482) (C and above)			Mathematics		
251	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	SEDS, SMG, SSH, SoM		
252	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	SEDS, SMG, SSH, SoM	

253	MATH 407	Graph Theory	3	6	(MATH 301 Introduction to Number Theory (613) (C and above) OR MATH 251 Discrete Mathematics (85) (C and above)) AND MATH 273 Linear Algebra with Applications (84) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
254	MATH 411	Linear Programming	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 263 Calculus III (81) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
255	MATH 412	Nonlinear Optimization	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 263 Calculus III (81) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
256	MATH 423	Actuarial Mathematics II	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
257	MATH 449	Statistical Programming	3	6	MATH 322 Mathematical Statistics (1165) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
258	MATH 455	Stochastic Calculus	3	6	MATH 321 Probability (482) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
259	MATH 456	Introduction to Lie Groups and Representations	3	6	MATH 361 Real Analysis I (483) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
260	MATH 462	Advanced Linear Algebra	3	6	MATH 251 Discrete Mathematics (85) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		

261	MATH 476	Numerical Methods for Partial Differential Equations	3	6	MATH 351 Numerical Methods with Applications (1166) (C and above) AND MATH 481 Partial Differential Equations (1168) (C and above)			Mathematics	SEDS, SMG, SSH, SoM	
262	MATH 480	Complex Analysis	3	6	MATH 263 Calculus III (81) (C and above)			Instructor's Permission Required. Registration through Add Course form only!		
263	MATH 482	Fourier Analysis	3	6	MATH 263 Calculus III (81) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above)			Mathematics	SEDS, SMG, SSH, SoM	
264	MATH 490	Special Topics in Mathematics I	3	6				Instructor's Permission Required. Registration through Add Course form only!		
265	MATH 498	Directed Study in Mathematics II	3	6				Instructor's Permission Required. Registration through Add Course form only!		
266	MATH 499	Capstone Project	3	6				Instructor's Permission Required. Registration through Add Course form only!		
Physics										
267	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	SEDS, SMG, SSH, SoM	
268	PHYS 162	Physics II for Scientists and Engineers with Laboratory	4	8	PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C- and above) OR PHYS 151 Introductory Physics I with Lab (649) (C- and above)		PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above)	1 year UG SEDS, 1 year UG SMG, 1 year UG SSH Mathematics, 1 year UG SSH Physics	SEDS, SMG, SSH, SoM	

269	PHYS 202	Introductory Astrophysics	3	6	PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			Physics		SEDS, SMG, SSH, SoM
270	PHYS 222	Classical Mechanics II	3	6	PHYS 221 Classical Mechanics I (652) (C- and above)	MATH 274 Introduction to Differential Equations (484) (D and above)		Physics		SEDS, SMG, SSH, SoM
271	PHYS 270	Computational Physics with Laboratory	3	6	(CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above)) AND MATH 263 Calculus III (81) (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))	MATH 273 Linear Algebra with Applications (84) (D and above)		Physics		SEDS, SMG, SSH, SoM
272	PHYS 280	Thermodynamics and Statistical Physics	3	6	MATH 263 Calculus III (81) (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))			Physics		SEDS, SMG, SSH, SoM
273	PHYS 362	Classical Electrodynamics II	3	6	PHYS 361 Classical Electrodynamics I (651) (C- and above)			Physics		
274	PHYS 370	Optics with Laboratory	4	8	PHYS 361 Classical Electrodynamics I (651) (C- and above)			Physics		
275	PHYS 451	Quantum Mechanics I	3	6	PHYS 221 Classical Mechanics I (652) (C- and above) AND PHYS 361 Classical Electrodynamics I (651) (C- and above)			Physics		
276	PHYS 462	Field Theories in Physics	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 221 Classical Mechanics I (652) (C- and above)	PHYS 451 Quantum Mechanics I (1415) (C- and above)		Physics		

277	PHYS 470	Introduction to Optoelectronics	4	8	PHYS 261 Modern Physics with laboratory (125) (C- and above) OR PHYS 473 Introduction to Solid State Physics (1423) (C- and above) OR CHEM 331 Physical Chemistry I (634) (C- and above) OR MAE 301 Engineering Thermodynamics (5927) (C- and above) OR CHME 201 Chemical Engineering Thermodynamics (5007) (C- and above) OR ELCE 204 Solid State Devices (5508) (C- and above)			Physics			
278	PHYS 483	Statistical Mechanics	3	6	PHYS 280 Thermodynamics and Statistical Physics (1179) (C- and above)			Physics			
279	PHYS 491	Directed Study of Advanced Physics Topics	3	6				Instructor's Permission Required. Registration through Add Course form only!			
280	PHYS 499	Honors Thesis	3	6				Instructor's Permission Required. Registration through Add Course form only!			
Political Science and International Relations											
281	PLS 101	Introduction to Political Science	3	6				5 year UG SEDS, 5 year UG SSH	Undeclared SEDS, Undeclared SSH	SEDS, SMG, SSH, SoM	
282	PLS 120	Introduction to Political Theory	3	6				5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	Undeclared SEDS, Undeclared SSH	SEDS, SMG, SSH, SoM	
283	PLS 140	Introduction to Comparative Politics	3	6				5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	Undeclared SEDS, Undeclared SSH	SEDS, SMG, SSH, SoM	
284	PLS 150	Introduction to International Relations	3	6				5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	Undeclared SEDS, Undeclared SSH	SEDS, SMG, SSH, SoM	

285	PLS 210	Political Science Research Methods	3	6				5 year UG SSH, Political Science and International Relations	SSH		
286	PLS 211	Quantitative Methods	3	6			ECON 211 Economic Statistics (2280) (C- and above)	5 year UG SSH, Political Science and International Relations	SSH		
287	PLS 312	Public Opinion and Elections	3	6	PLS 211 Quantitative Methods (221) (C- and above) OR ECON 211 Economic Statistics (2280) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		
288	PLS 341	Politics of Development	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		
289	PLS 345	Revolutions, Social Movements, and Contentious Politics	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		
290	PLS 351	International Political Economy	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)			5 year UG SSH, Political Science and International Relations	SSH		
291	PLS 355	European Union: Institutions and Policies	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		
292	PLS 356	International Politics of the Korean Peninsula	3	6	PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 150 Introduction to International Relations (511) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		
293	PLS 361	Memory Politics in East Asia	3	6				5 year UG SSH, Political Science and International Relations	SSH		
294	PLS 362	Science, Technology and International Affairs	3	6	PLS 150 Introduction to International Relations (511) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		

295	PLS 363	Visual Politics	3	6	PLS 140 Introduction to Comparative Politics (223) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		
296	PLS 392	Politics of China	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		
297	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!			
298	PLS 412	Scientific Research in International Relations	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		
299	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)			5 year UG SSH, Political Science and International Relations	SSH		
300	PLS 435	Political Polarization in Democracies	3	6	PLS 140 Introduction to Comparative Politics (223) (C and above) AND PLS 210 Political Science Research Methods (129) (C and above) AND PLS 211 Quantitative Methods (221) (C and above)			5 year UG SSH, Political Science and International Relations	SSH		
301	PLS 436	State capacity and state-building	3	6	PLS 140 Introduction to Comparative Politics (223) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH		

302	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)			5 year UG SSH, Political Science and International Relations	SSH	
303	PLS 457	International Security and Conflict	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)			5 year UG SSH, Political Science and International Relations	SSH	
304	PLS 460	Environmental Politics	3	6				5 year UG SSH, Political Science and International Relations	SSH	
305	PLS 468	International Relations of Asia	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH	
306	PLS 469	International Relations of Eurasia	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SSH, Political Science and International Relations	SSH	
307	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										
308	SSH 300	School of Sciences and Humanities Internship	3	6				Instructor's Permission Required. Registration through Add Course form only!		
309	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										

No	Code	Title	Cr	ECTS	Prerequisites						
310	ANT 110	Introduction to Sociocultural Anthropology	3	6				Anthropology, Undeclared SEDS, Undeclared SSH	SEDS, SMG, SSH, SoM		
311	ANT 160	Introduction to Biological Anthropology	3	6			ANT 361 Human Evolution: Bones, Stones and Genomes (160) (C- and above)	Anthropology, Undeclared SEDS, Undeclared SSH	Biological Sciences, Medical Sciences	SEDS, SMG, SSH, SoM	
312	ANT 232	Life, Death and Economy: Archaeology of Central Asia	3	6				Anthropology	2 year UG SSH Undeclared, 3 year UG SSH Undeclared	SEDS, SMG, SSH, SoM	
313	ANT 270	Anthropology of Warfare	3	6				Anthropology	2 year UG SSH Undeclared, 3 year UG SSH Undeclared	SEDS, SMG, SSH, SoM	
314	ANT 340	Method and Theory in Archaeology	3	6	(Subject "ANT" BETWEEN 100 and 199 AND Subject "ANT" BETWEEN 200 and 299) OR (Subject "ANT" BETWEEN 100 and 199 AND Subject "ANT" BETWEEN 200 and 299)			Anthropology	3 year UG SSH, 4 year UG SSH	SEDS, SMG, SSH, SoM	
315	ANT 361	Human Evolution: Bones, Stones and Genomes	3	6				Anthropology	Biological Sciences, Sociology	SEDS, SMG, SSH, SoM	
316	ANT 400	Research Assistance in Anthropology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
317	ANT 401	Research Assistance in Anthropology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
318	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	4 year UG SSH Sociology	SEDS, SMG, SSH, SoM	

319	ANT 499	Capstone Seminar II	3	6	ANT 498 Capstone Seminar I (2965) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!		
320	SOC 101	Introduction to Sociology	3	6				Nursing, Sociology, Undeclared SSH	SSH	SEDS, SMG, SoM	
321	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 SSH Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
322	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 Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
323	SOC 210	Gender and Society	3	6				Sociology	Anthropology	SEDS, SMG, SSH, SoM	
324	SOC 220	Science, Technology, and Society	3	6				Sociology	Anthropology	SEDS, SMG, SSH, SoM	
325	SOC 221	International Migration	3	6				Sociology	Anthropology	SEDS, SMG, SSH, SoM	
326	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 Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
327	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	

328	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 Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
329	SOC 317	Economy and Society	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR Subject "SOC" BETWEEN 200 and 299 OR Subject "SOC" BETWEEN 200 and 299 OR ECON 102 Introduction to Macroeconomics (503) (C- and above) OR PLS 120 Introduction to Political Theory (512) (C- and above) OR PLS 150 Introduction to International Relations (511) (C- and above)			Sociology	Anthropology	SEDS, SMG, SSH, SoM	
330	SOC 399	Special Topics in Sociology	3	6				4 year UG SSH Sociology, 5 year UG SSH Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
331	SOC 400	Research Assistance in Sociology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
332	SOC 402	Research Assistance in Sociology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
333	SOC 415	Social Problems and Issues in Eurasia	3	6				4 year UG SSH Sociology, 5 year UG SSH Sociology	3 year UG SSH Sociology	Anthropology, Sociology	
334	SOC 416	Sociology of Punishment	3	6	SOC 301 Classical Sociological Theory (683) (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 Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
335	SOC 420	Applied Policy Analysis: Tools and Perspectives	3	6	SOC 101 Introduction to Sociology (508) (C and above)			Anthropology, Sociology			

336	SOC 499	Capstone Seminar II	3	6	SOC 498 Capstone Seminar Part I (3043) (C- and above)		Instructor's Permission Required. Registration through Add Course form only!		
Sociology and Anthropology, Sociology and Anthropology
337	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 Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM
338	ANT 222/SOC 222	Approaches to Global Development	3	6		ANT 222/SOC 222 Approaches to Global Development (158) (C- and above)	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
339	ANT 285/SOC 212	Food and Society	3	6			Anthropology, Sociology	SEDS, SMG, SSH, SoM	
SEDS
Chemical and Materials Engineering
340	CHME 202	Fluid Mechanics	3	6			2 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Chemical Engineering, 5 year UG SEDS Chemical and Materials Engineering	

341	CHME 203	Organic and Polymer Chemistry	3	6	CHME 222 Inorganic and Analytical Chemistry (5039) (D and above)			2 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Chemical Engineering, 5 year UG SEDS Chemical and Materials Engineering		
342	CHME 303	Separation Processes	3	6	CHME 200 Basic Principles and Calculations in Chemical Engineering (5038) (D and above) AND CHME 201 Chemical Engineering Thermodynamics (5007) (D and above)			3 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Chemical Engineering, 5 year UG SEDS Chemical and Materials Engineering		
343	CHME 304	Chemical Reaction Engineering	3	6	CHME 200 Basic Principles and Calculations in Chemical Engineering (5038) (D and above)			3 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Chemical Engineering, 5 year UG SEDS Chemical and Materials Engineering		
344	CHME 305L	Chemical Engineering Laboratory I	3	6	CHME 201 Chemical Engineering Thermodynamics (5007) (D and above) AND CHME 202 Fluid Mechanics (5543) (D and above) AND CHME 300 Heat and Mass Transfer (5952) (D and above)			3 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Chemical Engineering, 5 year UG SEDS Chemical and Materials Engineering		

345	CHME 352	Research Practice	3	6				3 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Chemical Engineering, 5 year UG SEDS Chemical and Materials Engineering	
346	CHME 402	Materials Chemistry	3	6				4 year UG SEDS Chemical and Materials Engineering	5 year UG SEDS Chemical and Materials Engineering	
347	CHME 403	Chemical Process Control and Safety	3	6				4 year UG SEDS Chemical and Materials Engineering	5 year UG SEDS Chemical and Materials Engineering	
348	CHME 421	Tissue Engineering	3	6				4 year UG SEDS Chemical and Materials Engineering	5 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering
349	CHME 454	Transport Phenomena and Operations	3	6				4 year UG SEDS Chemical and Materials Engineering	5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	
350	CHME 461	Powder technology	3	6				4 year UG SEDS Chemical and Materials Engineering	5 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering
Civil and Environmental Engineering										
351	CEE 202	Environmental Engineering	3	6	CEE 201 Environmental Chemistry (4999) (D and above)			2 year UG SEDS Civil and Environmental Engineering	3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering
352	CEE 203	Structural Analysis	3	6	MAE 200 Structural Mechanics I (5010) (D and above) OR CEE 200 Structural Mechanics I (5005) (D and above)			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

353	CEE 301	Structural Design – Steel	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		
354	CEE 303	Geotechnical Design	3	6	CEE 302 Geotechnical Engineering (5896) (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		
355	CEE 305	Hydraulics and Hydrology	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) OR EME 275 Fluid Mechanics I (1988) (D and above) OR CEE 304 Fluid Mechanics (6348) (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		
356	CEE 400	Transportation Engineering	3	6	CEE 204 Civil Engineering CAD and Surveying (5002) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
357	CEE 454	Foundation Engineering	3	6	ECE 306 Geotechnical Design (1043) (D and above) OR CEE 303 Geotechnical Design (6158) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
358	CEE 455	Solid and Hazardous Waste Management	3	6	CEE 202 Environmental Engineering (5499) (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		
359	CEE 457	Air Quality Management	3	6				4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		

360	CEE 458	Modern Information Technology in Construction	3	6	CEE 204 Civil Engineering CAD and Surveying (5002) (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		
361	CEE 463	Individual Research Project in Civil & Environmental Engineering 1	3	6				4 year UG SEDS Civil and Environmental Engineering			
362	CEE 466	Introduction to Finite Element Methods	3	6	CEE 200 Structural Mechanics I (5005) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
363	CEE 468	Structural Design – Concrete II	3	6	CEE 300 Structural Design – Concrete (5895) (C- and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
Computer Science											
364	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			

365	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)	1 year UG SOM, 2 year UG SOM, 3 year UG SOM, 4 year UG SOM, Biological Sciences, Chemistry, Mathematics	SSH	
366	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	Physics, Undeclared SEDS	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
367	CSCI 152	Performance and Data Structures	4	8	CSCI 151 Programming for Scientists and Engineers (192) (C- and above)			Computer Science, Robotics Engineering, Robotics and Mechatronics	Undeclared SEDS, Undeclared SSH	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
368	CSCI 245	System Analysis and Design	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science		
369	CSCI 262	Software Project Management	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science		
370	CSCI 270	Algorithms	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)	MATH 251 Discrete Mathematics (85) (D and above)		Computer Science		

371	CSCI 272	Formal Languages	3	6	CSCI 151 Programming for Scientists and Engineers (192) (C- and above)	MATH 251 Discrete Mathematics (85) (D and above)		Computer Science			
372	CSCI 281	Human-Computer Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
373	CSCI 307	Research Methods	3	6				3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
374	CSCI 325	Introduction to Parallel Systems and Graphics Processing Unit 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			
375	CSCI 332	Operating Systems	3	6	CSCI 231 Computer Systems and Organization (194) (D and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
376	CSCI 333	Computer Networks	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			
377	CSCI 363	Software Testing and Quality Assurance	3	6	CSCI 235 Programming Languages (638) (C- and above)			Computer Science			
378	CSCI 371	Algorithmic Problem Solving	3	6	CSCI 270 Algorithms (648) (B and above)			Instructor's Permission Required. Registration through Add Course form only!			
379	CSCI 393	Introduction to Natural Language Processing	3	6	CSCI 390 Artificial Intelligence (643) (C- and above)			Computer Science			
380	CSCI 399	Internship II	3	6				Instructor's Permission Required. Registration through Add Course form only!			

#	Code	Title	Cr	Hrs	Prerequisite	Co-requisite			
381	CSCI 409	Senior Project II	3	6	CSCI 408 Senior Project I (1481) (C- and above)		4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
382	CSCI 447	Machine Learning: Theory and Practice	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above)		3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
383	CSCI 462	Open Source Software	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			
384	CSCI 490	Brain Computer Interface	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above)		3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
385	CSCI 496	Generative Artificial Intelligence	3	6	CSCI 390 Artificial Intelligence (643) (C- and above) AND MATH 273 Linear Algebra with Applications (84) (C- and above)		Computer Science			
Electrical and Computer Engineering										
386	ELCE 201	Circuits Theory II	3	6	ELCE 200 Introduction to Electrical Circuits (4991) (C- and above)		2 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	
387	ELCE 201L	Circuit Theory Laboratory	1	2		ELCE 201 Circuit Theory (5507) (D and above)	2 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	
388	ELCE 202	Digital Logic Design	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) AND ENG 101 Programming for Engineers (4517) (C- and above)		2 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	
389	ELCE 202L	Digital Logic Design Laboratory	1	2		ELCE 202 Digital Logic Design (4992) (D and above)	2 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	

390	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)		2 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	
391	ELCE 300	Microprocessor Systems	3	6	ELCE 202 Digital Logic Design (4992) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering	
392	ELCE 300L	Microprocessor Systems Laboratory	1	2		ELCE 300 Microprocessor Systems (6183) (C- and above)		3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering	
393	ELCE 302	Electric Machines	3	6	ELCE 201 Circuit Theory (5507) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering	

394	ELCE 303	Power System Analysis	3	6	ELCE 200 Introduction to Electrical Circuits (4991) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
395	ELCE 303L	Power System Analysis Laboratory	1	2	ELCE 200 Introduction to Electrical Circuits (4991) (C- and above)	ELCE 303 Power System Analysis (6180) (D and above)		4 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	SEDS
396	ELCE 305	Data Structures and Algorithms	3	6	CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
397	ELCE 306L	Linear Control Theory Lab	1	2	ELCE 203L Signals and Systems Laboratory (6182) (C- and above)	ELCE 306 Linear Control Theory (5949) (D and above)		Instructor's Permission Required. Registration through Add Course form only!		
398	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)		Instructor's Permission Required. Registration through Add Course form only!		

399	ELCE 308	Communication Systems	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
400	ELCE 308L	Communication Systems Laboratory	1	2	ELCE 203 Signals and Systems (4993) (C- and above)	ELCE 308 Communication Systems (5922) (D and above)		4 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	SEDS
401	ELCE 311	Interdisciplinary Design Project	3	6			ENG 400 Capstone Project (6385) (C- and above)	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering
402	ELCE 350	Electromagnetics I	3	6	PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) AND ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) AND ELCE 200 Introduction to Electrical Circuits (4991) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
403	ELCE 399	Internship	3	6				Instructor's Permission Required. Registration through Add Course form only!		
404	ELCE 403	Introduction to Adaptive Signal Processing	3	6	ELCE 307 Digital Signal Processing (5921) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering

405	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)			SMG	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
406	ELCE 458	Numerical Optimization Techniques and Computer Applications	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
407	ELCE 459	Design of Application Specific Electronic Circuits	3	6	ELCE 301 Electronic Circuits (5918) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
408	ELCE 461	Industrial Automation	3	6	ELCE 202 Digital Logic Design (4992) (C- and above)			SMG	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
409	ELCE 468	Robots For Rehabilitation	3	6				5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
410	ELCE 469	Microfluidics Fundamentals and Applications	3	6	PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) AND MATH 162 Calculus II (170) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
411	ELCE 470	Optical Communications	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
412	ELCE 486	Photonics for Engineering	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)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
Mechanical and Aerospace Engineering											

413	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)	SMG	4 year UG SEDS Electrical and Computer Engineering	Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering
414	ENG 102	Engineering Materials I	3	6				1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering, Undeclared SEDS	Civil Engineering	

| 415 | ENG 103 | Engineering Materials II | 3 | 6 | | | | 1 year UG SEDS Chemical Engineering, 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 Undeclared | 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Electrical and Computer Engineering, Civil and Environmental Engineering | SEDS | |

| 416 | ENG 201 | Applied Probability and Statistics | 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 Chemical and Materials Engineering, 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Electrical and Computer Engineering | SEDS | |

| 417 | ENG 202 | Numerical Methods in Engineering | 3 | 6 | ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (D 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 Chemical and Materials Engineering, 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Electrical and Computer Engineering | SEDS | |

418	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 Mechanical Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Electrical and Computer Engineering		
419	MAE 205	Material and Manufacturing I	3	6				2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
420	MAE 206	Engineering Dynamics I	3	6				2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
421	MAE 302	Machine Elements Design	3	6	MAE 205 Material and Manufacturing I (5534) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
422	MAE 305	Fluid Mechanics II	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) OR EME 275 Fluid Mechanics I (1988) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
423	MAE 306	Computer Aided Engineering	3	6	ENG 202 Numerical Methods in Engineering (5506) (D and above) AND MAE 201 Computer Aided Design (5011) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
424	MAE 350	Structural Mechanics II	3	6	MAE 200 Structural Mechanics I (5010) (D and above) OR CEE 200 Structural Mechanics I (5005) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
425	MAE 351	Vehicle Propulsion Systems	3	6	MAE 301 Engineering Thermodynamics (5927) (D and above) OR BENG 226 Engineering Thermodynamics (1553) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	

426	MAE 451	Unmanned Aerial Vehicle Design	3	6	(MAE 303 Control Systems (5929) (D and above) AND MAE 454 Aerodynamics (6576) (D and above)) OR MMAE 603 Modern Control Engineering (4500) (C- and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering	
427	MAE 454	Aerodynamics	3	6	MAE 300 Fluid Mechanics I (5926) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering
428	MAE 456	Materials and Manufacturing II	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering	SEDS
429	MAE 457	Feasibility Analysis of Clean Energy Technologies	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering	
430	MAE 460	Advanced Topics in Computational Fluid Dynamics	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) AND ENG 202 Numerical Methods in Engineering (5506) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering	SEDS
431	MAE 463	Micro-Electro-Mechanical Systems and Microsystems technology	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering	SEDS
432	MAE 464	Mechanics of Soft Materials	3	6	ENG 102 Engineering Materials I (4708) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering	SEDS
433	MAE 465	Introduction to Maintenance Engineering	3	6	ENG 201 Applied Probability and Statistics (5505) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Mechanical and Aerospace Engineering	
Robotics and Mechatronics										
434	ROBT 202	System Dynamics and Modeling	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) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above))			Robotics Engineering, Robotics and Mechatronics		

435	ROBT 204	Electrical and Electronic Circuits II with Lab	4	8	ROBT 203 Electrical and Electronic Circuits I with Lab (62) (C- and above)			Robotics Engineering, Robotics and Mechatronics			
436	ROBT 206	Microcontrollers with Lab	4	8	CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above)			Computer Science, Robotics Engineering, Robotics and Mechatronics			
437	ROBT 304	Electromechanical Systems with lab	4	8	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above)			Robotics Engineering, Robotics and Mechatronics	SEDS		
438	ROBT 307	Power Electronics	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above)			Robotics Engineering, Robotics and Mechatronics		SEDS	
439	ROBT 312	Robotics I: Kinematics and Dynamics	3	6	ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			Robotics Engineering, Robotics and Mechatronics	SEDS		
440	ROBT 391	Research methods	3	6				3 year UG SEDS Robotics Engineering, 3 year UG SEDS Robotics and Mechatronics	Robotics Engineering, Robotics and Mechatronics	SEDS	
441	ROBT 402	Robotic/Mechatronic System Design	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above) AND ROBT 206 Microcontrollers with Lab (476) (C- and above)			5 year UG SEDS (pending graduation), Robotics Engineering, Robotics and Mechatronics	SEDS		
442	ROBT 491	Graduation Project	3	6	ROBT 391 Research methods (7418) (C- and above)			5 year UG SEDS (pending graduation), Robotics Engineering, Robotics and Mechatronics	SEDS		