Course Requirements and Registration Priorities
Fall 2023

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
CPS											
NUFYP											
1	FEAP 010	Foundation English for Academic Purposes 1	0	0							
2	FLDP 090	Leadership 1	0	0							
3	FMAT 010	Foundation Mathematics 1	0	0							
NUZYP											
4	ZCOM 040	Academic Communications for Graduate Studies I	0	0							
5	ZRDG 030	Academic Reading for Graduate Studies I	0	0							
6	ZSTA 060	Foundational Statistics	0	0							
7	ZWRT 020	Academic Writing for Graduate Studies I	0	0							
GSB											
Economics											
8	ECON 101	Introduction to Microeconomics	3	6				5 year UG SSH, Undeclared SSH	SSH	SEDS, SMG, SoM	
9	ECON 102	Introduction to Macroeconomics	3	6				5 year UG SSH, Undeclared SSH	SSH	SEDS, SMG, SoM	
10	ECON 120	Managerial Economics	3	6				SEDS	SMG, SSH, SoM		
11	ECON 201	Intermediate Microeconomics	3	6	ECON 101 Introduction to Microeconomics (379) (B- and above) AND (MATH 161 Calculus I (118) (B- and above) OR MATH 162 Calculus II (170) (B- and above))			Economics	2 year UG SSH Undeclared	SSH	
12	ECON 202	Intermediate Macroeconomics	3	6	ECON 102 Introduction to Macroeconomics (503) (B- and above) AND (MATH 161 Calculus I (118) (B- and above) OR MATH 162 Calculus II (170) (B- and above))			Economics	2 year UG SSH Undeclared	SSH	
13	ECON 211	Economic Statistics	3	6	ECON 101 Introduction to Microeconomics (379) (C and above) OR ECON 102 Introduction to Macroeconomics (503) (C and above)			Economics	2 year UG SSH Undeclared	SSH	
14	ECON 300	Research Assistance in Economics	1	2	ECON 101 Introduction to Microeconomics (379) (C- and above) AND ECON 102 Introduction to Macroeconomics (503) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR CSCI 235 Programming Languages (638) (C- and above) OR CSCI 390 Artificial Intelligence (643) (C- and above) OR MATH 321 Probability (482) (C- and above) OR MATH 322 Mathematical Statistics (1165) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!			

15	ECON 301	Econometrics I	3	6	ECON 211 Economic Statistics (2280) (C- and above) OR (MATH 321 Probability (482) (C- and above) AND (MATH 322 Mathematical Statistics (1165) (C- and above) OR MATH 310 Applied Statistical Methods (82) (C- and above)))			Economics	SSH		
16	ECON 325	International Trade	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH	4 year UG SSH Economics	SSH	
17	ECON 326	The Economics of Financial Markets	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH	4 year UG SSH Economics	SSH	
18	ECON 333	Political Economy	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH	4 year UG SSH Economics	SSH	
19	ECON 335	Economics of Information	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH	4 year UG SSH Economics	SSH	
20	ECON 402	Advanced Macroeconomics	3	6	ECON 202 Intermediate Macroeconomics (207) (C- and above)			Economics		SSH	
21	ECON 403	Introduction to Contract Theory and Auctions	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)			Economics		SSH	
22	ECON 413	Econometrics II Time Series	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 433	Econometrics II Panel Data	3	6	ECON 301 Econometrics I (664) (C- and above)			Economics		SSH	
25	ECON 501	Microeconomics I	4	8				Economics	GSB		
26	ECON 502	Macroeconomics I	4	8				Economics	GSB		
27	ECON 511	Statistics	4	8				Economics			
28	ECON 512	Mathematical Economics	4	8				Economics	GSB		
29	ECON 513	Econometrics II Time Series	4	8	ECON 531 Econometrics (2505) (C- and above)			Economics			
30	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			
31	ECON 532	Applied Econometrics	4	8				Economics			
32	ECON 533	Econometrics II Panel Data	4	8	ECON 531 Econometrics (2505) (C- and above)			Economics			
33	ECON 589	Thesis I	4	8				Economics			
GSB											
34	BUS 101	Core Course in Business	3	6				2 year UG SOM Medical Sciences, 2 year UG SOM Nursing, 3 year UG SOM, 4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 4 year UG SSH (pending graduation)	3 year UG SEDS, 3 year UG SMG, 3 year UG SSH	2 year UG SEDS, 2 year UG SMG, 2 year UG SSH	

35	GSBA 620	Financial Accounting	2.5	5				Registration by School admin only!			
36	GSBF 501	Team Building and Business Communications	.5	1				Registration by School admin only!			
37	GSBF 511	Financial Data Analytics I	2.5	5				Registration by School admin only!			
38	GSBF 512	Principles of Finance	2.5	5				Registration by School admin only!			
39	GSBF 513	Financial Data Analytics II	2.5	5				Registration by School admin only!			
40	GSBF 515a	Investments I	2.5	5				Registration by School admin only!			
41	GSBF 523	Special Topics in Corporate Finance	2	4				Registration by School admin only!			
42	GSBF 550A	Master's Thesis	5	10				Registration by School admin only!			
43	GSBPHD 01	Foundations of Social Science Research	4	8				Business Administration (PhD)			
44	GSBPHD 14	Thesis Research Progress	0	0							
45	MBA 01	Consequential Leadership	1	2				Registration by School admin only!			
46	MBA 02	Business Mathematics and Business Computer Application	1	2				Registration by School admin only!			
47	MBA 03	Financial Accounting	2	4				Registration by School admin only!			
48	MBA 04	Probability and Statistics	2	4				Registration by School admin only!			
49	MBA 05	Business Communication	2	4				Registration by School admin only!			
50	MBA 07	Managerial Effectiveness	2	4				Registration by School admin only!			
51	MBA 08	Managerial Economics	2	4				Registration by School admin only!			
52	MBA 10	Foundations of Strategy	2	4							
53	MBA 11	Managerial Accounting	2	4				Registration by School admin only!			
54	MBA 17	Negotiations	2	4				Registration by School admin only!			
55	MBA 19	Distinguished Speaker Series	0	1				Registration by School admin only!			
56	MBA 20	Practicum Project	2.5	5				Registration by School admin only!			
57	MBA 21	Principles of Finance	2	4				Registration by School admin only!			
58	MBAE 16	Project Management	2	4				Registration by School admin only!			
59	MBAE 17	China Business Environment	2	4				Registration by School admin only!			
60	MBAE 18	Consumer Behavior	2	4				Registration by School admin only!			
61	MBAE 20	Marketing Research	2	4							
62	MBAE 22	Business Law	2	4				Registration by School admin only!			
63	MSF 07	Economic Policy in Global Markets	2	4				Registration by School admin only!			
64	MSF 08	Microeconomics for Finance	2.5	5				Registration by School admin only!			
65	MSF 10	Independent Research	2	4				Registration by School admin only!			
GSPP											
Master in Public Administration											
66	MPA 602	Public Administration in Theory and Practice	4	8				1 year GSPP Public Administration			
67	MPA 603	Economic Applications for Public Managers	4	8				1 year GSPP Public Administration			
68	MPA 605	Research Methods for Public Managers	4	8				1 year GSPP Public Administration			

69	MPA 609	Human Resource Policy and Management	4	8				2 year GSPP Public Administration			
70	MPA 699	Master’s Project with Overseas Component	6	12				2 year GSPP Public Administration			
71	MPE 628	Good Governance and Corruption	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	(inactive) Human Resource Management, Applied Mathematics, Biological Sciences, Biological Sciences and Technologies, Biomedical Engineering, Business Administration, Business Administration (for managerial staff), Chemical Engineering, Chemical and Materials Engineering, Chemistry, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Economics, Educational Leadership, Educational Leadership (obsolete), Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Eurasian Studies, Finance, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Molecular Medicine, Multilingual Education, Petroleum Engineering, Pharmacology and Toxicology, Physics, Political Science and International Relations, Public Administration, Public Health, Public Policy, Robotics, Sports Medicine and Rehabilitation	

72	MPE 646	Communications for Public Leadership	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	(inactive) Human Resource Management, Applied Mathematics, Biological Sciences, Biological Sciences and Technologies, Biomedical Engineering, Business Administration, Business Administration (for managerial staff), Chemical Engineering, Chemical and Materials Engineering, Chemistry, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Economics, Educational Leadership, Educational Leadership (obsolete), Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Eurasian Studies, Finance, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Molecular Medicine, Multilingual Education, Petroleum Engineering, Pharmacology and Toxicology, Physics, Political Science and International Relations, Public Administration, Public Health, Public Policy, Robotics, Sports Medicine and Rehabilitation	

73	MPE 671	Game Theory and Public Policy	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	(inactive) Human Resource Management, Applied Mathematics, Biological Sciences, Biological Sciences and Technologies, Biomedical Engineering, Business Administration, Business Administration (for managerial staff), Chemical Engineering, Chemical and Materials Engineering, Chemistry, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Economics, Educational Leadership, Educational Leadership (obsolete), Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Eurasian Studies, Finance, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Molecular Medicine, Multilingual Education, Petroleum Engineering, Pharmacology and Toxicology, Physics, Political Science and International Relations, Public Administration, Public Health, Public Policy, Robotics, Sports Medicine and Rehabilitation	

74	MPE 673	Development Assistance and Governance	4	8				2 year GSPP Public Administration, 2 year GSPP Public Policy	(inactive) Human Resource Management, Applied Mathematics, Biological Sciences, Biological Sciences and Technologies, Biomedical Engineering, Business Administration, Business Administration (for managerial staff), Chemical Engineering, Chemical and Materials Engineering, Chemistry, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Economics, Educational Leadership, Educational Leadership (obsolete), Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Eurasian Studies, Finance, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Molecular Medicine, Multilingual Education, Petroleum Engineering, Pharmacology and Toxicology, Physics, Political Science and International Relations, Public Administration, Public Health, Public Policy, Robotics, Sports Medicine and Rehabilitation		

75	MPE 682	Sustainable Development and Environmental Governance	4	8				2 year GSPP Public Administration, 2 year GSPP Public Policy	(inactive) Human Resource Management, Applied Mathematics, Biological Sciences, Biological Sciences and Technologies, Biomedical Engineering, Business Administration, Business Administration (for managerial staff), Chemical Engineering, Chemical and Materials Engineering, Chemistry, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Economics, Educational Leadership, Educational Leadership (obsolete), Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Eurasian Studies, Finance, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Molecular Medicine, Multilingual Education, Petroleum Engineering, Pharmacology and Toxicology, Physics, Political Science and International Relations, Public Administration, Public Health, Public Policy, Robotics, Sports Medicine and Rehabilitation		

76	MPE 683	Energy Systems and Climate Policy	4	8				2 year GSPP Public Administration	2 year GSPP Public Policy	(inactive) Human Resource Management, Applied Mathematics, Biological Sciences, Biological Sciences and Technologies, Biomedical Engineering, Business Administration, Business Administration (for managerial staff), Chemical Engineering, Chemical and Materials Engineering, Chemistry, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Economics, Educational Leadership, Educational Leadership (obsolete), Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Eurasian Studies, Finance, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Molecular Medicine, Multilingual Education, Petroleum Engineering, Pharmacology and Toxicology, Physics, Political Science and International Relations, Public Administration, Public Health, Public Policy, Robotics, Sports Medicine and Rehabilitation	

77	MPE 684	Global Energy Policy	4	8				2 year GSPP Public Administration, 2 year GSPP Public Policy	(inactive) Human Resource Management, Applied Mathematics, Biological Sciences, Biological Sciences and Technologies, Biomedical Engineering, Business Administration, Business Administration (for managerial staff), Chemical Engineering, Chemical and Materials Engineering, Chemistry, Civil Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Economics, Educational Leadership, Educational Leadership (obsolete), Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Eurasian Studies, Finance, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Molecular Medicine, Multilingual Education, Petroleum Engineering, Pharmacology and Toxicology, Physics, Political Science and International Relations, Public Administration, Public Health, Public Policy, Robotics, Sports Medicine and Rehabilitation		
Master in Public Policy											
78	MPP 601	Microeconomics and Public Policy	4	8				1 year GSPP Public Policy			
79	MPP 611	Statistics for Public Policy	4	8				1 year GSPP Public Policy			
80	MPP 613	Policy Research Design and Methods	4	8				1 year GSPP Public Policy			
81	MPP 621	Public Policy and Analysis	4	8				1 year GSPP Public Policy			
82	MPP 631	Politics and Public Policy	4	8				2 year GSPP Public Policy			
83	MPP 699-0	Policy Analysis Exercise with Overseas Component	0	0	MPP 613 Policy Research Design and Methods (1301) (C- and above)			2 year GSPP Public Policy			
PhD in Public Policy											
84	DPE 628	Good Governance and Corruption	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Business Administration (PhD), 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		

85	DPE 646	Communications for Public Leadership	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Business Administration (PhD), 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		
86	DPE 671	Game Theory and Public Policy	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Business Administration (PhD), 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		
87	DPE 673	Development Assistance and Governance	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Business Administration (PhD), 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		
88	DPE 682	Sustainable Development and Environmental Governance	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Business Administration (PhD), 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		

89	DPE 683	Energy Systems and Climate Policy	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Business Administration (PhD), 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		
90	DPE 684	Global Energy Policy	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Business Administration (PhD), 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		
91	DPP 600	Developing Dissertation Research	0	0				Public Policy			
92	DPP 601	Microeconomics in the Public Sector	4	8				1 year GSPP PhD Public Policy			
93	DPP 603	Public Administration and Management	4	8				1 year GSPP PhD Public Policy			
94	DPP 611	Statistics in Public Policy	4	8				1 year GSPP PhD Public Policy			
95	DPP 614	Advanced Quantitative Methods	4	8				2 year GSPP PhD Public Policy			
96	DPP 616	Advanced Qualitative Methods	4	8				2 year GSPP PhD Public Policy			
97	DPP 621	Public Policy and Analysis	4	8				1 year GSPP PhD Public Policy			
98	DPP 690-0	Thesis Preparation and Writing	0	0				3 year GSPP PhD Public Policy, 4 year GSPP PhD Public Policy			
GSE											
MA in Multilingual Education											
99	EDML 601	Introduction to Linguistics	3	6				1 year GSE MA in Multil.Education			
100	EDML 610	Foundations of Multilingual Education	3	6				1 year GSE MA in Multil.Education			
101	EDML 613	The Multilingual School	3	6				2 year GSE MA in Multil.Education			
102	EDML 614	Multilingual curriculum development and assessment	3	6				2 year GSE MA in Multil.Education			
103	EDML 620	Language and Literacy Development	3	6				2 year GSE MA in Multil.Education			
104	EDML 690	Thesis Research I	3	6				2 year GSE MA in Multil.Education			
MSc Educational Leadership HE											
105	EDHE 603	Thesis Seminar 3	3	6				2 year GSE Educ.Leadership			
106	EDHE 625	Fundamentals of Higher Education	3	6				1 year GSE Educ.Leadership			
107	EDHE 627	Student Experience, Learning and Success in Higher Education	3	6				2 year GSE Educ.Leadership			

108	EDHE 629	Globalization and International Higher Education	3	6				2 year GSE Educ.Leadership			
109	EDUC 510	Advanced English for Education Professionals I	3	6				1 year GSE MA in Multil.Education			
110	EDUC 512	English for Thesis Writing I	3	6				2 year GSE MA in Multil.Education			
111	EDUC 535	Academic English I	2	4				1 year GSE Educ.Leadership			
112	EDUC 571	Basic Kazakh	3	6				Education, Multilingual Education			
113	EDUC 572	Kazakh for Professional Purposes	3	6				Education, Multilingual Education			
114	EDUC 581	Basic Kazakh (MSc)	2	4				Educational Leadership			
115	EDUC 582	Kazakh for Professional Purposes (MSc)	2	4				Educational Leadership			
116	EDUC 590	Academic English Writing for Doctoral Students I	3	6				1 year GSE PhD Education			
117	EDUC 600	Research Methods I	3	6				1 year GSE Educ.Leadership, 1 year GSE MA in Multil.Education			
118	EDUC 602	Educational Context and Reform in Kazakhstan	3	6				1 year GSE MA in Multil.Education			
119	EDUC 606	Introduction to Education Research	2	4				1 year GSE Educ.Leadership			
120	EDUC 617	Contextualizing Education Reform in Kazakhstan and Beyond	3	6				1 year GSE Educ.Leadership			
121	EDUC 627	Psychology of Learning	3	6				2 year GSE Educ.Leadership			
122	EDUC 700	Developing PhD Student Strategies for Progressing the Thesis	9	18				Education			
123	EDUC 701	Education Research Methods	3	6				1 year GSE PhD Education			
124	EDUC 709	Introduction to Scholarship in Education	3	6				1 year GSE PhD Education			
125	EDUC 712	Educational Policy and Reform	3	6				1 year GSE PhD Education			
126	EDUC 727	Exploring the Research Topic 1	0	0				1 year GSE PhD Education			
127	EDUC 730	Preparation for Proposal Defence	0	0				2 year GSE PhD Education			
128	EDUC 733	Thesis Proposal Defense	12.5	25				4 year GSE PhD Education			
129	EDUC 740	Doctoral Seminar	3	6				3 year GSE PhD Education			
130	EDUC 751	Dissertation Research	0	0				3 year GSE PhD Education, 4 year GSE PhD Education			
131	EDUC 760	Teaching and Learning in the University Context: Curriculum, Pedagogy and Assessment	3	6				2 year GSE PhD Education, 3 year GSE PhD Education, 4 year GSE PhD Education			
132	EDUC 800	International Study	12	24				2 year GSE PhD Education			
MSc Educational Leadership IE											
133	EDIE 603	Thesis Seminar 3	3	6				2 year GSE Educ.Leadership			
134	EDIE 604	Thesis Seminar 4	0	0							

135	EDIE 605	Thesis Submission and Defense	10.5	21							
136	EDIE 625	Fundamentals of Inclusive Education	3	6				1 year GSE Educ.Leadership			
137	EDIE 631	Developing Inclusive Schools for an Inclusive Society	3	6				2 year GSE Educ.Leadership			
MSc Educational Leadership SE											
138	EDSE 603	Thesis Seminar 3	3	6				2 year GSE Educ.Leadership			
139	EDSE 621	Education Policy Analysis and Development	3	6				2 year GSE Educ.Leadership			
140	EDSE 625	Fundamentals of School Education	3	6				1 year GSE Educ.Leadership			
Other											
Other											
141	STUMOB 001	Student Mobility Course	0	0							
142	T - 1290131	Career Design I	1	2							
143	T - AE 13E81	Introduction to Japanese Culture	1.5	3							
144	T - BC 11121	International Politics	3	6							
145	T - BE 21241	Media Politics	3	6							
146	T - BE 21381	Introduction to Political Science	2	4							
147	T - BE 21391	Introduction to Sociology	2	4							
148	T - BE 21511	Academic Discussion Seminar	2	4							
149	T - BE 21831	Quantitative Methods for Social Sciences	2	4							
150	T - BE 22031	Japanese Foreign Policy	3	6							
151	T - BE 22161	Comparative Law I: Legal Traditions and Cultures	3	6							
152	T - BE 22551	Outline of Japanese Education	2	4							
153	T - EC 33651	Renewable Energy and Bioresource Recycling Technologies	3	6							
154	T - EG 70021	Introduction to Geoenvironmental Science	2	4							
155	T - MSD 022	Grand Strategy and Statecraft	4	8							
156	T - MSE 097	Mind, Behavior and Public Policy	4	8							
157	T - MSH 022	Gender and Development	4	8							
158	T - MSP 022	Human Resource Management in Government	4	8							
159	T - MST 045	K-Wave and Cultural Policy	4	8							
160	T - PP 5174	International Politics: The Rules of the Game	4	8							
161	T - PP 5203	Behavioral Economics and Public Policy	4	8							

162	T - PP 5234	Economics of Developing Countries	4	8							
163	T - PP 5278	Health Economics and Public Policy	4	8							
164	T - PP 5288	Labour Market Issues and Public Policy	4	8							
165	T - YB L1712	Workshops on Contemporary Photography	2	4							
166	T - YB X0021	English for Specialized Subjects 2	1	2							
167	TEST 001	TEST 1	3	6							
168	TEST 002	TEST 2	0	0							
SoM											
Biological Science											
169	BIOL 101	Biology for non-Science majors	3	6			BIOL 110 Modern Biology I (1070) (C- and above)	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			
170	BIOL 105	General Biology	3	6				5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
171	BIOL 110	Modern Biology I	3	6				1 year UG SOM Medical Sciences, 2 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	2 year UG SSH Undeclared, Chemistry, Computer Science, Electrical and Computer Engineering, Mathematics, Physics, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
172	BIOL 110L	Modern Biology I Laboratory	1	2		BIOL 110 Modern Biology I (1070) (C and above)		1 year UG SOM Medical Sciences, 2 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	2 year UG SSH Undeclared, Chemistry, Computer Science, Electrical and Computer Engineering, Mathematics, Physics, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
173	BIOL 120	Modern Biology II	3	6	BIOL 110 Modern Biology I (1070) (C and above)			2 year UG SOM Medical Sciences, 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
174	BIOL 120L	Modern Biology II Laboratory	1	2	BIOL 110 Modern Biology I (1070) (C and above) OR BIOL 110L Modern Biology I Laboratory (5448) (C and above)	BIOL 120 Modern Biology II (1195) (C and above)		2 year UG SOM Medical Sciences, 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
175	BIOL 301	Molecular Cell Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
176	BIOL 301L	Molecular Cell Biology Laboratory	1	2	BIOL 120 Modern Biology II (1195) (C and above) OR BIOL 120L Modern Biology II Laboratory (5443) (C and above)	BIOL 301 Molecular Cell Biology (5809) (C and above)		2 year UG SOM Medical Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
177	BIOL 305	Introduction to Microbiology	3	6	(BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 120L Modern Biology II Laboratory (5443) (C and above)) OR BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
178	BIOL 305L	Introduction to Microbiology Laboratory	1	2	BIOL 120 Modern Biology II (1195) (C and above) OR BIOL 120L Modern Biology II Laboratory (5443) (C and above)	BIOL 305 Introduction to Microbiology (5789) (C and above)		2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	

179	BIOL 310	Immunology	3	6	BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 301 Molecular Cell Biology (5809) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above)			2 year UG SOM Medical Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	3 year UG SSH Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
180	BIOL 320	Developmental Biology	3	6	BIOL 230 Human Anatomy and Physiology I (72) (C and above) OR BIOL 230 Human Anatomy and Physiology I (6217) (C and above)			2 year UG SOM Medical Sciences, 5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
181	BIOL 321	Bioethics	3	6	BIOL 120 Modern Biology II (1195) (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)	Biological Sciences	SEDS, SMG, SSH, SoM	
182	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)			2 year UG SOM Medical Sciences, 5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
183	BIOL 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			2 year UG SOM Medical Sciences, 5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
184	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)	3 year UG SOM Medical Sciences, Biological Sciences	SEDS, SMG, SSH, SoM	
185	BIOL 370	Genetics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
186	BIOL 380	Biology of Behavior	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
187	BIOL 385	Cell signaling: principles and mechanisms	3	6	BIOL 120 Modern Biology II (1195) (C and above)			2 year UG SOM Medical Sciences, 5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
188	BIOL 452	Biology of Cancer	3	6	BIOL 231 Human Anatomy and Physiology II (479) (C and above) OR BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 331 Human Anatomy and Physiology II (6218) (C and above) OR BIOL 301 Molecular Cell Biology (5809) (C and above)			3 year UG SSH Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
189	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 SSH	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
190	BIOL 460	Human Parasitology	3	6	BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above)			2 year UG SOM Medical Sciences, 5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
191	BIOL 490	Honors Thesis Research	0	0	BIOL 355 Critical Research Reasoning (1000) (B and above)			Instructor's Permission Required. Registration through Add Course form only!			
192	BIOL 520	Statistical Methods in Life Sciences	3	6				Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	
193	BIOL 550	Structural and Molecular Biology in Health and Disease	3	6				Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	

194	BIOL 560	Molecular Biology of Prokaryotic Cells	3	6				Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	
195	BIOL 592	Research Seminar	3	6				Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	
196	BIOL 599	Master's Thesis Research	0	0				Biological Sciences, Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	
197	BIOL 631	Synthetic Biology	3	6				Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	
198	BIOL 632	Drug Discovery and Design	3	6				Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	
199	BIOL 634	Advanced Cancer Biology	3	6				Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	
200	BIOL 670	Gene Therapy	3	6				Biological Sciences and Technologies	SSH	GSB, GSE, GSPP, SEDS	
201	BIOL 691	Master's Thesis Research Proposal	3	6				2 year Gr SSH Biological Sciences and Technologies, Biological Sciences			
202	BIOL 775	Gene Therapy	4	8				Biomedical Sciences, Life Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
203	BIOL 800-0	Thesis Research	0	0				Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
204	BIOL 820	Statistical Methods in Life Sciences	3	6				Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
205	BIOL 831	Synthetic Biology	4	8				Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
206	BIOL 832	Drug Discovery and Design	4	8				Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
207	BIOL 834	Advanced Cancer Biology	4	8				Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
208	BIOL 850	Structural and Molecular Biology in Health and Disease	4	8				Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
209	BIOL 860	Molecular Biology of Prokaryotic Cells	4	8				Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
MMM											
210	MMMM 501	Molecular Basis of Infection	3	6				1 year Gr SOM Molecular Medicine			
211	MMMM 503	Bioethics in Research: Principles and Practice	3	6				Molecular Medicine			
212	MMMM 610	Natural Drugs	3	6				1 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Molecular Medicine			
MPTOX											
213	MPTX 501	Organ system and common diseases	3	6				1 year Gr SOM Pharmacology and Toxicology			
214	MPTX 502	Cellular Communications	3	6				1 year Gr SOM Pharmacology and Toxicology			
215	MPTX 503	Principles of Pharmacology and Toxicology	3	6		MPTX 501 Organ system and common diseases (5841) (C and above)		1 year Gr SOM Pharmacology and Toxicology			
216	MPTX 505	Drug Discovery I	3	6		MPTX 503 Principles of Pharmacology and Toxicology (5843) (C and above)		1 year Gr SOM Pharmacology and Toxicology			

217	MPTX 506	Systemic Pharmacology II	3	6	MPTX 503 Principles of Pharmacology and Toxicology (5843) (C- and above) AND MSBM 604 Systemic Pharmacology (5844) (C- and above)			2 year Gr SOM Pharmacology and Toxicology			
218	MPTX 601	Biostatistics and Critical Appraisal	3	6	MPTX 503 Principles of Pharmacology and Toxicology (5843) (C- and above) AND MPTX 505 Drug Discovery I (5845) (C- and above)			2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology			
219	MPTX 602	Current Topics in Pharmacology and Toxicology	3	6	MPTX 503 Principles of Pharmacology and Toxicology (5843) (C- and above) AND MPTX 505 Drug Discovery I (5845) (C- and above)	MSBM 504 Biostatistics and Critical Appraisal (8517) (C- and above)		2 year Gr SOM Pharmacology and Toxicology			
220	MPTX 604E	Scientific Writing	3	6				1 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Molecular Medicine			
221	MPTX 605	Natural Therapeutics	3	6							
MSMR											
222	MSMR 501	Musculoskeletal System	3	6				Sports Medicine and Rehabilitation			
223	MSMR 503	Exercise Genetics, Physiology and Endocrinology	3	6				Sports Medicine and Rehabilitation			
224	MSMR 504	Pharmacology in Sports and Rehabilitation	3	6				Sports Medicine and Rehabilitation			
225	MSMR 505	Exercise and Biomechanics	3	6				Sports Medicine and Rehabilitation			
226	MSMR 507	Management and Rehabilitation of Injury	4	8				Sports Medicine and Rehabilitation			
227	MSMR 510	Biostatistics and Epidemiology	3	6				Sports Medicine and Rehabilitation			
228	MSMR 603	Master Research Project	8	16				Sports Medicine and Rehabilitation			
229	MSMR 701	Ethics and Professionalism	3	6				Sports Medicine and Rehabilitation			
Master of Sciences in Biomedicine											
230	MMMM 502	Molecular Basis of Cancer	3	6				1 year Gr SOM Molecular Medicine			
231	MMMM 504	Molecular Basis of Genetic Disease	3	6				1 year Gr SOM Molecular Medicine			
232	MMMM 603	Recombinant Drugs	3	6				Molecular Medicine			
233	MMMM 605	Developmental Biology	3	6				2 year Gr SOM Molecular Medicine			
234	MPTX 603	Introduction to Research Project	6	12				2 year Gr SOM Pharmacology and Toxicology			
Medical Sciences											
235	NUSM 101	Introduction to Medicine	2	4				1 year UG SOM Medical Sciences, 2 year UG SOM Medical Sciences			
236	NUSM 301	Introduction to Immunology, Microbiology and Genetics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SOM Medical Sciences			
237	NUSM 302	Introduction to Statistics for Evidence-Based Practice	3	6	MATH 161 Calculus I (118) (C- and above)			3 year UG SOM Medical Sciences			
238	NUSM 303	Introduction to Anatomy and Histology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			3 year UG SOM Medical Sciences			
239	NUSM 401	Introduction to Being a Physician	2	4	NUSM 310 Capstone Project (7138) (C and above)			Medical Sciences			

240	NUSM 402	Medical Anatomy	8	16	NUSM 310 Capstone Project (7138) (C and above)			Medical Sciences			
241	NUSM 403	Human Genetics	3	6	NUSM 310 Capstone Project (7138) (C and above)			Medical Sciences			
242	NUSM 405	Fuel Metabolism	3	6	NUSM 310 Capstone Project (7138) (C and above)			Medical Sciences			
243	NUSM 408	Pharmacology	2	4	NUSM 310 Capstone Project (7138) (C and above)			Medical Sciences			
Nursing											
244	NUR 103L	Microbiology for Nurses with Lab	4	8				1 year UG SOM Nursing			
245	NUR 112	Introduction to Professional Nursing	2	4				1 year UG SOM Nursing, 2 year UG SOM Nursing			
246	NUR 201	Pathophysiologic Foundations of Nursing Care	3	6				2 year UG SOM Nursing			
247	NUR 203	Pharmacology and Therapeutics	3	6				2 year UG SOM Nursing			
248	NUR 204	Nutrition Essentials for Nursing Clinical Practice	2	4				2 year UG SOM Nursing			
249	NUR 205	Psychology for the Health Practitioner	3	6				3 year UG SOM Nursing			
250	NUR 211	Foundations of Nursing Practice I	3	6				2 year UG SOM Nursing			
251	NUR 221	Nursing Research: Introduction to Critical Appraisal and Evidence-Based Practice	3	6				3 year UG SOM Nursing			
252	NUR 301	Nutrition for Clinical Practice	3	6				Nursing (two year program)			
253	NUR 302	Physical Assessment Across the Lifespan	4	8				Nursing (two year program)			
254	NUR 303	Nursing Care of Older Adults	4	8				Nursing (two year program)			
255	NUR 304	Introduction to Basic Statistics for Evidence Based Practice	3	6				Nursing (two year program)			
256	NUR 311C	Obstetric Nursing + Clinical	5	10				3 year UG SOM Nursing			
257	NUR 312C	Pediatric Nursing + Clinical: Care of Children and Families	4	8				3 year UG SOM Nursing			
258	NUR 401	Education: Principles and Practice for Teaching in Nursing	4	8				Nursing (two year program)			
259	NUR 403	Data Analytics for Quality Improvement in Healthcare	3	6				Nursing (two year program)			
260	NUR 404	Community and Home Health Nursing	4	8				Nursing (two year program)			
261	NUR 406.1	Medical-Surgical Nursing: Complex Surgical Management	4	8				Nursing (two year program)			
262	NUR 411C	Community and Home Health Nursing and Clinical	4	8				4 year UG SOM Nursing			
263	NUR 412	Geriatric Nursing: Nursing Care of the Older Adult	2	4				4 year UG SOM Nursing			
264	NUR 413C	Medical Surgical Nursing 3 - Management of the Complex and Critically Ill Patient and Clinical	7	14				4 year UG SOM Nursing			
265	NUR 421	Capstone I: Developing a Project Proposal in Nursing	3	6				4 year UG SOM Nursing			
PHD											
266	PHDBS 701	Thesis Research	90	180							
267	PHDBS 701-0	Thesis Research	0	0				Biomedical Sciences, Global Health			
268	PHDBS 702	Molecular Basis of Health and Disease	0	0				SoM	Life Sciences		

269	PHDBS 703	Biomedical Research Analysis and Design of Experimentation	0	0				SoM	Life Sciences		
270	PHDBS 704-0	NUSOM seminar	0	0				SoM			
271	PHDBS 705	Biosafety, Animal Welfare and Ethics	4	8				SoM	Life Sciences		
272	PHDBS 706	Advanced Biomedical Research Analysis and Design of Experimentation	0	0				SoM			
273	PHDBS 707	Publication Analysis	0	0				SoM			
274	PHDBS 708	Writing for Biomedical Sciences	0	0				Biomedical Sciences, Global Health	Life Sciences		
275	PHDBS 710	Molecular Pathology of Cancer	3	6				SoM	Life Sciences		
276	PHDBS 711	Molecular Basis of Genetic Disease	3	6				SoM	Life Sciences		
277	PHDBS 721	Drug Discovery I	3	6				SoM	Life Sciences		
278	PHDGH 701	Thesis Research	90	180				Global Health			
279	PHDGH 701-0	Thesis Research	0	0							
280	PHDGH 702	Foundations of Global Health	4	8				Global Health			
281	PHDGH 703	Health Policy and Systems in Global Health	4	8				Global Health			
282	PHDGH 704-0	NUSOM Seminar in Global Health	0	0				Global Health			
283	PHDGH 708	Advanced Methods in Global Health Research	3	6				Global Health			
Public Health											
284	PUBH 501	Principles of Public Health Problem Solving	3	6				Public Health			
285	PUBH 511	Inferential Biostatistics	3	6				Molecular Medicine, Public Health, Sports Medicine and Rehabilitation			
286	PUBH 521	Principles of Analytical Epidemiology	3	6				1 year Gr SOM Public Health, 2 year Gr SOM Molecular Medicine	1 year Gr SOM Molecular Medicine, 2 year Gr SOM Public Health, Pharmacology and Toxicology, Sports Medicine and Rehabilitation		
287	PUBH 528	Qualitative Research Methods	3	6				Public Health			
288	PUBH 552	Principles of Heath Economics and Policy	3	6	PUBH 551 Health Services Management, Health Economic and Health Policy (3696) (C and above)			Public Health			
289	PUBH 561	Graduate Research Seminar I	3	6				Public Health			
290	PUBH 599	Global Nutrition and Sustainability	3	6				1 year Gr SOM Public Health, 2 year Gr SOM Molecular Medicine			
291	PUBH 601	Health Education and Promotion	3	6				Public Health			
292	PUBH 633	Methods in Public Health	3	6				Public Health			
293	PUBH 681	Master’s Project Planning	3	6				Public Health			
SSH											
Academic Success Centre, Communication and Composition											

294	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, 2 year UG SSH Biological Sciences, 3 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
295	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)	SEDS, SMG	SSH, SoM		
Area Studies											
296	EAS 500	Introduction to Eurasia	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
297	EAS 501	General Methodology	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
298	EAS 503	Thesis I	7.5	15	EAS 500 Introduction to Eurasia (1632) (C- and above) AND EAS 501 General Methodology (1633) (C- and above) AND EAS 502 Disciplinary Methodology (1379) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!			
299	EAS 511	Independent Study in Eurasian Studies	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH		
300	EAS 513	Critical Issues in Eurasian Studies	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH		
301	EAS 514	Topics in Eurasian Social Sciences	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH		
302	EAS 700	Introduction to Eurasia	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
303	EAS 701	Critical Issues in Eurasian Studies	2	4				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
304	EAS 702	Elective in Eurasian Humanities	4	8				Instructor's Permission Required. Registration through Add Course form only!			

305	EAS 703	Elective in Eurasian Social Sciences	4	8				Instructor's Permission Required. Registration through Add Course form only!			
306	EAS 704	Elective 2 in Eurasian Humanities	4	8				Instructor's Permission Required. Registration through Add Course form only!			
307	EAS 705	Elective 2 in Social Sciences	4	8				Instructor's Permission Required. Registration through Add Course form only!			
308	EAS 709	Proseminar in Eurasian Social Sciences	4	8				Instructor's Permission Required. Registration through Add Course form only!			
309	EAS 710	Independent Study in Eurasian Studies	4	8				Instructor's Permission Required. Registration through Add Course form only!			
310	EAS 711	Doctoral Seminar in Eurasian Studies I	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
311	EAS 800-0	Dissertation Research in Eurasian Studies	0	0				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
Area Studies, Political Science and International Relations, Sociology and Anthropology											
312	PLS 514/EAS 506/SOC 514	Qualitative Research Methods	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
Chemistry											
313	CHEM 090	Chemistry for Non-Science majors	3	6				Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SSH, World Languages, Literature and Culture			
314	CHEM 091	Survey of Physical Science	3	6				Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH, World Languages, Literature and Culture			
315	CHEM 101	General Chemistry I	3	6				2 year UG SMG, 2 year UG SSH Biological Sciences, 2 year UG SSH Chemistry, SEDS, SMG, SSH, SoM	1 year UG SMG, 1 year UG SSH Biological Sciences, 1 year UG SSH Chemistry		
316	CHEM 101L	General Chemistry I lab	1	2		CHEM 101 General Chemistry I (113) (C and above)		2 year UG SMG, 2 year UG SSH Biological Sciences, 2 year UG SSH Chemistry, SEDS, SMG, SSH, SoM	1 year UG SMG, 1 year UG SSH Biological Sciences, 1 year UG SSH Chemistry		
317	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), Biological Sciences, Chemistry, SoM	SEDS, SMG, SSH		
318	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)		2 year UG SSH, 3 year UG SSH, 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), Chemistry	SEDS, SMG, SSH, SoM		
319	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)			2 year UG SSH, 3 year UG SSH, 4 year UG SSH, Chemistry	SEDS, SMG, SSH, SoM		

320	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)		2 year UG SSH, 3 year UG SSH, 4 year UG SSH, Chemistry	SEDS, SMG, SSH, SoM		
321	CHEM 220	Quantitative Chemical Analysis	3	6	CHEM 102 General Chemistry II (232) (C and above)			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
322	CHEM 220L	Quantitative Chemical Analysis Lab	1	2	CHEM 101L General Chemistry I lab (179) (C and above)	CHEM 220 Quantitative Chemical Analysis (555) (C and above)		5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
323	CHEM 331	Physical Chemistry I	3	6	CHEM 220 Quantitative Chemical Analysis (555) (C and above) AND PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C and above)			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
324	CHEM 331L	Physical Chemistry Lab	1	2		CHEM 331 Physical Chemistry I (634) (C and above)		5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
325	CHEM 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
326	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)		5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
327	CHEM 350	Advanced Inorganic Chemistry	3	6	CHEM 212 Organic Chemistry II (443) (C and above) AND CHEM 212L Organic Chemistry II Lab (444) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)			4 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
328	CHEM 350L	Advanced Inorganic Chemistry Laboratory	1	2	CHEM 212 Organic Chemistry II (443) (C and above) AND CHEM 212L Organic Chemistry II Lab (444) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)	CHEM 350 Advanced Inorganic Chemistry (1905) (C and above)		5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
329	CHEM 400	Chemistry Seminar	3	6	CHEM 380 Research Methods (636) (C and above)			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
330	CHEM 410	Structural Spectroscopy	4	8	CHEM 212 Organic Chemistry II (443) (C and above)			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
331	CHEM 471	Environmental Chemistry	3	6	CHEM 102 General Chemistry II (232) (C and above)			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
332	CHEM 510	Principles of Physical Chemistry	3	6				Chemistry	SSH	SEDS, SMG, SoM	
333	CHEM 518	Applied Polymer Science	4	8				Chemistry	SSH	SEDS, SMG, SoM	
334	CHEM 520	Applied Analytical Chemistry	3	6				Chemistry	SSH	SEDS, SMG, SoM	
335	CHEM 522	Analytical Environmental Chemistry	3	6	CHEM 520 Applied Analytical Chemistry (5267) (C and above)			Chemistry	SSH	SEDS, SMG, SoM	
336	CHEM 530	Inorganic Structures and Reaction Mechanisms	3	6				Chemistry	SSH	SEDS, SMG, SoM	

337	CHEM 531	Nanochemistry and Functional Nanomaterials	3	6				Instructor's Permission Required. Registration through Add Course form only!			
338	CHEM 543	Structural Identification of Organic Compounds	3	6				Chemistry	SSH	SEDS, SMG, SoM	
339	CHEM 591	Scientific Methods in Chemistry	3	6				Chemistry	SSH	SEDS, SMG, SoM	
340	CHEM 691	Thesis Proposal	3	6				Chemistry	SSH	SEDS, SMG, SoM	
341	CHEM 700	Hot Topics in Chemistry	4	8				Chemistry	SSH	SEDS, SMG, SoM	
342	CHEM 711	Polymer Chemistry	4	8				Chemistry	SSH	SEDS, SMG, SoM	
343	CHEM 720	Spectrochemical Methods of analysis	4	8				Chemistry	SSH	SEDS, SMG, SoM	
344	CHEM 722	Advanced Environmental Chemistry	4	8				Chemistry	SSH	SEDS, SMG, SoM	
345	CHEM 730	Chemical Thermodynamics and Kinetics	4	8				Chemistry	SSH	SEDS, SMG, SoM	
346	CHEM 750	Modern Inorganic Chemistry	4	8				Chemistry	SSH	SEDS, SMG, SoM	
347	CHEM 798-0	Thesis Research	0	0				Chemistry	SSH	SEDS, SMG, SoM	
Communication and Composition											
348	WCS 200	Introduction to Public Speaking	3	6	WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)			2 year UG SSH, SoM	SEDS, SMG, SSH		
349	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, SoM	SEDS	SMG, SSH	
350	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, SoM	SEDS	SMG, SSH	
351	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 SSH, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH, SoM	SEDS	SMG, SSH	
352	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))			3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	SEDS, SMG, SSH, SoM		
353	WCS 391	Writing Fellows II – Practicum in Composition & Collaboration	3	6	WCS 390 Writing Fellows I – Composition and Collaboration in Theory and Practice (1969) (B and above)			SEDS, SMG, SSH, SoM			
354	WCS 392	Writing Fellows III - Research & Practice in Writing & Peer Mentorship	3	6	WCS 391 Writing Fellows II – Practicum in Composition & Collaboration (3425) (B and above)			SEDS, SMG, SSH, SoM			
355	WCS 393	Internship: Undergraduate Writing Tutor I	3	6	WCS 392 Writing Fellows III - Research & Practice in Writing & Peer Mentorship (4472) (B and above)			SEDS, SMG, SSH, SoM			
356	WCS 501	Science Communication	3	6				SEDS, SMG, SSH, SoM			
357	WCS 730	From Genre to Style and Back: Writing for PhD Students	4	8				SSH			
Communication and Composition, Languages, Literature and Linguistics											

358	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	
359	WLL 462/WCS 462	Creative Nonfiction	3	6	WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (C and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
360	WLL 465/WCS 465	Creative Writing: Autofiction	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!			
361	WLL 469/WCS 469	Independent Study in Creative Writing	3	6				Instructor's Permission Required. Registration through Add Course form only!			
362	WLL 562/WCS 562	Creative Nonfiction	4	8				Eurasian Studies			
History, Philosophy and Religious Studies											
363	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, 2 year UG SSH Biological Sciences	SEDS, SMG, SSH, SoM	
364	HST 124	Introduction to the History of Medicine	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH, History	SEDS, SMG, SSH, SoM		
365	HST 132	European History II (from 1700)	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH, History	SEDS, SMG, SSH, SoM		
366	HST 172	Middle Eastern History II (from 1800)	3	6				4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH, History	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH	SEDS, SMG, SSH, SoM	
367	HST 205	The Mongol Empire	3	6	Subject "HST" BETWEEN 100 and 199 OR Subject "" BETWEEN 100 and 199 OR Subject "" BETWEEN 100 and 199 OR Subject "" BETWEEN 100 and 199			4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH, History	SEDS, SMG, SSH, SoM		
368	HST 232	Russian History from Riurik to Catherine the Great	3	6				4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SMG (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), History	SEDS, SMG, SSH, SoM		

369	HST 346	Genocide in Modern History	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)			4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SMG (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), History	SEDS, SMG, SSH, SoM		
370	HST 424	Global Histories	3	6	Subject "HST" BETWEEN 100 and 199 OR Subject "HST" BETWEEN 200 and 299 OR Subject "HST" BETWEEN 300 and 399 OR Subject "HST" BETWEEN 400 and 499			4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), History	SEDS, SMG, SSH, SoM		
371	HST 498	Directed Reading	3	6				Instructor's Permission Required. Registration through Add Course form only!			
372	HST 524	Global Histories	4	8				SSH			
373	PHIL 101	Introduction to Philosophy	3	6				SEDS, SMG, SSH, SoM			
374	PHIL 141	Critical Thinking	3	6				SEDS, SMG, SSH, SoM			
375	PHIL 160	Philosophy of Religion	3	6				SEDS, SMG, SSH, SoM			
376	PHIL 210	Ethics	3	6				3 year UG SOM Medical Sciences, 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, 2 year UG SMG, 2 year UG SSH Biological Sciences, 3 year UG SEDS, 3 year UG SMG	SEDS, SMG, SSH, SoM	

377	PHIL 223	Philosophy of Science	3	6				SEDS, SMG, SSH, SoM			
378	PHIL 225	Truth and Reality	3	6				SEDS, SMG, SSH, SoM			
379	PHIL 315	Philosophy of Agency	3	6				SEDS, SMG, SSH, SoM			
History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies											
380	HST 271/TUR 271	History of the Ottoman Empire	3	6	HST 100 History of Kazakhstan (172) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!			
History, Philosophy and Religious Studies, Languages, Literature and Linguistics											
381	HST 274/WLL 274	Texts and Contexts	3	6				History, World Languages, Literature and Culture		SSH	
382	WLL 102 /PHIL 102	Language, Experience, Culture	3	6				2 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	World Languages, Literature and Culture	SEDS, SMG, SSH, SoM	
Kazakh Language and Turkic Studies											
383	KAZ 001	Kazakh Language Placement Test	0	0							
384	KAZ 201	Academic Kazakh I	3	6	KAZ 150 Basic Kazakh (1215) (C- and above) OR KLL "[B1.2] Intermediate"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
385	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 SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
386	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 SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
387	KAZ 313	Kazakh for Business	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
388	KAZ 351	Kazakh Short Stories	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
389	KAZ 353	Kazakh Poetry	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			SEDS, SMG, SSH, SoM			
390	KAZ 356	Kazakh Music History	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
391	KAZ 357	Literature of Alash	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
392	KAZ 359	Professional Kazakh for Medicine	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			SEDS, SMG, SSH, SoM			
393	KAZ 362	Creative Writing in Kazakh Language	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
394	KAZ 363	Language and Globalization	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
395	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 SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		

396	KAZ 371	Contemporary Kazakh Literature	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
397	KAZ 373	Kazakh Terminology	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
398	KAZ 374	Kazakh Diplomacy	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
399	KAZ 376	Language and Culture	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
400	KAZ 377	Intercultural Communication through Film	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			1 year UG SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
401	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 SOM, 4 year UG SEDS, 4 year UG SMG, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
402	KFL 101	Elementary Kazakh as a Foreign Language I	4	8				Instructor's Permission Required. Registration through Add Course form only!			
403	TUR 100	Languages, Cultures, and Communities of the Turkic World	3	6				SEDS, SMG, SSH, SoM			
404	TUR 230	Literatures of Central Asia	3	6				SEDS, SMG, SSH, SoM			
405	TUR 231	Istanbul in Literature and Culture	3	6				SEDS, SMG, SSH, SoM			
406	TUR 301	Introduction to Old Turkic	3	6	KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"			SEDS, SMG, SSH, SoM			
407	TUR 411	Advanced Readings in Turkish Literature	3	6				SEDS, SMG, SSH, SoM			
408	TUR 451	The Turkish Novel	3	6				SEDS, SMG, SSH, SoM			
409	TUR 575	Advanced Topics in Turkic Studies	4	8							
Languages, Literature and Linguistics											
410	CHN 102	Beginning Mandarin II	4	8	CHN 101 Beginning Mandarin I (1384) (C and above)			SSH	SEDS, SMG, SoM		
411	CHN 202	Intermediate Mandarin II	4	8	CHN 201 Intermediate Mandarin I (2181) (C and above)			SSH	SEDS, SMG, SoM		
412	FRE 102	Beginning French II	4	8	FRE 101 Beginning French I (246) (C- and above)			SSH	SEDS, SMG, SoM		
413	FRE 201	Intermediate French I	4	8	FRE 102 Beginning French II (454) (C- and above)			SSH	SEDS, SMG, SoM		
414	FRE 202	Intermediate French II	4	8	FRE 201 Intermediate French I (667) (C- and above)			SSH	SEDS, SMG, SoM		
415	KOR 101	Beginning Korean I	4	8				2 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	
416	KOR 201	Intermediate Korean I	4	8	KOR 102 Beginning Korean II (4791) (C- and above)			SSH	SEDS, SMG, SoM		
417	KOR 301	Advanced Korean I	4	8	KOR 202 Intermediate Korean II (5060) (C- and above)			SSH	SEDS, SMG, SoM		
418	LING 131	Introduction to Linguistics	3	6				2 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	World Languages, Literature and Culture	SEDS, SMG, SSH, SoM	
419	LING 277	Language Diversity and Language Universals	3	6	LING 131 Introduction to Linguistics (1394) (C and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
420	LING 278	Sounds of the World’s Languages	3	6				World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	

421	LING 372	Discourse Analysis	3	6	Subject "LLL" BETWEEN 100 and 199 OR Subject "WLL" BETWEEN 100 and 199 OR WLL 171/ANT 175 Introduction to Linguistic Anthropology (4417) (C- and above) OR Subject "LING" BETWEEN 100 and 199 OR Subject "LING" BETWEEN 100 and 199			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
422	LING 374	Language Contact in Central Asia	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
423	LING 473	Advanced Empirical Methods in Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
424	PER 101	Beginning Persian I	4	8				2 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	3 year UG SSH World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	
425	RFL 103	Intensive Beginning Russian	4	8							
426	RFL 156	Kazakhstan - history, culture, traditions, society, modernity	6	3							
427	RFL 203	Intensive Intermediate Russian	4	8							
428	RFL 211	East in Soviet Russian-language culture: origin and fate	3	6							
429	RFL 303	Intensive Advanced Russian	4	8							
430	RFL 415	Social Problems and Issues of Eurasia	6	3							
431	RFL 469	International relations of Eurasia	3	6							
432	SPA 101	Beginning Spanish I	4	8				2 year UG SSH World Languages, Literatures and Cultures, SEDS, SMG, SSH, SoM, Undeclared SSH	2 year UG SSH, 3 year UG SSH		
433	SPA 201	Intermediate Spanish I	4	8	SPA 102 Beginning Spanish II (1128) (C- and above)			SSH	SEDS, SMG, SoM		
434	WLL 110	Introduction to Literary Studies	3	6				2 year UG SSH World Languages, Literatures and Cultures, Undeclared SSH	World Languages, Literature and Culture	SEDS, SMG, SSH, SoM	
435	WLL 201	World Literature I	3	6				World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
436	WLL 244	Survey of Nineteenth-Century Russian Literature	3	6				World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
437	WLL 246	Survey of Contemporary Russian Literature and Culture	3	6	Subject "WLL" BETWEEN 100 and 199 OR WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above)			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
438	WLL 250	From Page to Screen	3	6				World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
439	WLL 261	Survey of American Literature	3	6				World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
440	WLL 333	Literary Modernism: Writing the Futility and Anarchy of Contemporary History	3	6	Subject "WLL" BETWEEN 200 and 299			World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	
441	WLL 450	Laughter	3	6				World Languages, Literature and Culture	SSH	SEDS, SMG, SoM	

442	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	
443	WLL 498	Languages, Linguistics, and Literatures Capstone I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
Languages, Literature and Linguistics, Sociology and Anthropology											

444	WLL 385/ANT 385	Postcolonial Theory and its Applications in Eurasia	3	6	ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above) OR SOC 101 Introduction to Sociology (508) (C- and above) OR WLL 121 Introduction to Cultural Studies (243) (C- and above) OR WLL 102 /PHIL 102 Language, Experience, Culture (2481) (C- and above)			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH	SEDS, SMG, SSH, SoM	
Physics											
445	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			
446	PHYS 201	Introductory Astronomy I	3	6				5 year UG SEDS, 5 year UG SSH, Physics	SEDS, SMG, SSH, SoM		
447	PHYS 221	Classical Mechanics I	3	6	(PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above)) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			Physics	SEDS, SMG, SSH		
448	PHYS 261	Modern Physics with laboratory	4	8	MATH 162 Calculus II (170) (C- and above) AND (PHYS 152 Introductory Physics II with Lab (1176) (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above))			Physics	SEDS, SMG, SSH		
449	PHYS 291	Introduction to Quantum Technologies	3	6				5 year UG SEDS, 5 year UG SSH, Physics	SEDS, SMG, SSH, SoM		
450	PHYS 315	Mathematical Methods of Physics	3	6	(PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)) AND MATH 274 Introduction to Differential Equations (484) (C- and above)			Physics	SEDS, SMG, SSH		
451	PHYS 361	Classical Electrodynamics I	3	6		PHYS 315 Applied Mathematical Methods (653) (D and above) OR PHYS 411 Advanced Mathematical Physics (3142) (D and above)		Physics	SEDS, SMG, SSH		
452	PHYS 395	Research Methods	3	6				Physics			
453	PHYS 452	Quantum Mechanics II	3	6	PHYS 451 Quantum Mechanics I (1415) (C- and above)			Physics			
454	PHYS 463	Astrophysics and General Relativity	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 221 Classical Mechanics I (652) (C- and above) AND MATH 274 Introduction to Differential Equations (484) (C- and above)			Physics	SEDS, SMG, SSH, SoM		

455	PHYS 473	Introduction to Solid State Physics	4	8	PHYS 261 Modern Physics with laboratory (125) (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	SEDS, SMG, SSH, SoM		
456	PHYS 498	Honors Thesis Research	0	0				Instructor's Permission Required. Registration through Add Course form only!			
457	PHYS 505	Classical Mechanics	3	6				Physics	SEDS, SMG, SSH, SoM		
458	PHYS 515	Classical Electrodynamics	3	6				Physics	SEDS, SMG, SSH, SoM		
459	PHYS 530	Solid State Physics	4	8				Physics	SEDS, SMG, SSH, SoM		
460	PHYS 550	Advanced Mathematical Physics	3	6				Physics	SEDS, SMG, SSH, SoM		
461	PHYS 563	General Relativity	3	6				Physics	SEDS, SMG, SSH, SoM		
462	PHYS 591	Research Methods	3	6				Physics	SEDS, SMG, SSH, SoM		
463	PHYS 600	Thesis Research	0	0				Physics			
464	PHYS 700-0	Thesis Research	0	0				Physics	SSH	SEDS, SMG, SoM	
465	PHYS 705	Classical Mechanics	4	8				Physics	SEDS, SMG, SSH, SoM		
466	PHYS 715	Classical Electrodynamics	4	8				Physics	SEDS, SMG, SSH, SoM		
467	PHYS 730	Solid State Physics	4	8				Physics	SEDS, SMG, SSH, SoM		
468	PHYS 750	Advanced Mathematical Physics	4	8				Physics	SEDS, SMG, SSH, SoM		
469	PHYS 763	General Relativity	4	8				Physics	SEDS, SMG, SSH, SoM		
470	PHYS 765	Advanced Physics Laboratory	3	6				Physics	SEDS, SMG, SSH, SoM		
471	PHYS 791	Research methods and ethics	3	6				Physics	SEDS, SMG, SSH, SoM		
Political Science and International Relations											
472	PLS 100	Introduction to the Politics of Central Asia	3	6				5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH	Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
473	PLS 101	Introduction to Political Science	3	6				5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH	Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
474	PLS 102	The Political Challenges of Technologies and Science: An Introduction	3	6				5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH	Biological Sciences, Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
475	PLS 120	Introduction to Political Theory	3	6				5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH	Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SMG, SSH, SoM	
476	PLS 140	Introduction to Comparative Politics	3	6				5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH	Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SMG, SSH, SoM	
477	PLS 150	Introduction to International Relations	3	6				5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH	Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SMG, SSH, SoM	

478	PLS 210	Political Science Research Methods	3	6				5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations		SEDS, SMG, SSH, SoM	
479	PLS 211	Quantitative Methods	3	6			ECON 211 Economic Statistics (2280) (C- and above)	5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
480	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 SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
481	PLS 330	Politics and Governance of Eurasia	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
482	PLS 341	Politics of Development	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
483	PLS 342	Political Corruption	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
484	PLS 354	Introduction to International Law	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 140 Introduction to Comparative Politics (223) (C- and above) AND 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 SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
485	PLS 370	Law, Politics and Society	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
486	PLS 391	Intermediate Special Topics in Comparative Politics	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
487	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!			
488	PLS 416	Experimental Political Science	3	6	PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations			
489	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 SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations			
490	PLS 423	Immigration Theory	3	6				5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations			
491	PLS 431	Politics and Governance of the Russian Federation	3	6	PLS 210 Political Science Research Methods (129) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		

492	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 SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations			
493	PLS 448	Comparative Electoral System	3	6	PLS 140 Introduction to Comparative Politics (223) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
494	PLS 457	International Security and Conflict	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations			
495	PLS 458	International Organization	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 SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations			
496	PLS 459	International Conflict Processes	3	6	PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) OR PLS 211 Quantitative Methods (221) (C- and above)			5 year UG SEDS, 5 year UG SSH, 6 year UG SEDS, 6 year UG SSH, Political Science and International Relations			
497	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!			
498	PLS 510	Advanced Research I	4	8				Political Science and International Relations	SEDS, SMG, SSH, SoM		
499	PLS 522	Just War Theory	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
500	PLS 523	Immigration Theory	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
501	PLS 540	Core Seminar in Comparative Politics	4	8				Political Science and International Relations			
502	PLS 541	Advanced Topics in Comparative Politics	4	8				Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
503	PLS 550	Core Seminar in IR	4	8				Political Science and International Relations			
504	PLS 558	International Organization	4	8	PLS 550 Core Seminar in IR (1372) (C- and above)			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
505	PLS 581	Independent Study in Political Science	4	8				Instructor's Permission Required. Registration through Add Course form only!			
506	PLS 598	MA Thesis I	6	12				Political Science and International Relations			
SSH											
507	SSH 300	School of Sciences and Humanities Internship	3	6				Instructor's Permission Required. Registration through Add Course form only!			
508	SSH 301	School of Sciences and Humanities Internship: Second Experience	3	6				Instructor's Permission Required. Registration through Add Course form only!			
Sociology and Anthropology											
509	ANT 101	Being Human: An Introduction to Four Field Anthropology	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences	SEDS, SMG, SSH	

510	ANT 140	World Prehistory	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences	SEDS, SMG, SSH	
511	ANT 204/PLS 204	Capitalism in Crisis	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH	SEDS, SMG, SSH, SoM	
512	ANT 233	Cavemen, Mammoths, and Sabertooths: Stone Age Archaeology in Eurasia	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH	SEDS, SMG, SSH, SoM	
513	ANT 240	Laboratory Methods in Archaeology	3	6				Anthropology		SEDS, SMG, SSH, SoM	
514	ANT 306	Anthropology of Performance	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH	SEDS, SMG, SSH, SoM	
515	ANT 314	Politics of Identity in Eurasia	3	6	Subject "HST" BETWEEN 100 and 499 OR Subject "SOC" BETWEEN 100 and 499 OR Subject "ANT" BETWEEN 100 and 499 OR Subject "PLS" BETWEEN 100 and 499 OR Subject "SOC" BETWEEN 100 and 499 OR Subject "ANT" BETWEEN 100 and 499			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH	SEDS, SMG, SSH, SoM	
516	ANT 333	Anthropology of Space	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH	SEDS, SMG, SSH, SoM	
517	ANT 400	Research Assistance in Anthropology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
518	ANT 401	Research Assistance in Anthropology	1	2							
519	ANT 421	Sport and Construction of Identity	3	6				3 year UG SSH Anthropology, 4 year UG SSH Anthropology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
520	ANT 481	Anthropology of Entrepreneurship	3	6	ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above)			3 year UG SSH Anthropology, 4 year UG SSH Anthropology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
521	ANT 498	Capstone Seminar I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
522	ANT 521	Sport and Construction of Identity	4	8				SSH	GSB, GSE, GSPP, SEDS, SMG, SoM		
523	ANT 585	Postcolonial Theory and Its Application in Eurasia	4	8				SSH	GSB, GSE, GSPP, SEDS, SMG, SoM		
524	SOC 101	Introduction to Sociology	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences	SEDS, SMG, SSH	
525	SOC 201	Social Science Research Methods	3	6				3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology	Anthropology, Sociology		
526	SOC 203	Quantitative Methods in Sociology	3	6				4 year UG SSH Sociology	Anthropology, Sociology		
527	SOC 210	Gender and Society	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences	SEDS, SMG, SSH	
528	SOC 215	Sociology of Race and Ethnicity	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences	SEDS, SMG, SSH	
529	SOC 217	Sociology of the Family	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH, 3 year UG SSH Biological Sciences	SEDS, SMG, SSH	

530	SOC 301	Classical Sociological Theory	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above) OR ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above)			4 year UG SSH Sociology	Sociology		
531	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)			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH	SEDS, SMG, SSH, SoM	
532	SOC 401	Research Assistance in Sociology	1	2				Instructor's Permission Required. Registration through Add Course form only!			
533	SOC 410	Violence against women: An Intersectional Approach	3	6	Subject "SOC" BETWEEN 200 and 299 OR Subject "SOC" BETWEEN 200 and 299 OR Subject "SOC" BETWEEN 300 and 399 OR Subject "SOC" BETWEEN 300 and 399			4 year UG SSH Sociology	Anthropology, Sociology		
534	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)			4 year UG SSH Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
535	SOC 415	Social Problems and Issues in Eurasia	3	6				4 year UG SSH Sociology	Anthropology, Sociology	SEDS, SMG, SSH, SoM	
536	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	SEDS, SMG, SSH, SoM	
537	SOC 498	Capstone Seminar Part I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
538	SOC 515	Social Problems and Issues in Eurasia	4	8				SSH	GSB, GSE, GSPP, SEDS, SMG, SoM		
Sociology and Anthropology, Sociology and Anthropology											
539	ANT 214/SOC 214	Qualitative Methods	3	6				4 year UG SSH Sociology	Anthropology, Sociology		
540	ANT 386/SOC 386	Social Challenges of Climate Change	3	6				5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH	SEDS, SMG, SSH, SoM	
SoE											
Chemical and Materials Engineering											
541	CHME 200	Basic Principles and Calculations in Chemical Engineering	3	6				2 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
542	CHME 201	Chemical Engineering Thermodynamics	3	6				2 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
543	CHME 222	Inorganic and Analytical Chemistry	3	6				2 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
544	CHME 300	Heat and Mass Transfer	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
545	CHME 301	Applied Mathematics for Process Design	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
546	CHME 302	Instrumental Methods of Analysis for Engineers	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
547	CHME 351	Environment and Development	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
548	CHME 353	Electrochemical Engineering	3	6				3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		

549	CHME 400	Process Design and Simulation	3	6	CHME 300 Heat and Mass Transfer (5952) (D and above) AND CHME 304 Chemical Reaction Engineering (6168) (D and above)			4 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
550	CHME 401	Chemical Engineering Lab II	3	6				4 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
551	CHME 453	Multiphase Systems	3	6	CHME 202 Fluid Mechanics (5543) (D and above)			4 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
552	DCHME 700-0	Thesis Research	0	0				Chemical Engineering	Science, Engineering and Technology		
553	DCHME 755	Integrated Computational Materials Engineering	4	8				Chemical Engineering	Science, Engineering and Technology		
554	DCHME 761	Advanced Chemical Reaction Engineering	4	8				Chemical Engineering	Science, Engineering and Technology		
555	DCHME 762	Advanced Materials Processing	4	8				Chemical Engineering	Science, Engineering and Technology		
556	MBME 601	Master Thesis I	12	24				2 year Gr SEDS Biomedical Engineering			
557	MBME 603	Biomaterials Science & Engineering	3	6				1 year Gr SEDS Biomedical 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	SMG	
558	MBME 604	Biosensors	3	6				1 year Gr SEDS Biomedical 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	SMG	
559	MBME 610	Anatomy and Physiology for Biomedical Engineers	3	6				1 year Gr SEDS Biomedical 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	SMG	

560	MBME 710	Biophotonics	3	6				2 year Gr SEDS Biomedical 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	SMG	
561	MCHME 601	Master Thesis I	12	24				2 year Gr SEDS Chemical and Materials Engineering			
562	MCHME 603	Advanced Materials Processing	3	6				1 year Gr SEDS Chemical and Materials 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	SMG	
563	MCHME 604	Advanced Materials Characterization Methods	3	6				1 year Gr SEDS Chemical and Materials 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	SMG	
564	MCHME 605	Advanced Chemical Reaction Engineering	3	6				1 year Gr SEDS Chemical and Materials 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	SMG	

565	MCHME 714	Computational Materials Engineering	3	6				2 year Gr SEDS Chemical and Materials 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	SMG	
Civil Engineering											
566	MSC 600	Research Methods and Ethics	3	6				2 year Gr SEDS Engineering Management	1 year Gr SEDS Engineering Management	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	
567	MSC 602	Advanced Applied Mathematics	3	6				1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SEDS Mechanical and Aerospace Engineering, Biomedical Engineering, Chemical and Materials Engineering	1 year Gr SEDS Civil and Environmental Engineering, 2 year Gr SEDS Electrical and Computer Engineering		
568	MSC 615	Advanced Statistics and Probability	3	6				1 year Gr SEDS Engineering Management			
Civil Engineering, Communication and Composition											
569	MSC 601	Technical Communication	3	6				SEDS, SMG			
Civil and Environmental Engineering											
570	CEE 200	Structural Mechanics I	3	6				2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	Civil and Environmental Engineering, Mechanical and Aerospace Engineering	SMG	
571	CEE 201	Environmental Chemistry	3	6				2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	Civil and Environmental Engineering, Mechanical and Aerospace Engineering		
572	CEE 204	Civil Engineering CAD and Surveying	3	6				2 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)	Civil and Environmental Engineering		

573	CEE 300	Structural Design – Concrete	3	6	CEE 203 Structural Analysis (5500) (D and above)			3 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)	Civil and Environmental Engineering		
574	CEE 302	Geotechnical Engineering	3	6				3 year UG SEDS Civil and Environmental Engineering	Civil and Environmental Engineering		
575	CEE 304	Fluid Mechanics	3	6				3 year UG SEDS Civil and Environmental Engineering	Civil and Environmental Engineering		
576	CEE 306	Civil Engineering Materials	3	6	ENG 102 Engineering Materials I (4708) (D and above)			3 year UG SEDS Civil and Environmental Engineering	Civil and Environmental Engineering		
577	CEE 401	Construction Technology and Management	3	6	CEE 306 Civil Engineering Materials (5897) (D and above)			4 year UG SEDS Civil and Environmental Engineering	Civil and Environmental Engineering		
578	CEE 450	Behavior and Design of Structural System	3	6	CEE 300 Structural Design – Concrete (5895) (D and above) AND CEE 301 Structural Design – Steel (6157) (D and above)			4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)	Civil and Environmental Engineering		
579	CEE 460	Water Supply and Distribution Management	3	6	CEE 305 Hydraulics and Hydrology (6177) (D and above)			4 year UG SEDS Civil and Environmental Engineering	Civil and Environmental Engineering		
580	CEE 462	Pavement Design and Performance	3	6	CEE 306 Civil Engineering Materials (5897) (D and above) AND CEE 303 Geotechnical Design (6158) (D and above)			4 year UG SEDS Civil and Environmental Engineering	1 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
581	CEE 465	Structure and Properties of Concrete Materials	3	6	CEE 306 Civil Engineering Materials (5897) (D and above)			4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)	Civil and Environmental Engineering		
582	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, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)			
583	DCEE 700-0	Thesis Research	0	0				Civil Engineering			
584	DCEE 750	Finite Element Methods	4	8				1 year PhD SEDS Civil Engineering	SEDS		
585	DCEE 757	Advanced Environmental Chemistry	4	8				1 year PhD SEDS Civil Engineering	SEDS		
586	DCEE 760	Advanced Foundation Engineering	4	8				Civil Engineering			
587	DCEE 761	Advanced Soil Mechanics	4	8				1 year PhD SEDS Civil Engineering	SEDS		
588	DCEE 772	Engineering Management and Engineering Economy	4	8				Civil Engineering			

589	EMEM 507	Project Management	3	6				1 year Gr SEDS Engineering Management	2 year Gr SEDS Engineering Management	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, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics	
590	EMEM 523	Supply Chain Management	3	6				2 year Gr SEDS Engineering Management	1 year Gr SEDS Engineering Management	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, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics	
591	EMEM 533	Engineering Management and Engineering Economy	3	6				1 year Gr SEDS Engineering Management	2 year Gr SEDS Engineering Management	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, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics	

592	EMEM 535	Managing Product and Service Development	3	6				2 year Gr SEDS Engineering Management	1 year Gr SEDS Engineering Management	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	
593	EMEM 537	Engineering Decision Tools	3	6				2 year Gr SEDS Engineering Management	1 year Gr SEDS Engineering Management	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	

594	EMEM 538	Knowledge and Innovation Management	3	6				1 year Gr SEDS Engineering Management	2 year Gr SEDS Engineering Management	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	
595	EMEM 539	Big Data and Information Management	3	6				1 year PhD SEDS Civil Engineering, 2 year Gr SEDS Engineering Management	1 year Gr SEDS Engineering Management	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	
596	EMEM 549	Capstone Project I	3	6				2 year Gr SEDS Engineering Management	1 year Gr SEDS Engineering Management		
597	MCEE 601	Master Thesis I	12	24	MCEE 600 Research Seminar (4692) (P)			2 year Gr SEDS Civil and Environmental Engineering			

598	MCEE 603	Finite Element Methods	3	6				1 year Gr SEDS Civil and Environmental Engineering	1 year Gr SEDS Mechanical and Aerospace 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	
599	MCEE 604	Advanced Soil Mechanics	3	6				1 year Gr SEDS Civil and Environmental 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	SMG	
600	MCEE 605	Advanced Environmental Chemistry	3	6				1 year Gr SEDS Civil and Environmental 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	SMG	
601	MCEE 708	Advanced Foundation Engineering	3	6				2 year Gr SEDS Civil and Environmental Engineering			
Economics, SMG											
602	ECON 220/SMG 200	Resource Economics	3	6	MATH 161 Calculus I (118) (C- and above) OR MATH 162 Calculus II (170) (C- and above)		ECON 201 Intermediate Microeconomics (133) (C- and above) OR ECON 202 Intermediate Macroeconomics (207) (C- and above)	3 year UG SMG, 4 year UG SMG, 4 year UG SMG (pending graduation)	SEDS, SSH		
Electrical and Computer Engineering											

603	DELCE 700-0	Thesis Research	0	0				Electrical Engineering			
604	DELCE 753	Stochastic Processes	4	8				Electrical Engineering	Science, Engineering and Technology	SEDS	
605	DELCE 760	Advanced System Modelling and Control	4	8				Electrical Engineering	Science, Engineering and Technology		
606	DELCE 761	Advanced Data Structures and Algorithms	4	8				Electrical Engineering	Science, Engineering and Technology	SEDS	
607	ELCE 200	Circuits Theory I	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			2 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
608	ELCE 203	Signals and Systems	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			2 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
609	ELCE 203L	Signals and Systems Laboratory	1	2		ELCE 203 Signals and Systems (4993) (D and above)		2 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
610	ELCE 204	Solid State Devices	3	6	ENG 103 Engineering Materials II (4818) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
611	ELCE 205	Discrete Mathematics	3	6	MATH 162 Calculus II (170) (C- and above)			2 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
612	ELCE 301	Electronic Circuits	3	6	ELCE 201 Circuit Theory (5507) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
613	ELCE 301L	Electronic Circuits Laboratory	1	2	ELCE 201L Circuit Theory Laboratory (6179) (C- and above)	ELCE 301 Electronic Circuits (5918) (C- and above)		3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
614	ELCE 304	Computer Networks	3	6	ENG 101 Programming for Engineers (4517) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
615	ELCE 304L	Computer Networks Laboratory	1	2		ELCE 304 Computer Networks (5920) (D and above)		3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
616	ELCE 306	Linear Control Theory	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
617	ELCE 307	Digital Signal Processing	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
618	ELCE 350	Electromagnetics I	3	6	PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) AND ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) AND ELCE 200 Introduction to Electrical Circuits (4991) (C- and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
619	ELCE 452	Renewable Energy and Electric Vehicles	3	6	ELCE 200 Introduction to Electrical Circuits (4991) (C- and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
620	ELCE 455	Machine Learning with Python	3	6	ENG 101 Programming for Engineers (4517) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
621	ELCE 461	Industrial Automation	3	6	ELCE 202 Digital Logic Design (4992) (C- and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		

622	ELCE 462	Wireless Networks	3	6	ENG 201 Applied Probability and Statistics (5505) (C- and above) AND (ELCE 308 Communication Systems (5922) (C- and above) OR ELCE 304 Computer Networks (5920) (C- and above))			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
623	ELCE 463	Network Science: Methods and Applications	3	6	ENG 101 Programming for Engineers (4517) (C- and above) AND MATH 162 Calculus II (170) (C- and above) AND ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above)			4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
624	ELCE 465	PCB Design and Manufacturing	3	6				4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
625	ELCE 466	RF and Microwave Circuits	3	6				4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering		
626	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 Chemical and Materials Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering, 1 year UG SEDS Undeclared	SEDS, SMG		
627	MECE 601	Master Thesis I	12	24				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering		
628	MECE 603	Advanced Data Structures and Algorithms	3	6				1 year Gr SEDS Electrical and Computer 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		

629	MECE 605	Statistics and Probability for Electrical and Computer Engineers	3	6				1 year Gr SEDS Electrical and Computer 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		
630	MECE 606	Embedded Systems and Applications	3	6				1 year Gr SEDS Electrical and Computer 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		
631	MECE 724	System Modelling and Control	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering		
632	MECE 726	Modern Semiconductor Devices and Systems	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer 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	
633	MECE 727	Biosensors	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering		
634	MECE 728	Renewable and Sustainable Energy	3	6				2 year Gr SEDS Electrical and Computer Engineering	1 year Gr SEDS Electrical and Computer Engineering		
Geosciences											
635	GEOL 201	Mineralogy	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			2 year UG SMG Geology	Mining Engineering		
636	GEOL 202	Geologic Maps and Cross-Sections	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)			2 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		

637	GEOL 207	Geomorphology	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above) OR GEOL 102 Fundamentals of Geology (4772) (C- and above)			2 year UG SMG Geology			
638	GEOL 301	Sedimentary petrology	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)	GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)		3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
639	GEOL 302	Thermodynamics and Geochemistry	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
640	GEOL 303	Structural Geology and Tectonics	3	6	(GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)) AND GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	4 year UG SEDS, 4 year UG SEDS (pending graduation)	
641	GEOL 305	Geology of ore deposits	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above) OR GEOL 201 Mineralogy (5122) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	4 year UG SEDS, 4 year UG SEDS (pending graduation)	
642	GEOL 308	Environmental Geochemistry	3	6							
643	GEOL 309	Hydrogeology	3	6				3 year UG SMG Geology	4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering	4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SSH, 4 year UG SSH (pending graduation)	
644	GEOL 310	Field Geology 2	3	6	GEOL 303 Structural Geology and Tectonics (5874) (D and above) OR GEOL 301 Igneous and metamorphic petrology (5886) (D and above)			3 year UG SMG Geology, 4 year UG SMG Geology	4 year UG SEDS, 4 year UG SEDS (pending graduation)		
645	GEOL 401	Petroleum Geology and Geochemistry	3	6				4 year UG SMG Geology, 4 year UG SMG Petroleum Engineering, 5 year UG SMG	4 year UG SEDS, 4 year UG SEDS (pending graduation)		
646	GEOL 404	Research Project I	3	6				4 year UG SMG Geology			
Mechanical and Aerospace Engineering											
647	DMAE 700	Thesis Research	89	178							
648	DMAE 700-0	Thesis Research	0	0				Mechanical Engineering			
649	DMAE 701	Advanced Applied Mathematics	4	8				Mechanical Engineering	SEDS		
650	DMAE 751	Modern Control Engineering	4	8				Mechanical Engineering	SEDS		
651	DMAE 763	Computational Fluid Structure Interaction	4	8				Mechanical Engineering	SEDS		
652	DMAE 765	Advanced Manufacturing Processes and Strategies	4	8				Mechanical Engineering			
653	ENG 100	Introduction to Engineering	3	6				1 year UG SEDS Chemical and Materials Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering, Undeclared SEDS	Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, SMG		

654	ENG 200	Engineering Mathematics III (Differential Equations and Linear Algebra)	3	6	MATH 162 Calculus II (170) (C and above)			2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS 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	Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, SMG	
655	ENG 400	Capstone Project	3	6				4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering	5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Civil and Environmental Engineering		
656	MAE 201	Computer Aided Design	3	6				4 year UG SEDS Mechanical and Aerospace Engineering			
657	MAE 300	Fluid Mechanics I	3	6	PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering		
658	MAE 301	Engineering Thermodynamics	3	6				3 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering		
659	MAE 303	Control Systems	3	6				3 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering		
660	MAE 307	Engineering Dynamics II	3	6	MAE 206 Engineering Dynamics I (5535) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering		
661	MAE 400	Heat Transfer	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) AND MAE 301 Engineering Thermodynamics (5927) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering		
662	MAE 401	Mechanical Systems Design	3	6	MAE 302 Machine Elements Design (5928) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering		
663	MAE 450	Additive Manufacturing	3	6	MAE 205 Material and Manufacturing I (5534) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)	5 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Mechanical and Aerospace Engineering	
664	MAE 453	Fire Engineering	3	6	MAE 305 Fluid Mechanics II (6173) (D and above) AND MAE 301 Engineering Thermodynamics (5927) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering		
665	MAE 454	Aerodynamics	3	6	MAE 300 Fluid Mechanics I (5926) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)	5 year UG SEDS Mechanical and Aerospace Engineering		
666	MAE 455	Flight Performance and Mechanics	3	6	MAE 340 Aerodynamics (6576) (D and above) OR MAE 305 Fluid Mechanics II (6173) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)	Mechanical and Aerospace Engineering		
667	MAE 462	Multiphase Systems	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) AND MAE 305 Fluid Mechanics II (6173) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 6 year UG SEDS, 6 year UG SEDS (pending graduation)	Mechanical and Aerospace Engineering		
668	MMAE 600	Research Seminar	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	2 year Gr SEDS Mechanical and Aerospace Engineering		
669	MMAE 601	Master Thesis I	12	24	MMAE 600 Research Seminar (4703) (P)			2 year Gr SEDS Mechanical and Aerospace Engineering			

670	MMAE 603	Modern Control Engineering	3	6				1 year Gr SEDS Mechanical and Aerospace 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	SMG	
671	MMAE 605	Advanced Manufacturing Processes and Strategies	3	6				1 year Gr SEDS Mechanical and Aerospace 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	SMG	
672	MMAE 702	Sustainable Vehicle Transportation Systems	3	6				2 year Gr SEDS Mechanical and Aerospace 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	SMG	
673	MMAE 713	Computational Fluid Structure Interaction	3	6				2 year Gr SEDS Mechanical and Aerospace Engineering			
Mining Engineering											
674	MINE 301	Mine Surveying and Geographic Information Systems	3	6	SMG 100 Introduction to Natural Resources Extraction (4773) (C- and above)			3 year UG SMG Mining Engineering	3 year UG SMG, 4 year UG SMG		
675	MINE 302	Geomechanics	3	6				3 year UG SMG Mining Engineering	3 year UG SMG, 4 year UG SMG		
676	MINE 401	Mining Geotechnical Engineering	3	6	MINE 302 Geomechanics (5878) (C- and above)			4 year UG SMG Mining Engineering			
677	MINE 402	Coal Mining	3	6				4 year UG SMG Mining Engineering			
678	MINE 489	Research Project I	3	6				4 year UG SMG Mining Engineering			
679	MINE 501	Foundations of Mining	3	6				1 year Gr SMG Mining Engineering			
680	MINE 502	Geology for Mining Engineers	3	6				1 year Gr SMG Mining Engineering			
681	MINE 503	Applied Geostatistics	3	6				1 year Gr SMG Mining Engineering			
682	MINE 504	Mine Geomechanics	3	6				1 year Gr SMG Mining Engineering			

683	MINE 505	Advanced Mine Ventilation	3	6				1 year Gr SMG Mining Engineering			
684	MINE 602	Mine Maintenance and Services	3	6	MINE 502 Geology for Mining Engineers (3691) (C- and above)			2 year Gr SMG Mining Engineering			
685	MINE 605	Mechanized Excavation and Tunnelling	3	6				2 year Gr SMG Mining Engineering			
686	MINE 607	Geometallurgy	3	6				2 year Gr SMG Mining Engineering			
687	MINE 690	Thesis I	6	12				2 year Gr SMG Mining Engineering			
688	MINE 701	Advanced Mine Geomechanics	4	8				1 year PhD SMG Mining Engineering	Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
689	MINE 801	Advanced Mechanized Excavation and Tunneling	4	8				1 year PhD SMG Mining Engineering	1 year PhD SEDS Chemical Engineering, 1 year PhD SEDS Civil Engineering, 1 year PhD SEDS Computer Science, 1 year PhD SEDS Electrical Engineering, 1 year PhD SEDS Mechanical Engineering, 1 year PhD SEDS Robotics Engineering, 1 year PhD SEDS Science, Engineering and Technology		
690	MINE 803	Advanced Geometallurgy	4	8				1 year PhD SMG Mining Engineering	1 year PhD SEDS Chemical Engineering, 1 year PhD SEDS Civil Engineering, 1 year PhD SEDS Computer Science, 1 year PhD SEDS Electrical Engineering, 1 year PhD SEDS Mechanical Engineering, 1 year PhD SEDS Robotics Engineering, 1 year PhD SEDS Science, Engineering and Technology		
691	MINE 890-0	Thesis Research	0	0				4 year Gr SMG (pending graduation), Mining Engineering			
Petroleum Engineering											
692	PETE 201	Fluid Mechanics and Thermodynamics	3	6	MATH 161 Calculus I (118) (C- and above)			2 year UG SMG	3 year UG SMG		
693	PETE 301	Numerical Methods for Petroleum Engineers	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering		
694	PETE 302	Reservoir Engineering I with Laboratory works	4	8	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above)			3 year UG SMG Petroleum Engineering, 5 year UG SMG	4 year UG SMG Petroleum Engineering		
695	PETE 303	Well Logging and Formation Evaluation	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering		
696	PETE 304	Well Completion and Stimulation	3	6	PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering		
697	PETE 400	Capstone Design Project I	3	6	PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above) AND PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			4 year UG SMG Petroleum Engineering, 5 year UG SMG			
698	PETE 405	Enhanced Oil Recovery	3	6	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above)			4 year UG SMG Petroleum Engineering, 5 year UG SMG			

699	PETE 408	Gas Engineering	3	6	PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above) AND PETE 307 Production Engineering (6146) (C- and above)			4 year UG SMG Petroleum Engineering, 5 year UG SMG			
700	PETE 501	Foundations of Petroleum Engineering	3	6				1 year Gr SMG Petroleum Engineering			
701	PETE 502	Petroleum Geology	3	6				1 year Gr SMG Petroleum Engineering			
702	PETE 503	Fluid Flow Through Porous Media	3	6				1 year Gr SMG Petroleum Engineering			
703	PETE 504	Advanced Formation Evaluation	3	6				1 year Gr SMG Petroleum Engineering			
704	PETE 505	Advanced Drilling Engineering	3	6				1 year Gr SMG Petroleum Engineering			
705	PETE 509	Advanced Well Testing and Evaluation	3	6				2 year Gr SMG (pending graduation), 2 year Gr SMG Petroleum Engineering			
706	PETE 600	Thesis I	6	12				2 year Gr SMG Petroleum Engineering			
707	PETE 601	Petroleum Data Analytics	3	6				2 year Gr SMG Petroleum Engineering			
708	PETE 602	Research Seminar	3	6				2 year Gr SMG Petroleum Engineering			
709	PETE 620	Thesis II	12	24				3 year Gr SMG (pending graduation)			
710	PETE 802	Fluid Flow Through Porous Media	4	8				1 year PhD SMG Petroleum Engineering	1 year PhD SEDS Chemical Engineering, 1 year PhD SEDS Civil Engineering, 1 year PhD SEDS Computer Science, 1 year PhD SEDS Electrical Engineering, 1 year PhD SEDS Mechanical Engineering, 1 year PhD SEDS Robotics Engineering, 1 year PhD SEDS Science, Engineering and Technology		
711	PETE 805	Special Topics in Petroleum Engineering: Data Analytics	4	8				1 year PhD SMG Petroleum Engineering	1 year PhD SEDS Chemical Engineering, 1 year PhD SEDS Civil Engineering, 1 year PhD SEDS Computer Science, 1 year PhD SEDS Electrical Engineering, 1 year PhD SEDS Mechanical Engineering, 1 year PhD SEDS Robotics Engineering, 1 year PhD SEDS Science, Engineering and Technology		
712	PETE 890	Doctoral Thesis	90	180							
713	PETE 890-0	Thesis Research	0	0				1 year PhD SMG Petroleum Engineering, 2 year PhD SMG Petroleum Engineering, 3 year PhD SMG Petroleum Engineering, 4 year Gr SMG (pending graduation), 4 year PhD SMG Petroleum Engineering			
SMG											
714	SMG 100	Introduction to Natural Resources Extraction	3	6				1 year UG SMG	SEDS, SSH		
715	SMG 210	Strength of Materials	3	6	SMG 100 Introduction to Natural Resources Extraction (4773) (C- and above) AND MATH 162 Calculus II (170) (C- and above) AND PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C- and above)			2 year UG SMG	3 year UG SMG		

716	SMG 710	Advanced Statistics	3	6				1 year PhD SMG Mining Engineering, 1 year PhD SMG Petroleum Engineering	1 year PhD SEDS Chemical Engineering, 1 year PhD SEDS Civil Engineering, 1 year PhD SEDS Computer Science, 1 year PhD SEDS Electrical Engineering, 1 year PhD SEDS Mechanical Engineering, 1 year PhD SEDS Robotics Engineering, 1 year PhD SEDS Science, Engineering and Technology, 1 year PhD SSH Eurasian Studies, 1 year PhD SSH Life Sciences, 1 year PhD SSH Mathematics, 1 year PhD SSH Physics		
School of Engineering											
717	DENG 700-0	Thesis Research	0	0				Science, Engineering and Technology	SEDS		
718	DENG 782	Research Methods and Ethics	3	6				1 year PhD SEDS Chemical Engineering, 1 year PhD SEDS Civil Engineering, 1 year PhD SEDS Computer Science, 1 year PhD SEDS Electrical Engineering, 1 year PhD SEDS Mechanical Engineering, 1 year PhD SEDS Robotics Engineering, 1 year PhD SEDS Science, Engineering and Technology	2 year PhD SEDS Chemical Engineering, 2 year PhD SEDS Civil Engineering, 2 year PhD SEDS Computer Science, 2 year PhD SEDS Electrical Engineering, 2 year PhD SEDS Mechanical Engineering, 2 year PhD SEDS Robotics Engineering, 2 year PhD SEDS Science, Engineering and Technology	3 year PhD SEDS Chemical Engineering, 3 year PhD SEDS Civil Engineering, 3 year PhD SEDS Computer Science, 3 year PhD SEDS Electrical Engineering, 3 year PhD SEDS Mechanical Engineering, 3 year PhD SEDS Robotics Engineering, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Chemical Engineering, 4 year PhD SEDS Civil Engineering, 4 year PhD SEDS Computer Science, 4 year PhD SEDS Electrical Engineering, 4 year PhD SEDS Mechanical Engineering, 4 year PhD SEDS Robotics Engineering, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology (pending graduation), SMG	
719	DENG 789	Doctoral Seminar I	3	6	DENG 785 PhD Proposal Oral Defence (2604) (P)			Science, Engineering and Technology			
720	DENG 790	Doctoral Seminar II	3	6	DENG 789 Doctoral Seminar I (4598) (P)			Science, Engineering and Technology			
721	DENG 791	Doctoral Seminar III	3	6	DENG 790 Doctoral Seminar II (4599) (P)			Science, Engineering and Technology			
722	DENG 792	Doctoral Seminar IV	3	6	DENG 791 Doctoral Seminar III (4600) (P)			Science, Engineering and Technology			
723	DENG 793	Doctoral Seminar V	3	6	DENG 792 Doctoral Seminar IV (4601) (P)			Science, Engineering and Technology			
724	DENG 794	Dissertation Research	12	24	DENG 785 PhD Proposal Oral Defence (2604) (P)			Science, Engineering and Technology			
725	DENG 795	Research at Host University	6	12	DENG 785 PhD Proposal Oral Defence (2604) (P)			Science, Engineering and Technology			

726	DENG 796	Thesis Completion	0	0				Science, Engineering and Technology			
727	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			
728	DENG 798	Doctoral Seminar VI	3	6	DENG 793 Doctoral Seminar V (4602) (P)			Science, Engineering and Technology			
729	DENG 799	Doctoral Seminar VII	3	6	DENG 798 Doctoral Seminar VI (4607) (P)			Science, Engineering and Technology			
SCAI											
Computer Science											
730	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			
731	CSCI 115	Programming Fundamentals	4	8			CSCI 101 Introduction to Computational Sciences (147) (D and above) OR CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 151 Programming for Scientists and Engineers (192) (D and above) OR ENG 101 Programming for Engineers (4517) (D and above)	Biological Sciences, Chemistry, Mathematics, SoM	SSH		
732	CSCI 151	Programming for Scientists and Engineers	4	8			CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 115 Programming Fundamentals (5257) (D and above) OR ENG 101 Programming for Engineers (4517) (B- and above)	Computer Science, Robotics Engineering, Robotics and Mechatronics	1 year UG SSH Physics, Undeclared SEDS	SEDS, SMG, SSH	
733	CSCI 231	Computer Systems and Organization	3	6	CSCI 151 Programming for Scientists and Engineers (192) (C- and above)			Computer Science			

734	CSCI 235	Programming Languages	4	8	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
735	CSCI 281	Human-Computer Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science			
736	CSCI 299	Internship I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
737	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)	Computer Science			
738	CSCI 341	Database Systems	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		
739	CSCI 344	Data Mining and Decision Support	3	6	CSCI 341 Database Systems (195) (C- and above) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		
740	CSCI 355	Compiler Construction	3	6	CSCI 235 Programming Languages (638) (C and above) AND CSCI 272 Formal Languages (4689) (C and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		
741	CSCI 361	Software Engineering	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		
742	CSCI 390	Artificial Intelligence	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		
743	CSCI 399	Internship II	3	6				Instructor's Permission Required. Registration through Add Course form only!			
744	CSCI 399F	Internship II - F	6	12				Instructor's Permission Required. Registration through Add Course form only!			
745	CSCI 408	Senior Project I	3	6				4 year UG SEDS Computer Science			
746	CSCI 434	Information Security	3	6		CSCI 333 Computer Networks (1145) (D and above)		3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		
747	CSCI 437	Internet of Things: Technologies and Applications	3	6		CSCI 333 Computer Networks (1145) (D and above)		3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		
748	CSCI 471	Complexity and Computability	3	6	MATH 251 Discrete Mathematics (85) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		
749	CSCI 494	Deep Learning	3	6	CSCI 390 Artificial Intelligence (643) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science	1 year UG SEDS Computer Science, 2 year UG SEDS Computer Science		

750	CSCI 501	Software Principles and Practice	3	6				Computer Science, Robotics	Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Data Science, Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering	SSH	
751	CSCI 511	CS Track Core-Theory	3	6				Computer Science, Data Science	Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics	SSH	
752	CSCI 515	Modeling and Simulation for Computer Science	3	6				Computer Science, Data Science	Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics	SSH	
753	CSCI 535	Wireless Communication and Networks	3	6				Computer Science, Data Science			
754	CSCI 585	Computer Vision	3	6				Computer Science, Data Science	Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics	SSH	
755	CSCI 594	Deep Learning	3	6				Computer Science, Data Science	Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics		

756	CSCI 693	Thesis Proposal	3	6	SEDS 591 Research Methods (3184) (C- and above)			2 year Gr SEDS Computer Science			
757	CSCI 700-0	Thesis Research	0	0				Computer Science			
758	CSCI 701	Advanced Software Principles and Practice	4	8				Computer Science	Robotics Engineering	SSH	
759	CSCI 711	Advanced Theory of Computation	4	8				Computer Science	Robotics Engineering	SSH	
760	CSCI 735	Advanced Wireless Communication and Networks	4	8				Computer Science	Robotics Engineering	SSH	
761	CSCI 785	Advanced Computer Vision	4	8				Computer Science	Robotics Engineering	SSH	
762	CSCI 794	Advanced Deep Learning	4	8				Computer Science	Robotics Engineering	SSH	
763	DS 501	Fundamentals of Data Science	3	6				Data Science			
764	DS 502	Probability and Statistics for Data Science	3	6				Data Science	Computer Science		
765	DS 507	Database Management Systems	3	6				Data Science	Computer Science		
766	DS 551	Process and Project Management	3	6				Data Science	Computer Science		
767	DS 552	Data-Driven Innovation	3	6				Data Science	Computer Science		
768	DS 693	Thesis Proposal	3	6	SEDS 591 Research Methods (3184) (C- and above)			2 year Gr SEDS Data Science			
769	SEDS 503	Laboratory Practicum	3	6	SEDS 502 Teaching Practicum (2824) (P)			Computer Science, Data Science, Robotics			
770	SEDS 591	Research Methods	3	6				Computer Science, Data Science, Robotics			
Mathematics											
771	MATH 161	Calculus I	4	8				Biological Sciences, Chemistry, Mathematics, Physics, SEDS, SMG	SSH, SoM		
772	MATH 162	Calculus II	4	8	MATH 161 Calculus I (118) (C and above)			5 year UG SSH, Chemistry, Mathematics, Physics, SEDS, SMG	Undeclared SSH	SSH, SoM	
773	MATH 251	Discrete Mathematics	3	6	MATH 161 Calculus I (118) (C and above)			Computer Science, Mathematics	SEDS, SMG, SSH, SoM		
774	MATH 263	Calculus III	4	8	MATH 162 Calculus II (170) (C and above)			Mathematics, Physics	SEDS, SMG, SSH, SoM		
775	MATH 273	Linear Algebra with Applications	4	8	MATH 161 Calculus I (118) (C and above)	MATH 162 Calculus II (170) (C and above)		Computer Science, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics	SEDS, SMG, SSH, SoM		
776	MATH 274	Introduction to Differential Equations	3	6	MATH 162 Calculus II (170) (C and above)			Mathematics, Physics	Chemistry, Robotics Engineering, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
777	MATH 301	Introduction to Number Theory	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
778	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		
779	MATH 310	Applied Statistical Methods	3	6	MATH 161 Calculus I (118) (C and above)		MATH 321 Probability (482) (C and above)	Biological Sciences	2 year UG SMG Mining Engineering, 2 year UG SMG Petroleum Engineering	SEDS, SMG, SSH, SoM	
780	MATH 321	Probability	3	6	MATH 162 Calculus II (170) (C and above)		ECON 211 Economic Statistics (2280) (C- and above) OR PLS 211 Quantitative Methods (221) (C- and above)	Mathematics, Robotics Engineering, Robotics and Mechatronics	Computer Science	SEDS, SMG, SSH, SoM	

781	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		
782	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		
783	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		
784	MATH 371	Introduction to Mathematical Biology	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
785	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		
786	MATH 425	Stochastic Processes	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
787	MATH 446	Time Series Analysis	3	6	MATH 322 Mathematical Statistics (1165) (C and above)						
788	MATH 449	Statistical Programming	3	6	MATH 322 Mathematical Statistics (1165) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
789	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		
790	MATH 477	Applied Finite Element Methods	3	6	MATH 351 Numerical Methods with Applications (1166) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
791	MATH 480	Complex Analysis	3	6	MATH 263 Calculus III (81) (C and above)			Mathematics	SEDS, SMG, SSH, SoM		
792	MATH 481	Partial Differential Equations	3	6	MATH 274 Introduction to Differential Equations (484) (C and above)	MATH 480 Complex Analysis (618) (C and above)		Mathematics	SEDS, SMG, SSH, SoM		
793	MATH 510	Measure Theory and Applications	3	6				Applied Mathematics	SEDS, SMG, SSH, SoM		
794	MATH 517	Scientific Modeling and Simulation with Mathematics	3	6				Applied Mathematics	SEDS, SMG, SSH, SoM		
795	MATH 518	Applied Finite Element Analysis	3	6				Applied Mathematics	SEDS, SMG, SSH, SoM		
796	MATH 519	Scientific Computing	3	6				Applied Mathematics	SEDS, SMG, SSH, SoM		
797	MATH 540	Statistical Learning	3	6				Applied Mathematics	SEDS, SMG, SSH, SoM		
798	MATH 541	Data Analysis and Statistical Learning	3	6	MATH 540 Statistical Learning (2340) (B- and above)			Applied Mathematics	SEDS, SMG, SSH, SoM		
799	MATH 542	Statistical Programming	3	6				Applied Mathematics	SEDS, SMG, SSH, SoM		
800	MATH 592	Research Seminar	3	6				Applied Mathematics			
801	MATH 680	Potential Theory and Polynomial Approximation	3	6				Applied Mathematics	SEDS, SMG, SSH, SoM		
802	MATH 700	Doctoral Thesis	90	180							

803	MATH 700-0	Thesis Research	0	0				Mathematics	SEDS, SMG, SSH, SoM		
804	MATH 701	Real Analysis	4	8				Mathematics			
805	MATH 721	Nonlinear Differential Equations with Applications	4	8				Mathematics			
806	MATH 742	Advanced statistical programming	4	8				Mathematics			
Robotics and Mechatronics											
807	ROBT 201	Mechanics: Statics and Dynamics	3	6	MATH 162 Calculus II (170) (C- and above) AND (PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C- and above) OR PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above))			2 year UG SMG, Robotics Engineering, Robotics and Mechatronics	Biological Sciences, Chemistry, Mathematics, SoM		
808	ROBT 203	Electrical and Electronic Circuits I with Lab	4	8	MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above) OR (PHYS 141 Physics I for non-majors with Lab (1437) (C- and above) AND PHYS 142 Physics II for non-majors with Lab (1438) (C- and above)))			Robotics Engineering, Robotics and Mechatronics	Biological Sciences, Chemistry, Mathematics, SoM		
809	ROBT 205	Signals and Sensing with Lab	4	8	MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above))			Robotics Engineering, Robotics and Mechatronics	Biological Sciences, Chemistry, Mathematics, SoM		
810	ROBT 301	Mechanical Design with CAD and Machining Laboratory	4	8	ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above)			Robotics Engineering, Robotics and Mechatronics	Biological Sciences, Chemistry, Mathematics, SoM		
811	ROBT 303	Linear Control Theory with Lab	4	8	ROBT 202 System Dynamics and Modeling (68) (C- and above)			Robotics Engineering, Robotics and Mechatronics	Biological Sciences, Chemistry, Mathematics, SoM		
812	ROBT 308	Industrial Automation	3	6				Robotics Engineering, Robotics and Mechatronics	Physics, Undeclared SEDS		
813	ROBT 310	Image Processing	3	6	MATH 162 Calculus II (170) (C- and above) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			Robotics Engineering, Robotics and Mechatronics	Physics, Undeclared SEDS		
814	ROBT 403	Robotics II: Control, Modeling and Learning with Laboratory	4	8	ROBT 303 Linear Control Theory with Lab (623) (C- and above) AND ROBT 312 Robotics I: Kinematics and Dynamics (5263) (C- and above)			Robotics Engineering, Robotics and Mechatronics	Physics, Undeclared SEDS		
815	ROBT 407	Machine Learning with Applications	3	6	MATH 273 Linear Algebra with Applications (84) (C- and above) AND MATH 321 Probability (482) (C- and above) AND CSCI 152 Performance and Data Structures (489) (C- and above)			Robotics Engineering, Robotics and Mechatronics	Physics, Undeclared SEDS		
816	ROBT 414	Human-Robot Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Robotics Engineering, Robotics and Mechatronics	Physics, Undeclared SEDS		

817	ROBT 501	Robot Manipulation and Mobility	3	6				Robotics	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		
818	ROBT 503	Dynamic Systems and Control	3	6				Robotics	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		
819	ROBT 611	Industrial Robotics	3	6	ROBT 501 Advanced Robot Kinematics (2263) (C- and above)			Computer Science, Robotics	Biomedical Engineering, Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Data Science, Electrical and Computer Engineering, Electrical and Electronic Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering	Applied Mathematics, Physics	
820	ROBT 613	Brain-Machine Interfaces	3	6				Robotics	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		

821	ROBT 615	Optimal Control and Planning	3	6	ROBT 503 System Dynamics and Control (2264) (C- and above)			Robotics	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		
822	ROBT 691	Thesis Proposal	6	12				Robotics	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		
823	ROBT 700	Thesis Research	89	178							
824	ROBT 700-0	Thesis Research	0	0				Robotics Engineering	Science, Engineering and Technology		
825	ROBT 701	Advanced Robot Manipulation and Mobility	4	8				Robotics Engineering	Science, Engineering and Technology		
826	ROBT 703	Advanced Optimal Control and Planning	4	8				Robotics Engineering	Science, Engineering and Technology		
827	ROBT 709	Advanced Robot Dynamics and Control	4	8				Robotics Engineering	Science, Engineering and Technology		