Course Requirements and Registration Priorities
Spring 2023

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
CPS											
GSPP											
1	ZEST 061	Basic Economics and Statistics	0	0							
NUFYP											
2	FEAP 020	Foundation English for Academic Purposes 2	0	0							
3	FLDP 095	Leadership 2	0	0							
4	FMAT 041	Foundation Mathematics 2	0	0							
NUZYP											
5	ZCOM 041	Academic Communications for Graduate Studies II	0	0							
6	ZLIN 062	Linear Algebra for Graduate Studies	0	0							
7	ZRDG 031	Academic Reading for Graduate Studies II	0	0							
8	ZWRT 021	Academic Writing for Graduate Studies II	0	0							
GSB											
Economics											
9	ECON 101	Introduction to Microeconomics	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Undeclared SEDS, Undeclared SMG, Undeclared SSH	SSH	SEDS, SMG, SoM	
10	ECON 102	Introduction to Macroeconomics	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Undeclared SEDS, Undeclared SMG, Undeclared SSH	SSH	SEDS, SMG, SoM	
11	ECON 120	Managerial Economics	3	6				SEDS		SSH	
12	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	Undeclared SSH	SSH	
13	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	Undeclared SSH	SSH	
14	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	Undeclared SSH	SSH	
15	ECON 300	Research Assistance in Economics	1	2	ECON 101 Introduction to Microeconomics (379) (C- and above) AND ECON 102 Introduction to Macroeconomics (503) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR CSCI 235 Programming Languages (638) (C- and above) OR CSCI 390 Artificial Intelligence (643) (C- and above) OR MATH 321 Probability (482) (C- and above) OR MATH 322 Mathematical Statistics (1165) (C- and above)						

16	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)))			3 year UG SSH Economics, 4 year UG SSH Economics, 5 year UG SSH Economics	2 year UG SSH Economics, 2 year UG SSH Undeclared	SSH	
17	ECON 302	Game Theory and Economic Analysis	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) OR ECON 101 Introduction to Microeconomics (379) (C- and above) AND MATH 251 Discrete Mathematics (85) (C- and above)		PLS 315 Political Game Theory (704) (C- and above)	3 year UG SSH Economics	4 year UG SSH Economics	SSH	
18	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	4 year UG SSH Economics	SSH	
19	ECON 318	Applied Econometrics	3	6	ECON 301 Econometrics I (664) (C- and above)		ECON 336 Programming for Economists (7979) (C- and above)	3 year UG SSH Economics	4 year UG SSH Economics	SSH	
20	ECON 319	Matching Theory and Applications	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics	4 year UG SSH Economics	SSH	
21	ECON 322	Natural Resources and Environmental Economics	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)		ECON 331 Environmental Economics (1687) (C- and above)	3 year UG SSH Economics	4 year UG SSH Economics	SSH	
22	ECON 415	Industrial Organization	3	6	ECON 301 Econometrics I (664) (C- and above)			Economics		SSH	
23	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	
24	ECON 434	Introduction to Big Data Analytics	3	6	ECON 301 Econometrics I (664) (C- and above)			Economics		SSH	
25	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		
26	ECON 521	Microeconomic Theory II	4	8	ECON 501 Microeconomics (2187) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)			Economics	SSH		
27	ECON 522	Macroeconomics II	4	8	() (and above)			Economics	SSH		
28	ECON 524	Research Methodology	4	8	ECON 501 Microeconomics (2187) (C- and above) AND ECON 502 Macroeconomics (2186) (C- and above) AND ECON 511 Mathematics and Statistics (2188) (C- and above)	ECON 531 Econometrics (2505) (D and above)		Economics	SSH		
29	ECON 528	Wages and the Labor Market	4	8	ECON 521 Microeconomic Theory II (2506) (C- and above) AND ECON 531 Econometrics (2505) (C- and above)			Economics	SSH		
30	ECON 531	Econometrics	4	8	ECON 511 Mathematics and Statistics (2188) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above)			Economics	SSH		
31	ECON 590	Thesis II	8	16	ECON 589 Thesis I (3714) (P)			Economics	SSH		
GSB											
32	BUS 101	Core Course in Business	3	6				2 year UG SOM Medical Sciences, 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	
33	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	
34	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	

35	GSBF 513	Financial Data Analytics II	2	4				For GSB programs only! Registration by School admin.			
36	GSBF 514	Corporate Finance	2	4							
37	GSBF 515b	Investments II	2	4	GSBF 515a Investments I (4106) (C- and above)						
38	GSBF 520	Empirical Asset Pricing	2	4				For GSB programs only! Registration by School admin.			
39	MBA 08	Managerial Economics	2	4				For GSB programs only! Registration by School admin.			
40	MBA 09	Marketing Management	2	4				For GSB programs only! Registration by School admin.			
41	MBA 10	Foundations of Strategy	2	4				For GSB programs only! Registration by School admin.			
42	MBA 12	Operations Management	2	4				For GSB programs only! Registration by School admin.			
43	MBA 15	Corporate Finance	2	4				For GSB programs only! Registration by School admin.			
44	MBA 16	Entrepreneurship	2	4				For GSB programs only! Registration by School admin.			
45	MSF 01	Financial Modeling	2	4				For GSB programs only! Registration by School admin.			
46	MSF 11	FinTech	2	4				For GSB programs only! Registration by School admin.			
GSPP											
Master in Public Administration											
47	MPA 608	Strategic Management and Leadership	4	8				1 year GSPP Public Administration			
48	MPA 610	Program Evaluation	4	8	MPA 602 Public Administration in Theory and Practice (2077) (C- and above) AND MPA 603 Economic Applications for Public Managers (2074) (C- and above) AND MPA 605 Research Methods for Public Managers (2108) (C- and above)			1 year GSPP Public Administration			
49	MPA 699	Master's Project with Overseas Component	0	0				1 year GSPP Public Administration			
50	MPE 600	Internship in Public Policy	4	8	(MPP 601 Microeconomics and Public Policy (1449) (C- and above) AND MPP 602 Macroeconomics and Public Policy (1023) (C- and above) AND MPP 611 Statistics for Public Policy (1450) (C- and above) AND MPP 621 Public Policy and Analysis (1451) (C- and above) AND MPP 641 Public Management and Leadership (1907) (C- and above) AND MPP 603 Data Analytics in Public Policy (6618) (C- and above)) OR (MPA 602 Public Administration in Theory and Practice (2077) (C- and above) AND MPA 603 Economic Applications for Public Managers (2074) (C- and above) AND MPA 605 Research Methods for Public Managers (2108) (C- and above) AND MPE 608 Strategic Management and Leadership (2491) (C- and above) AND MPA 610 Program Evaluation (6617) (C- and above))			2 year GSPP Public Policy			
51	MPE 610	National Identity and Public Policy	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
52	MPE 611	Benefit Cost Analysis	4	8				Public Administration, Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
53	MPE 638	Contemporary Security Challenges in Central Asia and Beyond	4	8				Public Administration	Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	

54	MPE 641	Globalisation and Public Policy	4	8			MPE 640 International Political Economy (1307) (C- and above) OR DPE 623 International Political Economy (6338) (C- and above)	Public Administration, Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
55	MPE 670	Behavioural Insights and Public Policy	4	8				Public Administration, Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
56	MPE 672	The Third Sector: civil society, nonprofit organizations, and voluntary action	4	8				Public Administration, Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
57	MPE 673	Development Assistance and Governance	4	8				Public Administration, Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
58	MPE 681	Natural Resource Management and Policy	4	8				Public Administration, Public Policy	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
Master in Public Policy											
59	MPP 602	Macroeconomics and Public Policy	4	8				1 year GSPP Public Policy			
60	MPP 603	Data Analytics in Public Policy	4	8	MPP 611 Statistics for Public Policy (1450) (C- and above) AND MPP 601 Microeconomics and Public Policy (1449) (C- and above) AND MPP 621 Public Policy and Analysis (1451) (C- and above) AND MPP 613 Policy Research Design and Methods (1301) (C- and above)			1 year GSPP Public Policy			
61	MPP 641	Public Management and Leadership	4	8				1 year GSPP Public Policy			
62	MPP 699	Policy Analysis Exercise with Overseas Component	8	16	MPP 601 Microeconomics and Public Policy (1449) (C- and above) AND MPP 611 Statistics for Public Policy (1450) (C- and above) AND MPP 613 Policy Research Design and Methods (1301) (C- and above) AND MPP 621 Public Policy and Analysis (1451) (C- and above)			2 year GSPP Public Policy			
63	MPP 699-0	Policy Analysis Exercise with Overseas Component	0	0	MPP 613 Policy Research Design and Methods (1301) (C- and above)			1 year GSPP Public Policy			
PhD in Public Policy											
64	DPP 600	Developing Dissertation Research	0	0				Public Policy			
65	DPP 602	Macroeconomics in Public Sector	4	8				1 year GSPP PhD Public Policy			
66	DPP 613	Research Design (qualitative and quantitative)	4	8				1 year GSPP PhD Public Policy			
67	DPP 615	Law, Governance and Public Policy	4	8				1 year GSPP PhD Public Policy			
68	DPP 631	Politics of Public Policy	4	8				1 year GSPP PhD Public Policy			
69	DPP 689-0	PhD Qualifying Examination: Core Exam	0	0				2 year GSPP PhD Public Policy			
70	DPP 689-1	PhD Qualifying Examination: Field Exam	0	0							
71	DPP 690	Thesis Preparation and Writing	66	132	DPP 689 PhD Qualifying Examinations (4830) (P) AND DPP 699 Thesis Design and Written Proposal (4831) (B- and above)			4 year GSPP PhD Public Policy			
72	DPP 690-0	Thesis Preparation and Writing	0	0				3 year GSPP PhD Public Policy, 4 year GSPP PhD Public Policy			
73	DPP 699	Thesis Design and Written Proposal	6	12				2 year GSPP PhD Public Policy			
GSE											
MA in Multilingual Education											
74	EDML 612	Multilingual Society	3	6				1 year GSE MA in Multil.Education			
75	EDML 620	Language and Literacy Development	3	6				2 year GSE MA in Multil.Education			
76	EDML 691	Thesis Research II	6	12				2 year GSE MA in Multil.Education			
MSc Educational Leadership HE											
77	EDHE 604	Thesis Seminar 4	0	0				2 year GSE Educ.Leadership			

78	EDHE 605	Thesis Submission and Defense	10.5	21				2 year GSE Educ.Leadership				
79	EDHE 626	Organization and Governance in Higher Education	3	6				1 year GSE Educ.Leadership				
80	EDHE 628	Higher Education Policy Analysis and Development	3	6				1 year GSE Educ.Leadership				
81	EDUC 507	Academic English III	1.5	3				Registration available only for MSc Yr2 student Albina Kassenova				
82	EDUC 508	Academic English IV	1.5	3				Registration available only for MSc Yr2 students Ilyas Sarsenbayev and Bakhtiyor Ermetov				
83	EDUC 511	Advanced English for Education Professionals II	3	6				1 year GSE MA in Multil.Education				
84	EDUC 513	English for Thesis Writing II	3	6				2 year GSE MA in Multil.Education				
85	EDUC 531	Academic English 2	2	4				1 year GSE Educ.Leadership				
86	EDUC 571	Basic Kazakh	3	6				Education, Multilingual Education				
87	EDUC 581	Basic Kazakh (MSc)	2	4				Educational Leadership				
88	EDUC 585	Education in Kazakhstan for International Students	3	6				Only for GSE international students. Registration by School admin through Add Course form only.				
89	EDUC 591	Academic English Writing for Doctoral Students II	3	6				2 year GSE PhD Education				
90	EDUC 592	Academic English Writing for Doctoral Students III	3	6				4 year GSE PhD Education				
91	EDUC 600	Research Methods II	3	6				1 year GSE MA in Multil.Education				
92	EDUC 608	Research Methods 2	3	6				1 year GSE Educ.Leadership				
93	EDUC 618	Educational Leadership	3	6				1 year GSE Educ.Leadership				
94	EDUC 704	Advanced Methods of Education Research	3	6				1 year GSE PhD Education				
95	EDUC 705	Advanced Methods of Education Research: Qualitative Methods	3	6				1 year GSE PhD Education				
96	EDUC 711	Globalisation and Education	3	6				1 year GSE PhD Education				
97	EDUC 720	Philosophy of Education	3	6				1 year GSE PhD Education				
98	EDUC 728	Exploring the Research Topic 2	0	0				1 year GSE PhD Education				
99	EDUC 730	Preparation for Proposal Defence	0	0				2 year GSE PhD Education				
100	EDUC 740	Doctoral Seminar	3	6				3 year GSE PhD Education				
101	EDUC 750	Dissertation Research	9	18				4 year GSE PhD Education				
102	EDUC 751	Dissertation Research	0	0				3 year GSE PhD Education				
MSc Educational Leadership IE												
103	EDIE 604	Thesis Seminar 4	0	0				2 year GSE Educ.Leadership				
104	EDIE 605	Thesis Submission and Defense	10.5	21				2 year GSE Educ.Leadership				
105	EDIE 626	Global Perspectives on Inclusive Education	3	6				1 year GSE Educ.Leadership				
106	EDIE 628	Inclusive Curriculum and Assessment	3	6				1 year GSE Educ.Leadership				
MSc Educational Leadership SE												
107	EDSE 604	Thesis Seminar 4	0	0				2 year GSE Educ.Leadership				

108	EDSE 605	Thesis Submission and Defense	10.5	21				2 year GSE Educ.Leadership			
109	EDSE 626	Curriculum Development and Implementation	3	6				1 year GSE Educ.Leadership			
110	EDSE 629	Teacher Development and Identity	3	6				1 year GSE Educ.Leadership			
111	EDSE 632	School Improvement and Effectiveness	3	6				1 year GSE Educ.Leadership			
112	EDSE 692	Thesis Seminar III	4.5	9				Registration available only for MSc Yr2 student Kassenova Albina			
113	EDSE 693	Thesis Seminar IV	9	18				2 year GSE Educ.Leadership			
Other											
Other											
114	STUMOB 001	Student Mobility Course	0	0							
115	T - AST 109	Introduction to Astronomy	3	6							
116	T - ECE 271	Microcomputer Architecture and Applications	4	8							
117	T - POS 100	American Government	3	6							
SoM											
Biological Science											
118	BIOL 101	Biology for non-Science majors	3	6			BIOL 110 Modern Biology I (1070) (C- and above)	5 year UG SEDS, 5 year UG SSH, 5 year UG SSH (pending graduation), Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SSH, World Languages, Literature and Culture	Mathematics	SEDS, SMG, SSH, SoM	
119	BIOL 110	Modern Biology I	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Chemistry, Computer Science, Electrical and Computer Engineering, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
120	BIOL 110L	Modern Biology I Laboratory	1	2		BIOL 110 Modern Biology I (1070) (C and above)		5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Chemistry, Computer Science, Electrical and Computer Engineering, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
121	BIOL 120	Modern Biology II	3	6	BIOL 110 Modern Biology I (1070) (C and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
122	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)		5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
123	BIOL 230	Human Anatomy and Physiology I	3	6	BIOL 110 Modern Biology I (107) (C and above) OR BIOL 110 Modern Biology I (1070) (C and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
124	BIOL 301	Molecular Cell Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Medical Sciences	Biological Sciences	SEDS, SMG, SSH, SoM	
125	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)		3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Medical Sciences	Biological Sciences	SEDS, SMG, SSH, SoM	

126	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)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	2 year UG SSH Biological Sciences, Chemistry, Mathematics, Medical Sciences, Physics	SEDS, SMG, SSH, SoM	
127	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)		3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	2 year UG SSH Biological Sciences, Chemistry, Mathematics, Medical Sciences	SEDS, SMG, SSH, SoM	
128	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)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	Biological Sciences, Medical Sciences	SEDS, SMG, SSH, SoM	
129	BIOL 321	Bioethics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	2 year UG SSH Biological Sciences, Chemistry, Mathematics, Medical Sciences, Physics	SEDS, SMG, SSH, SoM	
130	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, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Medical Sciences, Undeclared SSH	2 year UG SSH Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
131	BIOL 333	Environmental Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
132	BIOL 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
133	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, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Medical Sciences, Undeclared SSH	2 year UG SSH Biological Sciences	SEDS, SMG, SSH, SoM	
134	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)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
135	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, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	Biological Sciences, Medical Sciences	SEDS, SMG, SSH, SoM	
136	BIOL 392	Directed Study in Biology	3	6				Instructor's Permission Required. Registration through Add Course form only!			
137	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)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	

138	BIOL 430	Histology with Laboratory	4	8	BIOL 230 Human Anatomy and Physiology I (72) (C and above) OR BIOL 230 Human Anatomy and Physiology I (6217) (C and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
139	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)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
140	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)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
141	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)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
142	BIOL 456	Biology Research Design	3	6		BIOL 355 Critical Research Reasoning (1000) (C and above)		4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Undeclared SSH	3 year UG SSH Biological Sciences	SEDS, SMG, SSH, SoM	
143	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)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Medical Sciences, Undeclared SSH	2 year UG SSH Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
144	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)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Medical Sciences, Undeclared SSH	2 year UG SSH Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
145	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)		3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Medical Sciences, Undeclared SSH	2 year UG SSH Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
146	BIOL 481	Neuroimmunology	3	6	BIOL 310 Immunology (628) (C and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Medical Sciences, Undeclared SSH	Biomedical Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
147	BIOL 491	Graduation Project 2	4	8	BIOL 490 Honors Thesis Research (1581) (C and above)			Instructor's Permission Required. Registration through Add Course form only!			
148	BIOL 502	Research Methods	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
149	BIOL 570	Advanced Biotechnology	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
150	BIOL 580	Applied Bioinformatics	3	6	BIOL 520 Statistical Methods in Life Sciences (1203) (C and above)			Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
151	BIOL 590	Research Analysis in Life Sciences	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
152	BIOL 591	Cellular Biophysics	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
153	BIOL 599	Master’s Thesis Research	0	0				1 year Gr SSH Biological Sciences and Technologies			

154	BIOL 630	Advanced Neuroscience	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
155	BIOL 637	Fundamentals of Advanced Microscopy	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
156	BIOL 692	Master's Thesis	15	30	BIOL 691 Master's Thesis Research Proposal (5676) (B- and above)			Biological Sciences			
157	BIOL 800-0	Thesis Research	0	0				Life Sciences			
158	BIOL 830	Advanced Neuroscience	4	8				Biomedical Sciences, Life Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
159	BIOL 870	Advanced Biotechnology	4	8				Biomedical Sciences, Life Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
160	BIOL 880	Applied Bioinformatics	4	8				Biomedical Sciences, Life Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
161	BIOL 891	Cellular Biophysics	4	8				Biomedical Sciences, Life Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
MMM											
162	MMMM 508	Molecular Immunology	3	6				SoM			
163	MMMM 509	From the Bench to the Bedside: Drug Development and Clinical Trials	3	6				SoM			
164	MMMM 511	Research Methods in Molecular Biomedicine	3	6				SoM			
165	MMMM 513	Molecular Basis of Neurological Disorders	3	6				SoM			
166	MMMM 690	Master Research Project	15	30				SoM			
MPTOX											
167	MPTX 508	Research Methods in Pharmacology	3	6	MPTX 502 Cellular Communications (5842) (C- and above) OR MPTX 503 Principles of Pharmacology and Toxicology (5843) (C- and above)			SoM			
168	MPTX 509	Drug Discovery and Development II	3	6	MPTX 505 Drug Discovery I (5845) (C- and above)			SoM			
169	MPTX 511E	Environmental Toxicology	3	6				SoM			
170	MPTX 701	Research Project and Thesis	15	30	MPTX 601 Biostatistics and Critical Appraisal (6342) (C and above) AND MSBM 601 Introduction to Research Project (6344) (P)			SoM			
MSMR											
171	MSMR 502	Nutrition in Sports and Exercise	3	6				SoM			
172	MSMR 506	Seminar in Sports Medicine	3	6				SoM			
173	MSMR 511	Introduction to Research Project	3	6				SoM			
174	MSMR 515	Nutrition for Life	3	6				SoM			
175	MSMR 601	Psychology of Sports and Rehabilitation	3	6				SoM			
176	MSMR 602	Advances in Sports and Rehabilitation	4	8				SoM			
177	MSMR 702	Master Research Project Thesis	12	24				SoM			
Master of Sciences in Biomedicine											
178	MMMM 507	Critical Analysis of the Contemporary Concepts in Molecular Medicine	3	6				SoM			
179	MPTX 504	Systemic Pharmacology I	3	6	MSBM 512 Principles of Pharmacology and Toxicology (8727) (C- and above)			SoM			
180	MPTX 507	Drug Addiction and Toxicology	3	6	MSBM 512 Principles of Pharmacology and Toxicology (8727) (C- and above)			SoM			
181	MSMR 509	Robots for Rehabilitation	3	6				SoM			

182	MSMR 514	Adaptive Physical Activity	3	6				SoM			
Medical Sciences												
183	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			
Nursing												
184	NUR 101	Human Anatomy and Physiology I and Lab	4	8				1 year UG SOM Nursing			
185	NUR 102L	Human Anatomy and Physiology II with Lab	4	8				1 year UG SOM Nursing			
186	NUR 122	English-Russian-Kazakh Medical Terminology	2	4				2 year UG SOM Nursing			
187	NUR 204	Nutrition Essentials for Nursing Clinical Practice	2	4				2 year UG SOM Nursing			
188	NUR 212/L	Foundations of Nursing Practice II	2	4				2 year UG SOM Nursing			
189	NUR 213/C	Medical-Surgical Nursing I: Clinical	7	14				2 year UG SOM Nursing			
190	NUR 305	Research Methods for Nursing	3	6				BN students only! Registration by School admin.			
191	NUR 306	Medical-Surgical Nursing: Complex Medical Management for Acute and Chronic Patient	4	8				BN students only! Registration by School admin.			
192	NUR 307	Health Promotion and Disease Prevention in Culturally Diverse Populations	4	8				BN students only! Registration by School admin.			
193	NUR 308	Enhanced Communication in Professional Nursing	4	8				BN students only! Registration by School admin.			
194	NUR 313C	Medical-Surgical Nursing II: Complex Surgical Management and Clinical	7	14				3 year UG SOM Nursing			
195	NUR 314C	Psychiatric Nursing and Clinical	4	8				3 year UG SOM Nursing			
196	NUR 322	Nursing Clinical Informatics	2	4				2 year UG SOM Nursing, 3 year UG SOM Nursing			
197	NUR 402	Principles of Healthcare Administration	4	8				BN students only! Registration by School admin.			
198	NUR 405	Issues and Trends in Nursing	4	8				BN students only! Registration by School admin.			
199	NUR 406.2	Medical-Surgical Nursing: Complex Management	4	8				BN students only! Registration by School admin.			
200	NUR 407	Capstone: Clinical and EBP Quality Improvement Research	4	8				BN students only! Registration by School admin.			
201	NUR 415C	Clinical Transitions	9	18				4 year UG SOM Nursing			
202	NUR 422	Capstone II: Evidence-Based Quality Improvement/Research Project Completion	3	6				4 year UG SOM Nursing			
PHD												
203	PHDBS 701-0	Thesis Research	0	0				Biomedical Sciences		SoM	
204	PHDBS 702	Molecular Basis of Health and Disease	4	8				Biomedical Sciences	Life Sciences	SoM	
205	PHDBS 703	Biomedical Research Analysis and Design of Experimentation	4	8				Biomedical Sciences	Life Sciences	SoM	
206	PHDBS 704	NUSOM seminar (final semester)	4	8				4 year PhD SOM BioMed Sciences			
207	PHDBS 704-0	NUSOM seminar	0	0				Biomedical Sciences		SoM	
208	PHDBS 706	Advanced Biomedical Research Analysis and Design of Experimentation	4	8				Biomedical Sciences		SoM	
209	PHDBS 707	Publication Analysis	4	8				Biomedical Sciences		SoM	
210	PHDBS 708	Writing for Biomedical Sciences	3	6				Biomedical Sciences	Life Sciences	SoM	

211	PHDBS 715	Molecular Basis of Neurological Disorders	3	6				Biomedical Sciences	Life Sciences	SoM	
212	PHDGH 701-0	Thesis Research	0	0				SoM			
213	PHDGH 704-0	NUSOM Seminar in Global Health	0	0				SoM			
214	PHDGH 705	Global Health into Action	3	6				SoM			
215	PHDGH 706	Methods in Global Health Research	3	6				SoM			
216	PHDGH 707	Implementation Science in Global Health	3	6				SoM			
Public Health											
217	PUBH 512	Biostatistical Modeling and Sampling	3	6				SoM			
218	PUBH 522	Advanced Analytical Epidemiology	3	6				SoM			
219	PUBH 551	Health Services Management, Health Economic and Health Policy	3	6				SoM			
220	PUBH 631	Social and Behavioral Sciences in Public Health	3	6				SoM			
221	PUBH 641	Problem Investigations in Environmental Health	3	6				SoM			
222	PUBH 651	Risk Management in Health Care	3	6				SoM			
223	PUBH 652	Applied Methods in Health Services Research	3	6				SoM			
224	PUBH 682	Master’s Project Implementation	12	24				SoM			
SSH											
Academic Success Centre, Communication and Composition											
225	WCS 150	Rhetoric and Composition	3	6				1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SOM, 3 year UG SMG, 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), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SSH	SEDS, SMG, SSH, SoM	

226	WCS 210	Technical and Professional Writing	3	6	ASC 100 Advanced English for Academic Purposes (9234) (C- and above) OR Test "IELTS" BETWEEN 6.5 and 9 OR WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)		WCS 200 Introduction to Public Speaking (175) (D and above) OR WCS 220 Science Writing (5686) (D and above) OR WCS 230 Say What you Mean: Clarity, Precision, and Style in Academic Writing (3026) (D and above) OR WCS 240 Writing for Digital Media (4421) (D and above) OR WCS 250 Advanced Rhetoric and Composition (3027) (D and above) OR WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (D and above) OR WCS 270 Academic and Professional Presentations (8409) (D and above)	Chemistry, SEDS, SMG		SSH, SoM	
Area Studies											
227	EAS 502	Disciplinary Methodology	4	8				Eurasian Studies			
228	EAS 504	Thesis II	12.5	25	EAS 500 Introduction to Eurasia (1632) (C- and above) AND EAS 501 General Methodology (1633) (C- and above) AND EAS 502 Disciplinary Methodology (1379) (C- and above) AND EAS 503 Thesis I (2141) (C- and above)			Eurasian Studies			
229	EAS 511	Independent Study in Eurasian Studies	4	8				Eurasian Studies			
230	EAS 512	Topics in Eurasian Studies	4	8				Instructor's Permission Required. Registration through Add Course form only!			
231	EAS 513	Critical Issues in Eurasian Studies	4	8				Eurasian Studies			
232	EAS 514	Topics in Eurasian Social Sciences	4	8				Eurasian Studies			
233	EAS 702	Elective in Eurasian Humanities	4	8				Instructor's Permission Required. Registration through Add Course form only!			
234	EAS 703	Elective in Eurasian Social Sciences	4	8				Instructor's Permission Required. Registration through Add Course form only!			
235	EAS 704	Elective 2 in Eurasian Humanities	4	8				Instructor's Permission Required. Registration through Add Course form only!			
236	EAS 705	Elective 2 in Social Sciences	4	8				Instructor's Permission Required. Registration through Add Course form only!			
237	EAS 708	Proseminar in Eurasian Humanities	4	8				Instructor's Permission Required. Registration through Add Course form only!			
238	EAS 709	Proseminar in Eurasian Social Sciences	4	8				Instructor's Permission Required. Registration through Add Course form only!			
239	EAS 710	Independent Study in Eurasian Studies	4	8				Instructor's Permission Required. Registration through Add Course form only!			
240	EAS 712	Doctoral Seminar in Eurasian Studies II	4	8				Eurasian Studies			
241	EAS 713	Qualifying Examination	0	0				Eurasian Studies			
242	EAS 800-0	Dissertation Research in Eurasian Studies	0	0				Eurasian Studies			
Chemistry											

243	CHEM 092	Survey of Environmental Sciences for Non-Science Majors	3	6				5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, World Languages, Literature and Culture	SSH	Undeclared SEDS, Undeclared SMG	
244	CHEM 101	General Chemistry I	3	6				1 year UG SMG, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Chemistry, SoM, Undeclared SSH	Computer Science, Electrical and Computer Engineering, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics, SMG	SEDS, SSH	
245	CHEM 101L	General Chemistry I lab	1	2		CHEM 101 General Chemistry I (113) (C and above)		1 year UG SMG, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Chemistry, SoM, Undeclared SSH	Computer Science, Electrical and Computer Engineering, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics, SMG	SEDS, SSH	
246	CHEM 102	General Chemistry II	3	6	CHEM 101 General Chemistry I (113) (C and above)			1 year UG SMG, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Chemistry, SoM, Undeclared SSH	Computer Science, Electrical and Computer Engineering, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics, SMG	SEDS, SSH	
247	CHEM 211	Organic Chemistry I	3	6	CHEM 102 General Chemistry II (232) (C and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Chemistry, SoM	SSH	SEDS	
248	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, SoM	SSH		
249	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)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Biological Sciences, Chemistry, SoM	SEDS, SMG, SSH		
250	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, SoM	Anthropology, Economics, History, Mathematics, Physics, Political Science and International Relations, SMG, Sociology, Undeclared SSH, World Languages, Literature and Culture		
251	CHEM 250	Descriptive Inorganic Chemistry	3	6	CHEM 101 General Chemistry I (113) (C and above)			Chemistry	SSH	SEDS, SMG	
252	CHEM 320	Instrumental Analysis	3	6	CHEM 220 Quantitative Chemical Analysis (555) (C and above)			Chemistry	SSH	SEDS, SMG	
253	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	SEDS, SMG	
254	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	SEDS, SMG	

255	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	SEDS, SMG	
256	CHEM 341L	Biochemistry I Lab	1	2	CHEM 212L Organic Chemistry II Lab (444) (C and above)	CHEM 341 Biochemistry I (1058) (C and above)		Chemistry	SSH	SEDS, SMG	
257	CHEM 380	Research Methods	3	6				Chemistry	SSH	SEDS, SMG	
258	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	SEDS, SMG	
259	CHEM 433	Surfactants and Colloids	3	6	CHEM 102 General Chemistry II (232) (C and above)			Chemistry	SSH	SEDS, SMG	
260	CHEM 451	Applied Homogenous Catalysis	3	6	CHEM 350 Advanced Inorganic Chemistry (1905) (C and above)			Chemistry	SSH	SEDS, SMG	
261	CHEM 488	Directed Research I	3	6	CHEM 380 Research Methods (636) (C and above)						
262	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	SEDS, SMG	
263	CHEM 511	Theoretical Chemistry	3	6	CHEM 510 Principles of Physical Chemistry (5266) (C and above)			Chemistry	SSH	SEDS, SMG, SoM	
264	CHEM 540	Organic Reactions and Mechanisms	3	6				Chemistry	SSH	SEDS, SMG, SoM	
265	CHEM 550	Selected Topics in Chemistry	3	6				Chemistry	SSH	SEDS, SMG, SoM	
266	CHEM 560	Directed research in chemistry	0	0				Instructor's Permission Required. Registration through Add Course form only!			
267	CHEM 592	Chemistry Seminar	3	6				Chemistry	SSH	SEDS, SMG, SoM	
268	CHEM 692	MSc Thesis in Chemistry	18	36	CHEM 691 Thesis Proposal (5858) (C- and above)			Chemistry			
269	CHEM 710	Mechanistic Principles of Organic Reactions	4	8				Chemistry	SSH	SEDS, SMG, SoM	
270	CHEM 731	Design of Functional Materials	4	8				Chemistry	SSH	SEDS, SMG, SoM	
271	CHEM 733	Colloid and Surfactant Science	4	8				Chemistry	SSH	SEDS, SMG, SoM	
272	CHEM 752	Materials Chemistry	4	8				Chemistry	SSH	SEDS, SMG, SoM	
273	CHEM 753	Organometallic Catalysis	4	8	CHEM 750 Modern Inorganic Chemistry (6499) (C and above)			Chemistry	SSH	SEDS, SMG, SoM	
274	CHEM 798-0	Thesis Research	0	0				Chemistry			
Communication and Composition											
275	WCS 101	Communication and Society	3	6				SEDS, SMG, SSH, SoM			
276	WCS 135	Introduction to Visual Communication	3	6				SEDS, SMG, SSH, SoM			
277	WCS 200	Introduction to Public Speaking	3	6	WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)			2 year UG SEDS, 2 year UG SSH, 4 year UG SMG, 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	SEDS, SMG, SSH, SoM	
278	WCS 205	Intercultural Communication	3	6				SEDS, SMG, SSH, SoM			

279	WCS 220	Science Writing	3	6	WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)		WCS 210/ASC 200 Academic Writing, Science Communication, and Media Literacy (4881) (C- and above)	2 year UG SEDS, 2 year UG SSH, 4 year UG SMG, 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), SoM		SEDS, SMG, SSH	
280	WCS 230	Say What you Mean: Clarity, Precision, and Style in Academic Writing	3	6	WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)			2 year UG SEDS, 2 year UG SSH, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), SoM	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	SEDS, SMG, SSH	
281	WCS 240	Writing for Digital Media	3	6	WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)			2 year UG SEDS, 2 year UG SSH, 4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), SoM	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	SEDS, SMG, SSH	
282	WCS 250	Advanced Rhetoric and Composition	3	6	WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)			2 year UG SEDS, 2 year UG SMG, 2 year UG SSH, 4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), SoM	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	SEDS, SMG, SSH	
283	WCS 390	Writing Fellows I – Composition and Collaboration in Theory and Practice	3	6	WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (B and above) AND (WCS 220 Science Writing (5686) (B+ and above) OR WCS 230 Say What you Mean: Clarity, Precision, and Style in Academic Writing (3026) (B+ and above) OR WCS 250 Advanced Rhetoric and Composition (3027) (B+ and above))			2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	SEDS, SMG, SSH, SoM		
284	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)			Instructor's Permission Required. Registration through Add Course form only!			
285	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)						
286	WCS 501	Science Communication	3	6				SSH	SMG, SoM		
Communication and Composition, Languages, Literature and Linguistics											
287	WLL 235/WCS 260	Creative Writing: Introduction to Fiction Writing I	3	6	WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)			2 year UG SSH Anthropology, 2 year UG SSH Economics, 2 year UG SSH History, 2 year UG SSH Political Sciences and International Relations, 2 year UG SSH Sociology, 2 year UG SSH World Languages, Literatures and Cultures	World Languages, Literature and Culture	SEDS, SMG, SSH, SoM	
288	WLL 363/WCS 363	Writing Speculative Fiction	3	6	WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (C and above)			Instructor's Permission Required. Registration through Add Course form only!			
289	WLL 462/WCS 462	Creative Nonfiction	3	6	WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (C and above)			SSH	SEDS, SMG, SoM		
History, Philosophy and Religious Studies											
290	HST 100	History of Kazakhstan	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), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH	SEDS, SMG, SSH, SoM	

291	HST 226	Soviet Central Asia in WWII	3	6	REL 110/HST 110 Introduction to World Religions (142) (B and above) OR REL 120 Religion and Science (457) (B and above) OR REL 140 Religion in the Modern World (1623) (B and above) OR REL 160 Lived Religion (1347) (B and above) OR HST 100 History of Kazakhstan (172) (B and above) OR HST 103 Central Asian History I (to 1700) (197) (B and above) OR HST 104 Central Asian History II (1700 - 1991) (1192) (B and above) OR HST 105 Introduction to World Environmental History (4424) (B and above) OR HST 121 World History I (to 1500) (1193) (B and above) OR HST 122 World History II (from 1500) (1162) (B and above) OR HST 123 Introduction to the History of Science and Technology (1376) (B and above) OR HST 124 Introduction to the History of Medicine (3000) (B and above) OR HST 125 History of Magic (5668) (B and above) OR HST 131 European History I (to 1700) (201) (B and above) OR HST 132 European History II (from 1700) (139) (B and above) OR HST 151 US History I (to 1877) (668) (B and above) OR HST 152 US History II (from 1877) (465) (B and above) OR HST 172 Middle Eastern History II (from 1800) (1194) (B and above) OR HST 182 East Asian History II (from 1500) (213) (B and above) OR HST 199 Freshman Seminar (241) (B and above) OR HST 199 Freshman Seminar: Western Intellectual History (1509) (B and above)			SEDS, SMG, SSH, SoM			
292	HST 233	The Russian Empire from Catherine the Great to the Bolshevik Revolution	3	6	Subject "HST" BETWEEN 100 and 199			SEDS, SMG, SSH, SoM			
293	HST 336	The Totalitarian Phenomenon	3	6	HST 100 History of Kazakhstan (172) (C- and above)			SEDS, SMG, SSH, SoM			
294	HST 399	Independent Study	3	6				Instructor's Permission Required. Registration through Add Course form only!			
295	HST 400	Research Assistance	1	2	HST 100 History of Kazakhstan (172) (B and above) AND Subject "HST" BETWEEN 100 and 499			Instructor's Permission Required. Registration through Add Course form only!			
296	HST 499	History Capstone: Undergraduate Dissertation	4	8	HST 498 Directed Reading (1365) (C- and above)						
297	PHIL 124	Knowledge and Reality	3	6				SEDS, SMG, SSH, SoM			
298	PHIL 141	Critical Thinking	3	6				SEDS, SMG, SSH, SoM			
299	PHIL 160	Philosophy of Religion	3	6				SEDS, SMG, SSH, SoM			
300	PHIL 210	Ethics	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), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH	2 year UG SEDS, 3 year UG SEDS	SEDS, SMG, SSH, SoM	
301	PHIL 240	Formal Logic	3	6				SEDS, SMG, SSH, SoM			
302	PHIL 320	Truth, Knowledge and Belief	3	6				SEDS, SMG, SSH, SoM			
303	PHIL 362	Philosophy of Mind	3	6				SEDS, SMG, SSH, SoM			
304	REL 212	Buddhist Religious Traditions	3	6				SEDS, SMG, SSH, SoM			
History, Philosophy and Religious Studies, History, Philosophy and Religious Studies											
305	HST 110/REL 110	Introduction to World Religions	3	6				SEDS, SMG, SSH, SoM			

306	HST 273/REL 273	History of Sufism in the Middle East and Central Asia	3	6	Subject "HST" BETWEEN 100 and 199			SEDS, SMG, SSH, SoM			
307	HST 320/REL 320	The Crusades	3	6	Subject "HST" BETWEEN 100 and 199			SEDS, SMG, SSH, SoM			
308	HST 341/REL 341	Eastern Christianity	3	6			REL 240 Christian Religious Traditions (1348) (C- and above)	SEDS, SMG, SSH, SoM			
309	HST 462/REL 462	History of Islam Under Russian Rule	3	6				SEDS, SMG, SSH, SoM			
310	HST 562/REL 562	History of Islam under Russian Rule	4	8				SSH	GSB, GSE, GSPP, SEDS, SMG, SoM		
History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies											
311	HST 272	Modern Turkey: from the Ottoman Empire to the Turkish Republic	3	6				SEDS, SMG, SSH, SoM			
History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies, Sociology and Anthropology, Sociology and Anthropology											
312	TUR 375	Topics in Turkic Studies	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 SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH		
History, Philosophy and Religious Studies, Languages, Literature and Linguistics											
313	HST 274/WLL 274	Texts and Contexts	3	6				SEDS, SMG, SSH, SoM			
History, Philosophy and Religious Studies, Sociology and Anthropology											
314	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)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
315	REL 535/ANT 535	The Archaeology of Ritual	4	8				Eurasian Studies			
Kazakh Language and Turkic Studies											
316	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, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
317	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, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
318	KAZ 211	Academic Speaking in Kazakh	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"		KAZ 303 Academic Speaking in Kazakh (702) (C- and above) OR KAZ 304 Academic Writing in Kazakh (703) (C- and above)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	

319	KAZ 212	Academic Writing in Kazakh	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"		KAZ 304 Academic Writing in Kazakh (703) (C- and above) OR KAZ 303 Academic Speaking in Kazakh (702) (C- and above)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
320	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, 2 year UG SOM, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SSH	
321	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
322	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
323	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
324	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
325	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
326	KAZ 366	Kazakh Language for Engineers	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
327	KAZ 368	Onomastics: History and Function of Names	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	

328	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
329	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
330	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
331	KAZ 374	Kazakh Diplomacy	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SMG, 4 year UG SSH Political Sciences and International Relations	3 year UG SSH Political Sciences and International Relations	2 year UG SSH Political Sciences and International Relations	
332	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 SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH	
333	KFL 102	Elementary Kazakh as a Foreign Language II	4	8	KFL 101 Elementary Kazakh as a Foreign Language I (4889) (C- and above)			1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 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 SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SMG, 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	Eurasian Studies		
334	TUR 100	Languages, Cultures, and Communities of the Turkic World	3	6				1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 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 SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)		
335	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 SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH		
336	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 SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH		
337	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 SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH		

338	TUR 305	Introduction to Chagatay and Ottoman Turkish	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 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)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH		
339	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 SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH		
340	TUR 575	Advanced Topics in Turkic Studies	4	8				Eurasian Studies			
341	TUR 775	Doctoral Topic in Turkic Studies	4	8							
Languages, Literature and Linguistics											
342	CHN 101	Beginning Mandarin I	4	8				2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	SEDS, SMG, SSH, SoM	
343	CHN 201	Intermediate Mandarin I	4	8	CHN 102 Beginning Mandarin II (1844) (C and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
344	FRE 101	Beginning French I	4	8				2 year UG SSH World Languages, Literatures and Cultures	3 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	SEDS, SMG, SSH, SoM	
345	FRE 102	Beginning French II	4	8	FRE 101 Beginning French I (246) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
346	FRE 201	Intermediate French I	4	8	FRE 102 Beginning French II (454) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
347	FRE 202	Intermediate French II	4	8	FRE 201 Intermediate French I (667) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
348	GER 102	Beginning German II	4	8	GER 101 Beginning German (3173) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
349	GER 201	Intermediate German I	4	8	GER 102 Beginning German II (3335) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
350	GER 202	Intermediate German II	4	8	GER 201 Intermediate German I (3722) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
351	KOR 102	Beginning Korean II	4	8	KOR 101 Beginning Korean I (4672) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
352	KOR 202	Intermediate Korean II	4	8	KOR 201 Intermediate Korean I (5059) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
353	LING 130	Introduction to Language and Communication	3	6				Undeclared SSH	World Languages, Literature and Culture	SEDS, SMG, SSH	
354	LING 131	Introduction to Linguistics	3	6				Undeclared SSH	World Languages, Literature and Culture	SEDS, SMG, SSH	
355	LING 140	Language Variation and Change: the Story of English	3	6				Undeclared SSH	World Languages, Literature and Culture	SEDS, SMG, SSH, SoM	
356	LING 271	Introduction to Cognitive Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C and above)			World Languages, Literature and Culture	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
357	LING 273	Survey of Research Methods in Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)			World Languages, Literature and Culture	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SoM	
358	LING 278	Sounds of the World’s Languages	3	6				World Languages, Literature and Culture	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
359	LING 361	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, Literature and Culture	SSH	SEDS, SMG, SoM	
360	LING 376	Psycholinguistics	3	6	LING 131 Introduction to Linguistics (1394) (C- and above) OR LING 272 Language and the Mind (1847) (C- and above) OR LING 273 Survey of Research Methods in Linguistics (2158) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
361	LING 398	Linguistics Research Methods	3	6	LING 131 Introduction to Linguistics (1394) (C- and above) OR ANT 277/WLL 271 Language and Society (1027) (C- and above) OR LING 272 Language and the Mind (1847) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
362	LING 472	Language Ideologies	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	

363	LING 772	Language Ideologies	4	8				Biomedical Sciences, Chemical Engineering, Chemistry, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Global Health, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology			
364	PER 101	Beginning Persian I	4	8				Instructor's Permission Required. Registration through Add Course form only!			
365	RFL 215	What is Islam? Anthropological Perspectives	3	6				Instructor's Permission Required. Registration through Add Course form only!			
366	RFL 311	Russian Literature in the Context of Eurasia	3	6				Instructor's Permission Required. Registration through Add Course form only!			
367	RFL 403	Intensive Advanced and Superior Composition and Conversation Russian	4	8				Instructor's Permission Required. Registration through Add Course form only!			
368	RFL 469	International relations of Eurasia	3	6				Instructor's Permission Required. Registration through Add Course form only!			
369	SPA 102	Beginning Spanish II	4	8	SPA 101 Beginning Spanish I (685) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
370	SPA 202	Intermediate Spanish II	4	8	SPA 201 Intermediate Spanish I (1475) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
371	SPA 311	Colloquial Spanish	3	6	SPA 202 Intermediate Spanish II (1842) (C and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
372	WLL 110	Introduction to Literary Studies	3	6				SoM, Undeclared SSH	World Languages, Literature and Culture	SEDS, SMG, SSH	
373	WLL 211	World Literature II: from the 18th to the 20th century	3	6				World Languages, Literature and Culture	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
374	WLL 240	Introduction to the Novel	3	6				World Languages, Literature and Culture	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
375	WLL 241	Survey of Folk Tales	3	6				World Languages, Literature and Culture	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
376	WLL 244	Survey of Nineteenth-Century Russian Literature	3	6				World Languages, Literature and Culture	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
377	WLL 341	Soviet Literature as Multinational Literature	3	6				World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	

378	WLL 349	Terrible Perfection: Women in 19th-Century Russian Literature	3	6	WLL 101 Introduction to Critical Issues in the Humanities and Social Sciences (234) (C and above) OR WLL 102 /PHIL 102 Language, Experience, Culture (2481) (C and above) OR WLL 110 Introduction to Literary Studies (244) (C and above) OR WLL 111 Introduction to Theatre (2160) (C and above) OR WLL 121 Introduction to Cultural Studies (243) (C and above) OR WLL 155 Introduction to the Comic Book (3046) (C and above) OR WLL 171/ANT 175 Introduction to Linguistic Anthropology (4417) (C and above) OR WLL 201 World Literature I (686) (C and above) OR WLL 209 Introduction to Translation Studies (2178) (C and above) OR WLL 210 Migrants, Nomads and Exiles (217) (C and above) OR WLL 211 World Literature II: from the 18th to the 20th century (492) (C and above) OR WLL 212 Introduction to Poetry (2167) (C and above) OR WLL 213/SPA 211 Introduction to the Hispanic World (1030) (C and above) OR WLL 218 Renaissance in Italy and Beyond (6573) (C and above) OR WLL 219 Myth and Adaptation (2489) (C and above) OR WLL 220 Ancient World Literature (to 1650) (218) (C and above) OR WLL 221 Creative Writing/Theatre (245) (C and above) OR WLL 222 Acting: Praxis, Theory and History (3336) (C and above) OR WLL 231 Beginning and Intermediate Playwriting (1625) (C and above) OR WLL 240 Introduction to the Novel (687) (C and above) OR WLL 241 Survey of Folk Tales (466) (C and above) OR WLL 243 Western Theatre, Literature and History From Ancient Creece to 1800 (1082) (C and above) OR WLL 244 Survey of Nineteenth-Century Russian Literature (1395) (C and above) OR WLL 246 Survey of Contemporary Russian Literature and Culture (3604) (C and above) OR WLL 247 Survey of East Asian Literature (1382) (C and above) OR WLL 248 Survey of Soviet Literature and Culture (3842) (C and above) OR WLL 250 From Page to Screen (472) (C and above) OR WLL 251 Hong Kong Cinema (3337) (C and above) OR WLL 253 Western Theatre Literature and History: 1800-Present (1396) (C and above) OR WLL 254/SPA 254 Superstition, Magical Realism, and Horror in Hispanic Culture (1851) (C and above) OR WLL 255 The Comic Book in Japan and America (1849) (C and above) OR WLL 257 Fan Culture in the Age of Convergence (2487) (C and above) OR WLL 291 Theatre Practicum (2168) (C and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
379	WLL 400	Research Assistance in Linguistics and Literature	1	2				Anthropology, Sociology			

380	WLL 451	The Call of the Evil: Unmasking the Villain(ness) in Popular Culture and Literature	3	6	WLL 201 World Literature I (686) (C+ and above) OR WLL 209 Introduction to Translation Studies (2178) (C+ and above) OR WLL 210 Migrants, Nomads and Exiles (217) (C+ and above) OR WLL 211 World Literature II: from the 18th to the 20th century (492) (C+ and above) OR WLL 212 Introduction to Poetry (2167) (C+ and above) OR WLL 213/SPA 211 Introduction to the Hispanic World (1030) (C+ and above) OR WLL 218 Renaissance in Italy and Beyond (6573) (C+ and above) OR WLL 219 Myth and Adaptation (2489) (C+ and above) OR WLL 220 Ancient World Literature (to 1650) (218) (C+ and above) OR WLL 221 Creative Writing/Theatre (245) (C+ and above) OR WLL 222 Acting: Praxis, Theory and History (3336) (C+ and above) OR WLL 231 Beginning and Intermediate Playwriting (1625) (C+ and above) OR WLL 240 Introduction to the Novel (687) (C+ and above) OR WLL 241 Survey of Folk Tales (466) (C+ and above) OR WLL 243 Western Theatre, Literature and History From Ancient Creece to 1800 (1082) (C+ and above) OR WLL 244 Survey of Nineteenth-Century Russian Literature (1395) (C+ and above) OR WLL 349 Terrible Perfection: Women in 19th-Century Russian Literature (2488) (C+ and above) OR WLL 246 Survey of Contemporary Russian Literature and Culture (3604) (C+ and above) OR WLL 247 Survey of East Asian Literature (1382) (C+ and above) OR WLL 248 Survey of Soviet Literature and Culture (3842) (C+ and above) OR WLL 250 From Page to Screen (472) (C+ and above) OR WLL 251 Hong Kong Cinema (3337) (C+ and above) OR WLL 253 Western Theatre Literature and History: 1800-Present (1396) (C+ and above) OR WLL 254/SPA 254 Superstition, Magical Realism, and Horror in Hispanic Culture (1851) (C+ and above) OR WLL 255 The Comic Book in Japan and America (1849) (C+ and above) OR WLL 257 Fan Culture in the Age of Convergence (2487) (C+ and above) OR WLL 291 Theatre Practicum (2168) (C+ and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
381	WLL 499	Languages, Linguistics, and Literatures Capstone II	3	6	WLL 498 Languages, Linguistics, and Literatures Capstone I (3048) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
Physics											
382	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)	SEDS, SMG, SSH, SoM			
383	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)	SEDS, SMG, SSH, SoM			
384	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	SSH	SEDS, SMG, SoM	
385	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) OR CSCI 115 Programming Fundamentals (5257) (C- and above)) AND MATH 162 Calculus II (170) (C- and above)	MATH 273 Linear Algebra with Applications (84) (D and above)		Physics	SSH	SEDS, SMG, SoM	

386	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	SSH	SEDS, SMG, SoM	
387	PHYS 362	Classical Electrodynamics II	3	6	PHYS 361 Classical Electrodynamics I (651) (C- and above)			Physics	SSH	SEDS, SMG, SoM	
388	PHYS 370	Optics with Laboratory	4	8	PHYS 361 Classical Electrodynamics I (651) (C- and above)			Physics	SSH	SEDS, SMG, SoM	
389	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	SSH	SEDS, SMG, SoM	
390	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	SSH	SEDS, SMG, SoM	
391	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	SSH	SEDS, SMG, SoM	
392	PHYS 483	Statistical Mechanics	3	6	PHYS 280 Thermodynamics and Statistical Physics (1179) (C- and above)			Physics	SSH	SEDS, SMG, SoM	
393	PHYS 491	Directed Study of Advanced Physics Topics	3	6				Instructor's Permission Required. Registration through Add Course form only!			
394	PHYS 499	Honors Thesis	3	6				Instructor's Permission Required. Registration through Add Course form only!			
395	PHYS 510	Quantum Mechanics	3	6				Physics			
396	PHYS 520	Statistical Physics	3	6				Physics			
397	PHYS 565	Advanced Physics Laboratory	4	8				Physics			
398	PHYS 570	Introduction to Optoelectronics	4	8				Physics			
399	PHYS 692	Thesis	21	42				Instructor's Permission Required. Registration through Add Course form only!			
400	PHYS 700-0	Thesis Research	0	0				Physics			
401	PHYS 701	Current Research Literature	3	6				Physics			
402	PHYS 710	Quantum Mechanics	4	8				Physics			
403	PHYS 720	Statistical Physics	4	8				Physics			
404	PHYS 770	Introduction to Optoelectronics	4	8				Physics			
Political Science and International Relations											
405	PLS 101	Introduction to Political Science	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SSH, Undeclared SEDS, Undeclared SMG	SEDS, SMG, SoM	
406	PLS 120	Introduction to Political Theory	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	Undeclared SSH	SEDS, SMG, SSH, SoM	

407	PLS 140	Introduction to Comparative Politics	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	Undeclared SSH	SEDS, SMG, SSH, SoM	
408	PLS 150	Introduction to International Relations	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	Undeclared SSH	SEDS, SMG, SSH, SoM	
409	PLS 210	Political Science Research Methods	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
410	PLS 211	Quantitative Methods	3	6			ECON 211 Economic Statistics (2280) (C- and above)	5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
411	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 SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
412	PLS 315	Political Game Theory	3	6	PLS 211 Quantitative Methods (221) (C- and above) OR ECON 101 Introduction to Microeconomics (379) (C and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
413	PLS 320	Feminist Political Theory	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 SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
414	PLS 329	Anarchy	3	6	PLS 120 Introduction to Political Theory (512) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
415	PLS 331	Nationalism and Multi-Ethnic Governance	3	6	PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 140 Introduction to Comparative Politics (223) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
416	PLS 341	Politics of Development	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
417	PLS 343	Politics of Sub-Saharan Africa	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 SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
418	PLS 352	International Relations Theory	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
419	PLS 355	European Union: Institutions and Policies	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
420	PLS 360	Foreign Policy Analysis	3	6	PLS 150 Introduction to International Relations (511) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		

421	PLS 361	Memory Politics in East Asia	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
422	PLS 362	Science, Technology and International Affairs	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 SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
423	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 SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
424	PLS 374	Public Choice and Public Policy	3	6	PLS 140 Introduction to Comparative Politics (223) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
425	PLS 391	Intermediate Special Topics in Comparative Politics	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			SSH			
426	PLS 392	Politics of China	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
427	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!			
428	PLS 422	Just War Theory	3	6	PLS 120 Introduction to Political Theory (512) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
429	PLS 426	Hannah Arendt on Power, Violence, and Revolution	3	6	PLS 120 Introduction to Political Theory (512) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
430	PLS 434	Text Analysis and Political Communication in the Information Age	3	6	PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
431	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 SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
432	PLS 451	Advanced Topics in International Relations	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
433	PLS 465	Politics of International Finance	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Political Science and International Relations	SEDS, SMG, SSH, SoM		
434	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!			
435	PLS 510	Advanced Research II	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
436	PLS 522	Just War Theory	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		

437	PLS 526	Hannah Arendt on Power, Violence, and Revolution	4	8			PLS 426 Hannah Arendt on Power, Violence, and Revolution (5398) (C- and above)	Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
438	PLS 534	Text Analysis and Political Communication in the Information Age	4	8	PLS 510 Quantitative Research Methods (1946) (C- and above) AND PLS 511 Qualitative Methods in Political Science (1631) (C- and above)			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
439	PLS 541	Advanced Topics in Comparative Politics	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
440	PLS 551	Advanced Topics in International Relations	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
441	PLS 565	Politics of International Finance	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
442	PLS 596	Thesis Preparation	2	4	Subject "PLS" BETWEEN 500 and 599			1 year Gr SSH Political Science and International Relations			
443	PLS 599	MA Thesis II	10	20				2 year Gr SSH Political Science and International Relations			
SSH											
444	SSH 300	School of Sciences and Humanities Internship	3	6				Instructor's Permission Required. Registration through Add Course form only!			
445	SSH 301	School of Sciences and Humanities Internship: Second Experience	3	6				Instructor's Permission Required. Registration through Add Course form only! Deadline - 18.12.22			
446	SSH 398	Independent Study	1	2				Instructor's Permission Required. Registration through Add Course form only!			
Sociology and Anthropology											
447	ANT 110	Introduction to Sociocultural Anthropology	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH	
448	ANT 160	Introduction to Biological Anthropology	3	6			ANT 361 Human Evolution: Bones, Stones and Genomes (160) (C- and above)	5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH	
449	ANT 232	Life, Death and Economy: Archaeology of Central Asia	3	6				Anthropology, Sociology	SSH	SEDS, SMG, SoM	
450	ANT 270	Anthropology of Warfare	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
451	ANT 306	Anthropology of Performance	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
452	ANT 375	Inner Asian Frontiers of China: A Cultural Perspective	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
453	ANT 400	Research Assistance in Anthropology	1	2				Anthropology, Sociology			
454	ANT 401	Research Assistance in Anthropology	1	2				Anthropology, Sociology			
455	ANT 402	Research Assistance in Anthropology	1	2				Anthropology, Sociology			

456	ANT 420	Materiality and Eurasian Society	3	6	Subject "ANT" BETWEEN 200 and 399 OR Subject "ANT" BETWEEN 200 and 399 OR Subject "SOC" BETWEEN 200 and 399 OR Subject "SOC" BETWEEN 200 and 399			5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
457	ANT 499	Capstone Seminar II	3	6	ANT 498 Capstone Seminar I (2965) (C- and above)			4 year UG SSH Anthropology			
458	SOC 101	Introduction to Sociology	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences	SEDS, SMG, SSH	
459	SOC 201	Social Science Research Methods	3	6				Sociology	SSH	SEDS, SMG, SoM	
460	SOC 203	Quantitative Methods in Sociology	3	6				Sociology	SSH	SEDS, SMG, SoM	
461	SOC 210	Gender and Society	3	6				Sociology	SSH	SEDS, SMG, SoM	
462	SOC 213	Work and Society	3	6				Sociology	SSH	SEDS, SMG, SoM	
463	SOC 215	Sociology of Race and Ethnicity	3	6				Sociology	SSH	SEDS, SMG, SoM	
464	SOC 217	Sociology of the Family	3	6				Sociology	SSH	SEDS, SMG, SoM	
465	SOC 220	Science, Technology, and Society	3	6				Sociology	SSH	SEDS, SMG, SoM	
466	SOC 221	International Migration	3	6				Sociology	SSH	SEDS, SMG, SoM	
467	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)			Sociology	SSH	SEDS, SMG, SoM	
468	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)			Sociology	SSH	SEDS, SMG, SoM	
469	SOC 402	Research Assistance in Sociology	1	2				Anthropology, Sociology			
470	SOC 411	Citizenship in Eurasia: Political Sociology of Civic Belonging	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above) OR SOC 180 Introducing Kazakhstan: from the Past to the Future (5063) (C- and above) OR SOC 201 Social Science Research Methods (1341) (C- and above) OR SOC 301 Classical Sociological Theory (683) (C- and above)			Sociology	SSH	SEDS, SMG, SoM	
471	SOC 415	Social Problems and Issues in Eurasia	3	6				Sociology	SSH	SEDS, SMG, SoM	
472	SOC 420	Applied Policy Analysis: Tools and Perspectives	3	6	SOC 101 Introduction to Sociology (508) (C and above)			4 year UG SSH Sociology, Anthropology, Sociology			
473	SOC 499	Capstone Seminar II	3	6	SOC 498 Capstone Seminar Part I (3043) (C- and above)			4 year UG SSH Sociology			
474	SOC 511	Citizenship in Eurasia: Political Sociology of Civic Belonging	4	8				4 year UG SSH Sociology, Economics, Eurasian Studies, Political Science and International Relations			
475	SOC 515	Social Problems and Issues in Eurasia	4	8				4 year UG SSH Sociology, Economics, Eurasian Studies, Political Science and International Relations			
Sociology and Anthropology, Sociology and Anthropology											
476	ANT 214/SOC 214	Qualitative Methods	3	6				Anthropology, Sociology	SSH	SEDS, SMG, SoM	
477	ANT 285/SOC 212	Food and Society	3	6				5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation), Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
478	ANT 386/SOC 386	Social Challenges of Climate Change	3	6				Anthropology, Sociology	SSH	SEDS, SMG, SoM	
SEDS											
Civil and Environmental Engineering											

479	DCEE 700	Thesis Research	89	178							
Computer Science											
480	SEDS 502	Teaching Practicum	3	6					Computer Science, Data Science, Robotics		
SoE											
Chemical and Materials Engineering											
481	CHME 202	Fluid Mechanics	3	6				2 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering	
482	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	4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering	
483	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	Chemical and Materials Engineering		
484	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		
485	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)			2 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering	
486	CHME 352	Research Practice	3	6				3 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering		
487	CHME 402	Materials Chemistry	3	6				4 year UG SEDS Chemical and Materials Engineering	5 year UG SEDS Civil and Environmental Engineering		
488	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, 5 year UG SEDS Civil and Environmental Engineering		
489	CHME 421	Tissue Engineering	3	6				4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering		
490	CHME 454	Transport Phenomena and Operations	3	6				4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering	3 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering		
491	CHME 461	Powder technology	3	6				4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering		
492	DCHME 700-0	Thesis Research	0	0				Chemical Engineering			
493	DCHME 701	Current Research Literature	4	8				Chemical Engineering			
494	DCHME 752	Polymer Melt Fluid Mechanics and Processing	4	8				Chemical Engineering			
495	DCHME 757	Advanced Chemical Engineering Thermodynamics	4	8				Chemical Engineering			
496	DCHME 763	Advanced Heat and Mass Transfer	4	8				Chemical Engineering			
497	DCHME 766	Advanced Energy Materials and Their Application	4	8				Chemical Engineering			
498	MBME 600	Research Seminar	3	6				Biomedical Engineering	SEDS		
499	MBME 602	Master Thesis II	12	24	MBME 601 Master Thesis I (5953) (P)			Biomedical Engineering	SEDS		
500	MBME 607	Advanced Tissue Engineering	3	6				Biomedical Engineering	SEDS		
501	MBME 700	Strategies for Controlled Topical Delivery of Drugs	3	6				Biomedical Engineering	SEDS		
502	MBME 708	Biomedical Imaging	3	6				Biomedical Engineering	SEDS		

503	MCHME 600	Research Seminar	3	6				Chemical and Materials Engineering	SEDS		
504	MCHME 602	MSc Thesis II	12	24				Chemical and Materials Engineering	SEDS		
505	MCHME 606	Advanced Heat and Mass Transfer	3	6				Chemical and Materials Engineering	SEDS		
506	MCHME 701	Advanced Chemical Thermodynamics	3	6				Chemical and Materials Engineering	SEDS		
507	MCHME 707	Polymer Melt Fluid Mechanics and Processing	3	6				Chemical and Materials Engineering	SEDS		
508	MCHME 713	Advanced Energy Materials and their Applications	3	6				Chemical and Materials Engineering	SEDS		
Civil Engineering											
509	MSC 600	Research Methods and Ethics	3	6				1 year Gr SEDS Biomedical Engineering, 1 year Gr SEDS Chemical and Materials Engineering, 1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SEDS Mechanical and Aerospace Engineering	2 year Gr SEDS Biomedical Engineering, 2 year Gr SEDS Chemical and Materials Engineering, 2 year Gr SEDS Civil and Environmental Engineering, 2 year Gr SEDS Mechanical and Aerospace Engineering	SMG	
Civil Engineering, Communication and Composition											
510	MSC 601	Technical Communication	3	6				Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering	SEDS	SMG	
Civil and Environmental Engineering											
511	CEE 201	Environmental Chemistry	3	6				Instructor's Permission Required. Registration through Add Course form only!			
512	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	
513	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	
514	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		
515	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		
516	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		
517	CEE 350	Water and Wastewater Treatment Processes	3	6	CEE 201 Environmental Chemistry (4999) (D and above) AND 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		
518	CEE 352	Engineering geology	3	6				3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
519	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		
520	CEE 457	Air Quality Management	3	6				4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
521	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		
522	CEE 463	Individual Research Project in Civil & Environmental Engineering 1	3	6				4 year UG SEDS Civil and Environmental Engineering			

523	CEE 464	Individual Research Project in Civil and Environmental Engineering II	3	6	CEE 463 Individual Research Project in Civil & Environmental Engineering 1 (6594) (C and above)			4 year UG SEDS Civil and Environmental Engineering			
524	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		
525	CEE 467	Building Information Modelling for Geotechnical Engineering	3	6	CEE 303 Geotechnical Design (6158) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
526	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		
527	DCEE 700-0	Thesis Research	0	0				Civil Engineering			
528	DCEE 701	Current Research Literature	4	8				2 year PhD SEDS Civil Engineering	Civil Engineering		
529	DCEE 751	Structural Dynamics and Earthquake Engineering	4	8				1 year PhD SEDS Civil Engineering	2 year PhD SEDS Civil Engineering		
530	DCEE 752	Advanced Concrete Technology	4	8				1 year PhD SEDS Civil Engineering	2 year PhD SEDS Civil Engineering		
531	DCEE 755	Contaminated Site Management and Soil Treatment Technologies	4	8				1 year PhD SEDS Civil Engineering	2 year PhD SEDS Civil Engineering		
532	DCEE 762	Advanced Project Management	4	8				1 year PhD SEDS Civil Engineering, Civil Engineering	2 year PhD SEDS Civil Engineering		
533	DCEE 771	Soil Improvement and Stabilization	4	8				1 year PhD SEDS Civil Engineering	2 year PhD SEDS Civil Engineering		
534	EMEM 510	Managerial Accounting	2	4				Engineering Management			
535	EMEM 511	Business Strategy	2	4				Engineering Management			
536	EMEM 513	Entrepreneurship	2	4				Engineering Management			
537	EMEM 514	Finance	2	4				Engineering Management			
538	EMEM 516	Management of Organizations	2	4				Engineering Management			
539	EMEM 517	Marketing	2	4				Engineering Management			
540	EMEM 527	Globalization and Engineering	3	6				Engineering Management			
541	EMEM 542	Production and Service Operations Management	3	6				Engineering Management			
542	EMEM 545	Business Communication	2	4				Engineering Management			
543	EMEM 548	Understanding and Predicting Consumer Behavior	2	4				Engineering Management			
544	EMEM 549	Capstone Project I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
545	EMEM 550	Capstone Project II	5	10				2 year Gr SEDS Engineering Management			
546	MCEE 600	Research Seminar	3	6				1 year Gr SEDS Civil and Environmental Engineering	2 year Gr SEDS Civil and Environmental Engineering		
547	MCEE 602	MSc Thesis II	12	24				2 year Gr SEDS Civil and Environmental Engineering			
548	MCEE 606	Advanced Project Management	3	6				1 year Gr SEDS Civil and Environmental Engineering			
549	MCEE 700	Structural Dynamics and Earthquake Engineering	3	6				1 year Gr SEDS Civil and Environmental Engineering	2 year Gr SEDS Civil and Environmental Engineering		
550	MCEE 701	Advanced Concrete Technology	3	6				1 year Gr SEDS Civil and Environmental Engineering	2 year Gr SEDS Civil and Environmental Engineering		
551	MCEE 704	Contaminated Site Management and Soil Treatment Technologies	3	6				1 year Gr SEDS Civil and Environmental Engineering	2 year Gr SEDS Civil and Environmental Engineering		
552	MCEE 711	Soil Improvement and Stabilization	3	6				1 year Gr SEDS Civil and Environmental Engineering	2 year Gr SEDS Civil and Environmental Engineering		
Electrical and Computer Engineering											

553	DELCE 700-0	Thesis Research	0	0				Electrical Engineering	Chemical Engineering, Civil Engineering, Computer Science , Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
554	DELCE 701	Current Research Literature	4	8				Electrical Engineering	Chemical Engineering, Civil Engineering, Computer Science , Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
555	DELCE 759	Advanced Pattern Recognition and Machine Learning	4	8				Electrical Engineering	Chemical Engineering, Civil Engineering, Computer Science , Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
556	DELCE 763	Advanced Electronic Circuits	4	8				Electrical Engineering	Chemical Engineering, Civil Engineering, Computer Science , Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
557	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	
558	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	
559	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	
560	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	
561	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	
562	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	

563	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	
564	ELCE 302L	Electrical Machines Laboratory	1	2	ELCE 201 Circuit Theory (5507) (C- and above)	ELCE 302 Electric Machines (5919) (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	
565	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	
566	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	
567	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	

568	ELCE 309	Individual Study	3	6				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	
569	ELCE 310L	Electronics Instrumentation and Measurement	1	2	ELCE 201 Circuit Theory (5507) (C- and above)	ELCE 301 Electronic Circuits (5918) (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	
570	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	
571	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	
572	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	
573	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	
574	ENG 101	Programming for Engineers	3	6			CSCI 151 Programming for Scientists and Engineers (192) (F) OR CSCI 111 Web Programming and Problem Solving (110) (F) OR CSCI 115 Programming Fundamentals (5257) (F) OR CSCI 152 Performance and Data Structures (489) (F) OR CSCI 408 Senior Project I (1481) (F) OR CSCI 409 Senior Project II (1483) (F)	1 year UG SEDS, 2 year UG SMG, Undeclared SMG	2 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering	SEDS	
575	MECE 600	Research Seminar	3	6				1 year Gr SEDS Electrical and Computer Engineering	2 year Gr SEDS Electrical and Computer Engineering	SEDS	
576	MECE 602	Master Thesis II	12	24				1 year Gr SEDS Electrical and Computer Engineering	2 year Gr SEDS Electrical and Computer Engineering	SEDS	
577	MECE 608	Energy Systems Operations and Planning	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
578	MECE 704	Fundamentals of Signal Processing	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
579	MECE 707	Advanced Electronic Circuits	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	

580	MECE 716	Adaptive Signal Processing	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
581	MECE 717	Pattern Recognition and Machine Learning	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering	Electrical and Computer Engineering	
Geosciences											
582	GEOL 101	Fundamentals of Geology	3	6				4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SSH, 4 year UG SSH (pending graduation)			
583	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			
584	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			
585	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, 3 year UG SMG Geology, 3 year UG SMG Mining Engineering	1 year UG SEDS, 2 year UG SEDS, 3 year UG SEDS, 4 year UG SEDS, 4 year UG SEDS (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS		
586	GEOL 303	Structural Geology	3	6	(GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)) AND GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	1 year UG SEDS, 1 year UG SSH, 2 year UG SEDS, 2 year UG SSH, 3 year UG SEDS, 3 year UG SSH, 4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	
587	GEOL 304	Geophysics	3	6	GEOL 204 Sedimentology and strartigraphy (5475) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
588	GEOL 307	Geographic Information Systems	3	6				3 year UG SMG Geology			
589	GEOL 309	Hydrogeology	3	6				3 year UG SMG Geology, 4 year UG SMG Mining Engineering			
590	GEOL 403	Geostatistics	3	6	MATH 161 Calculus I (118) (C- and above)			4 year UG SMG Geology		4 year UG SEDS, 4 year UG SSH	
591	GEOL 405	Research Project II	3	6	GEOL 404 Research Project I (6423) (C- and above)			4 year UG SMG Geology			
592	GEOL 407	Exploration Geology & Geophysics	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			4 year UG SMG Geology	1 year UG SEDS, 1 year UG SSH, 2 year UG SEDS, 2 year UG SSH, 3 year UG SEDS, 3 year UG SSH, 4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SSH, 4 year UG SSH (pending graduation)	

Mechanical and Aerospace Engineering											
593	DMAE 700-0	Thesis Research	0	0				Mechanical Engineering			
594	DMAE 702	Current Research Literature	4	8				Mechanical Engineering	Science, Engineering and Technology	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Robotics Engineering	
595	DMAE 703	Numerical Techniques for Engineers	4	8							
596	DMAE 750	Advanced Statistics and Probability	4	8			MSC 615 Advanced Statistics and Probability (2394) (B- and above)	Mechanical Engineering	Science, Engineering and Technology	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Robotics Engineering	
597	DMAE 756	Design and Manufacturing with Environmental Concern	4	8				Mechanical Engineering	Science, Engineering and Technology	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Robotics Engineering	
598	DMAE 769	Advanced Computational Fluid Dynamics and Heat Transfer in Mechanical Engineering	4	8				Mechanical Engineering	Science, Engineering and Technology	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Robotics Engineering	
599	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 and Environmental Engineering, Mechanical and Aerospace Engineering		
600	ENG 103	Engineering Materials II	3	6				1 year UG SEDS Chemical and Materials Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SEDS 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, 5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Electrical and Computer Engineering, Civil and Environmental Engineering	SEDS	
601	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	SEDS	
602	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 Mechanical and Aerospace Engineering	3 year UG SEDS Chemical and Materials Engineering, 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering		
603	ENG 300	Interdisciplinary Project	3	6				Instructor's Permission Required. Registration through Add Course form only!			

604	ENG 400	Capstone Project	3	6				4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Electronic Engineering, 4 year UG SEDS Mechanical Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Chemical 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, 5 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS Mechanical Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering		
605	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	
606	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	
607	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	
608	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	
609	MAE 307	Engineering Dynamics II	3	6	MAE 206 Engineering Dynamics I (5535) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
610	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	
611	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	
612	MAE 451	Unmanned Aerial Vehicle Design	3	6	(MAE 303 Control Systems (5929) (D and above) AND MAE 340 Aerodynamics (6576) (D and above)) OR MMAE 603 Modern Control Engineering (4500) (C- and above)			4 year UG SEDS Mechanical and Aerospace Engineering			
613	MAE 455	Flight Mechanics	3	6	MAE 340 Aerodynamics (6576) (D and above) OR MAE 305 Fluid Mechanics II (6173) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
614	MAE 456	Materials and Manufacturing II	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
615	MAE 457	Feasibility Analysis of Clean Energy Technologies	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering		

616	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	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
617	MAE 463	Micro-Electro-Mechanical Systems and Microsystems technology	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
618	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	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
619	MAE 500	Unmanned Aerial Vehicle Design	3	6	MMAE 603 Modern Control Engineering (4500) (C- and above)				1 year Gr SEDS Mechanical and Aerospace Engineering, 2 year Gr SEDS Mechanical and Aerospace Engineering		
620	MMAE 602	Master Thesis II	12	24	MMAE 601 Master Thesis I (5014) (P)			1 year Gr SEDS Mechanical and Aerospace Engineering, 2 year Gr SEDS Mechanical and Aerospace Engineering			
621	MMAE 604	Advanced Computational Fluid Dynamics and Heat Transfer in Mechanical Engineering	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	2 year Gr SEDS Mechanical and Aerospace Engineering		
622	MMAE 700	Advanced Statistics and Probability	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	2 year Gr SEDS Mechanical and Aerospace Engineering		
623	MMAE 701	Numerical Techniques for Engineers	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	2 year Gr SEDS Mechanical and Aerospace Engineering		
624	MMAE 704	Design and Manufacturing with Environmental Concern	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	2 year Gr SEDS Mechanical and Aerospace Engineering		
625	MMAE 710	Space Structures Design	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	2 year Gr SEDS Mechanical and Aerospace Engineering		
626	MMAE 716	Digital Transformation Concepts	3	6				2 year Gr SEDS Engineering Management	2 year Gr SEDS Mechanical and Aerospace Engineering	1 year Gr SEDS Mechanical and Aerospace Engineering	
Mining Engineering											
627	MINE 201	Mineral Processing	3	6	SMG 100 Introduction to Natural Resources Extraction (4773) (and above) AND MATH 162 Calculus II (170) (and above) AND CHEM 101 General Chemistry I (113) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			2 year UG SMG Mining Engineering, 4 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
628	MINE 306	Underground Mining Systems and Design	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
629	MINE 307	Surface Mining System and Design	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
630	MINE 308	Mine Planning	3	6				3 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
631	MINE 309	Sustainability and Mining Environment	3	6	SMG 100 Introduction to Natural Resources Extraction (4773) (D and above)			3 year UG SMG Mining Engineering, 4 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
632	MINE 310	Rock Breakage	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		

633	MINE 403	Mine Risk Management	3	6				4 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
634	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			
635	MINE 490	Research project II	3	6	MINE 489 Mine Design Project I (6419) (P)			4 year UG SMG Mining Engineering			
636	MINE 507	Rock Excavation Methods	3	6				1 year Gr SMG Mining Engineering			
637	MINE 508	Advanced Rock Mechanics	3	6				1 year Gr SMG Mining Engineering			
638	MINE 509	Advanced Surface Mine Design	3	6				1 year Gr SMG Mining Engineering			
639	MINE 510	Advanced Underground Mine Design	3	6				1 year Gr SMG Mining Engineering			
640	MINE 607	Geometallurgy	3	6				2 year Gr SMG Mining Engineering	Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics		
641	MINE 691	Thesis II	15	30	MINE 690 Thesis I (4531) (P)			2 year Gr SMG Mining Engineering			
642	MINE 701	Advanced Mine Geomechanics	4	8				1 year PhD SMG Mining Engineering			
643	MINE 702	Current Research Literature	4	8				1 year PhD SMG Mining Engineering			
644	MINE 703	Advanced Mining Systems	4	8				1 year PhD SMG Mining Engineering	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
645	MINE 803	Advanced Geometallurgy	4	8				1 year PhD SMG Mining Engineering			
646	MINE 890-0	Thesis Research	0	0				Mining Engineering, Petroleum Engineering			
Petroleum Engineering											
647	PETE 202	Transport Phenomena	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above)			2 year UG SMG Petroleum Engineering, 3 year UG SMG Petroleum Engineering			
648	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			
649	PETE 204	Reservoir Rock and Fluid Properties with Lab	4	8				2 year UG SMG Petroleum Engineering, 4 year UG SMG Geology			
650	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	Petroleum Engineering		
651	PETE 306	Reservoir Engineering II	3	6	PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above)			3 year UG SMG Petroleum Engineering	Petroleum Engineering		
652	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	Petroleum Engineering		

653	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)			3 year UG SMG Petroleum Engineering, 4 year UG SMG Petroleum Engineering			
654	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			
655	PETE 407	Capstone Design Project II	3	6	PETE 400 Capstone Design Project I (6424) (P)			4 year UG SMG Petroleum Engineering			
656	PETE 421	Advanced Technologies in Drilling	3	6	PETE 203 Drilling Engineering with Laboratories (5486) (C- and above) AND PETE 304 Well Completion and Stimulation (5883) (C- and above)			4 year UG SMG Petroleum Engineering			
657	PETE 506	Advanced Reservoir Simulation	3	6				Petroleum Engineering			
658	PETE 507	Advanced Reservoir Engineering	3	6				Petroleum Engineering			
659	PETE 508	Advanced Production Engineering	3	6				Petroleum Engineering			
660	PETE 606	Advanced Enhanced Oil Recovery	3	6				Petroleum Engineering			
661	PETE 620	Thesis II	12	24				Petroleum Engineering			
662	PETE 702	Current Research Literature	4	8				Petroleum Engineering			
663	PETE 703	Advanced Reservoir Engineering	4	8				Mining Engineering, Petroleum Engineering	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
664	PETE 801	Advanced Reservoir Simulation	4	8				Mining Engineering, Petroleum Engineering	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
665	PETE 803	Advanced Enhanced Oil Recovery	4	8				Mining Engineering, Petroleum Engineering	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
666	PETE 890-0	Thesis Research	0	0				Petroleum Engineering			
SMG											
667	SMG 400	Engineering Economics	3	6	SMG 200/ECON 220 Resource Economics (6197) (C- and above) OR ECON 120 Managerial Economics (1852) (C- and above) OR MATH 161 Calculus I (118) (C- and above) OR MATH 162 Calculus II (170) (C- and above)			4 year UG SMG Geology, 4 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	SEDS, SSH	
School of Engineering											
668	DENG 700-0	Thesis Research	0	0				Science, Engineering and Technology			
669	DENG 791	Doctoral Seminar III	3	6	DENG 790 Doctoral Seminar II (4599) (P)			Science, Engineering and Technology			
670	DENG 793	Doctoral Seminar V	3	6	DENG 792 Doctoral Seminar IV (4601) (P)			Science, Engineering and Technology			
671	DENG 794	Dissertation Research	12	24	DENG 785 PhD Proposal Oral Defence (2604) (P)			Science, Engineering and Technology			
672	DENG 795	Research at Host University	6	12	DENG 785 PhD Proposal Oral Defence (2604) (P)			Science, Engineering and Technology			

673	DENG 796	Thesis Completion	0	0				Science, Engineering and Technology			
674	DENG 797	Oral Defence of PhD Dissertation	0	0	DENG 785 PhD Proposal Oral Defence (2604) (P) AND DENG 789 Doctoral Seminar I (4598) (P) AND DENG 790 Doctoral Seminar II (4599) (P)			Science, Engineering and Technology			
675	DENG 798	Doctoral Seminar VI	3	6	DENG 793 Doctoral Seminar V (4602) (P)			Science, Engineering and Technology			
676	DENG 799	Doctoral Seminar VII	3	6	DENG 798 Doctoral Seminar VI (4607) (P)			Instructor's Permission Required. Registration through Add Course form only!			
SCAI											
Computer Science											
677	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			
678	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		
679	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	
680	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	
681	CSCI 245	System Analysis and Design	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
682	CSCI 262	Software Project Management	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
683	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			

684	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			
685	CSCI 281	Human-Computer Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
686	CSCI 307	Research Methods	3	6				3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
687	CSCI 325	Introduction to Parallel Systems and Graphics Processing Unit Programming	3	6	CSCI 332 Operating Systems (490) (C- and above)		PHYS 421 Parallel Computing (8532) (D and above)	3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
688	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			
689	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			
690	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			
691	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			
692	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			
693	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			
694	CSCI 495	Connectionist Models of Computation	3	6	MATH 251 Discrete Mathematics (85) (C- and above)			Computer Science			
695	CSCI 502	Hardware Software Co-Design	3	6	CSCI 501 Software Principles and Practice (2408) (C- and above)			Computer Science, Robotics			
696	CSCI 545	Big Data Analytics	3	6				Data Science	Computer Science	Robotics	
697	CSCI 575	Formal Methods and Applications	3	6				Computer Science, Data Science		Robotics	
698	CSCI 581	Acquisition and Analysis of Biomedical Data	3	6				Computer Science, Data Science		Robotics	
699	CSCI 585	Computer Vision	3	6				Computer Science, Data Science		Robotics	
700	CSCI 591	Advanced Artificial Intelligence	3	6	CSCI 501 Software Principles and Practice (2408) (C- and above) OR DS 501 Fundamentals of Data Science (5218) (C- and above)			Computer Science, Data Science		Robotics	
701	CSCI 694	Thesis	15	30				2 year Gr SEDS Computer Science			
702	CSCI 700-0	Thesis Research	0	0				Computer Science			
703	CSCI 702	Advanced Hardware/Software Co-Design	4	8				Computer Science , Robotics Engineering			
704	CSCI 722	Current Research Literature	4	8				Computer Science			
705	CSCI 745	Advanced Big Data Analytics	4	8				Computer Science	Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
706	CSCI 775	Advanced Formal Methods and Applications	4	8				GSB, GSE, GSPP, SEDS, SMG, SSH, SoM			
707	CSCI 781	Advanced Acquisition and Analysis of Biomedical Data	4	8				Computer Science	Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		

708	CSCI 785	Advanced Computer Vision	4	8				Computer Science	Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Science, Engineering and Technology		
709	CSCI 791	Advanced Artificial Reasoning and Problem solving	4	8				Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology			
710	DS 504	Data Mining and Decision Support	3	6				Data Science	Computer Science		
711	DS 509	Information Retrieval	3	6	DS 501 Fundamentals of Data Science (5218) (C- and above) OR CSCI 501 Software Principles and Practice (2408) (C- and above)			SEDS, SMG, SSH, SoM			
712	DS 694	Thesis	15	30	DS 693 Thesis Proposal (5915) (P)			2 year Gr SEDS Data Science			
713	DS 709	Advanced Information Retrieval	4	8				GSB, GSE, GSPP, SEDS, SMG, SSH, SoM			
714	SEDS 592	Research Seminar	3	6					Computer Science, Data Science, Robotics		
Mathematics											
715	MATH 109	Mathematical Discovery	3	6			MATH 161 Calculus I (118) (C- and above)	5 year UG SSH, 5 year UG SSH (pending graduation), Anthropology, History, Political Science and International Relations, Sociology, Undeclared SSH, World Languages, Literature and Culture			
716	MATH 161	Calculus I	4	8				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, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), Medical Sciences	1 year UG SSH Undeclared, Biological Sciences, Chemistry, Mathematics, Physics, SEDS, SMG	SSH, SoM	
717	MATH 162	Calculus II	4	8	MATH 161 Calculus I (118) (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, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), Medical Sciences	1 year UG SSH Undeclared, Biological Sciences, Chemistry, Mathematics, Physics, SEDS, SMG	SSH, SoM	
718	MATH 251	Discrete Mathematics	3	6	MATH 161 Calculus I (118) (C and above)			Computer Science, Mathematics	SEDS, SMG, SSH, SoM		
719	MATH 263	Calculus III	4	8	MATH 162 Calculus II (170) (C and above)			Mathematics, Physics	SEDS, SMG, SSH, SoM		
720	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	
721	MATH 274	Introduction to Differential Equations	3	6	MATH 162 Calculus II (170) (C and above)			Chemistry, Robotics Engineering, Robotics and Mechatronics	Mathematics, Physics	SEDS, SMG, SSH, SoM	
722	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		
723	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	SEDS, SMG, SSH, SoM	
724	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)	2 year UG SEDS Computer Science, 2 year UG SSH Mathematics, 3 year UG SEDS Robotics Engineering, 3 year UG SEDS Robotics and Mechatronics, 5 year UG SSH, 5 year UG SSH (pending graduation)	Computer Science, Robotics Engineering, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
725	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		
726	MATH 323	Actuarial Mathematics I	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above) OR (MATH 162 Calculus II (170) (C and above) AND MATH 310 Applied Statistical Methods (82) (C and above))			Mathematics	SEDS, SMG, SSH, SoM		
727	MATH 350	Research Methods	3	6	MATH 321 Probability (482) (C and above)			Mathematics			

728	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		
729	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		
730	MATH 403	Abstract Algebra II	3	6	MATH 302 Abstract Algebra I (620) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
731	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		
732	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		
733	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		
734	MATH 424	Mathematical Finance	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
735	MATH 455	Stochastic Calculus	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
736	MATH 460	Topology	3	6	MATH 361 Real Analysis I (483) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
737	MATH 461	Real Analysis II	3	6	MATH 361 Real Analysis I (483) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
738	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		
739	MATH 471	Nonlinear Differential Equations	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
740	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		
741	MATH 490	Special Topics in Mathematics I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
742	MATH 499	Capstone Project	3	6				Instructor's Permission Required. Registration through Add Course form only!			
743	MATH 514	Operations Research	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
744	MATH 541	Data Analysis and Statistical Learning	3	6	MATH 540 Statistical Learning (2340) (B- and above)			Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
745	MATH 571	Advanced Nonlinear Differential Equations	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
746	MATH 582	Mathematical Biology	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
747	MATH 682	Applied Functional Analysis	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
748	MATH 691	Thesis Proposal	3	6	MATH 592 Research Seminar (5760) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!			
749	MATH 692	Thesis	15	30	MATH 691 Thesis Proposal (5769) (P)			Instructor's Permission Required. Registration through Add Course form only!			
750	MATH 700-0	Thesis Research	0	0				Mathematics			
751	MATH 702	Functional Analysis with Applications	4	8				Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
752	MATH 761	Mathematical Finance	4	8				Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	

753	MATH 771	Operations Research	4	8				Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
754	MATH 791	Topics in Mathematics	4	8				Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
Robotics and Mechatronics											
755	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			
756	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			
757	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			
758	ROBT 304	Electromechanical Systems with lab	4	8	ROBT 203 Electrical and Electronic Circuits I with Lab (62) (C- and above)			Robotics Engineering, Robotics and Mechatronics	SEDS		
759	ROBT 308	Industrial Automation	3	6				Robotics Engineering, Robotics and Mechatronics	SEDS		
760	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		
761	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, Robotics Engineering, Robotics and Mechatronics	SEDS		
762	ROBT 491	Graduation Project	3	6	ROBT 391 Research methods (7418) (C- and above)			5 year UG SEDS, Robotics Engineering, Robotics and Mechatronics	SEDS		
763	ROBT 502	Robot Perception & Vision	3	6	ROBT 501 Advanced Robot Kinematics (2263) (C- and above)			Robotics	SEDS		
764	ROBT 692	Thesis	15	30	ROBT 691 Thesis Proposal (5930) (P)				Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics		
765	ROBT 700-0	Thesis Research	0	0				Robotics Engineering			