

Course Requirements and Registration Priorities Fall 2020

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
CPS											
NUFYP											
1	FBIO 011	Introduction to Biology	0	0							
2	FBUS 011	Introduction to Business	0	0							
3	FCHM 011	Introduction to Chemistry	0	0							
4	FEAP 010	Foundation English for Academic Purposes 1	0	0							
5	FGEO 011	Introduction to Geography	0	0							
6	FHUM 011	Introduction to Humanities and Social Science	0	0							
7	FMAT 010	Foundation Mathematics 1	0	0							
8	FPHY 011	Introduction to Physics	0	0							
NUZYP											
9	ZCOM 040	Academic Communications for Graduate Studies I	0	0							
10	ZRDG 030	Academic Reading for Graduate Studies I	0	0							
11	ZWRT 020	Academic Writing for Graduate Studies I	0	0							
GSB											
GSB											
12	BUS 101	Core Course in Business	3	6				3 year UG SEDS, 3 year UG SMG, 3 year UG SSH	4 year UG SEDS, 4 year UG SSH	SEDS, SMG, SSH, SoM	
13	GSBF 501	Team Building and Business Communications	1	2							
14	GSBF 511	Applied Data Analytics I	2.5	5							
15	GSBF 512	Principles of Finance	2.5	5							
16	GSBF 516	Financial Markets and Institutions	2	4							
17	GSBF 517	Macroeconomics for Finance	2.5	5							
18	GSBF 522	Entrepreneurial Finance	2	4							
19	GSBF 533	Islamic Banking and Finance	2	4							
20	GSBF 535	Insurance and Actuarial Science	2	4							
21	MBA 01	Consequential Leadership	1	2							
22	MBA 02	Business Mathematics and Business Computer Application	1	2							
23	MBA 03	Financial Accounting	2	4							
24	MBA 04	Probability and Statistics	2	4							
25	MBA 05	Business Communication	2	4							
26	MBA 07	Managerial Effectiveness	2	4							
27	MBA 08	Managerial Economics	2	4							
28	MBA 12	Operations Management	2	4				For GSB programs only! Registration by School admin.			

29	MBA 16	Entrepreneurship	2	4							
30	MBA 20	Practicum Project	2.5	5							
31	MBAE 14	Innovation Process	2	4							
32	MBAE 17	China Business Environment	2	4							
33	MBAE 2	Emerging Markets Strategy	2	4					For GSB programs only! Registration by School admin.		
34	MBAE 20	Marketing Research	2	4							
35	MBAE 8	Leadership	2	4					For GSB programs only! Registration by School admin.		
36	MSF 02	Thesis Preparation Seminar	2	4							
37	MSF 03	Advanced Econometrics	2	4					For GSB programs only! Registration by School admin.		
38	MSF 04	Private Equity	2	4					For GSB programs only! Registration by School admin.		
39	MSF 08	Microeconomics for Finance	2.5	5							
40	MSF 09	Corporate Governance	2	4							

GSPP											
Master in Public Administration											

41	MPA 602	Public Administration in Theory and Practice	4	8					1 year GSPP Public Administration		
42	MPA 603	Economic Applications for Public Managers	4	8					1 year GSPP Public Administration		
43	MPA 605	Research Methods for Public Managers	4	8					1 year GSPP Public Administration		
44	MPA 699	Master's Project with Overseas Component	0	0					2 year GSPP Public Administration		
45	MPE 617	Institutions and development policies	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
46	MPE 625	Ethical Challenges in Governance	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
47	MPE 626	Open Governance	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
48	MPE 627	Public Policy and Health Issues	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
49	MPE 628	Good Governance and Corruption	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
50	MPE 629	Political Economy of State-Building	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
51	MPE 639	International Financial Policy	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
52	MPE 646	Communications for Public Leadership	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
53	MPE 671	Game Theory and Public Policy	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
54	MPE 680	Urban Mobility Policy in the Age of the Smart City	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM
55	MPE 685	Water Resources Policy and Management	4	8					2 year GSPP Public Administration, 2 year GSPP Public Policy	Public Administration, Public Policy	GSB, GSE, SEDS, SMG, SSH, SoM

Master in Public Policy											
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56	MPP 601	Microeconomics and Public Policy	4	8					1 year GSPP Public Policy		
57	MPP 611	Statistics for Public Policy	4	8					1 year GSPP Public Policy		
58	MPP 612	Public Policy Research and Evaluation	4	8					1 year GSPP Public Policy		
59	MPP 621	Public Policy and Analysis	4	8					1 year GSPP Public Policy		
60	MPP 631	Politics and Public Policy	4	8					2 year GSPP Public Policy		
61	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											
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62	DPE 626	Open Governance	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
63	DPE 627	Public Policy and Health Issues	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
64	DPE 628	Good Governance and Corruption	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
65	DPE 639	International Financial Policy	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
66	DPE 671	Game Theory and Public Policy	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
67	DPE 680	Urban Mobility Policy in the Age of the Smart City	4	8				2 year GSPP PhD Public Policy	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
68	DPP 600	Developing Dissertation Research	0	0				Public Policy			
69	DPP 601	Microeconomics in the Public Sector	4	8				1 year GSPP PhD Public Policy			
70	DPP 603	Public Administration and Management	4	8				1 year GSPP PhD Public Policy			
71	DPP 611	Statistics in Public Policy	4	8				1 year GSPP PhD Public Policy			
72	DPP 614	Advanced Quantitative Methods	4	8				2 year GSPP PhD Public Policy			
73	DPP 616	Advanced Qualitative Methods	4	8				2 year GSPP PhD Public Policy			
74	DPP 621	Public Policy and Analysis	4	8				1 year GSPP PhD Public Policy			
75	DPP 690-0	Thesis Preparation and Writing	0	0				3 year GSPP PhD Public Policy, 4 year GSPP			
GSE											
MA in Multilingual Education											
76	EDML 601	Introduction to Linguistics	3	6				1 year GSE MA in Multil.Education			

77	EDML 610	Foundations of Multilingual Education	3	6			1 year GSE MA in Multil.Education		
78	EDML 613	The Multilingual School	3	6			2 year GSE MA in Multil.Education		
79	EDML 614	Multilingual curriculum development and assessment	3	6			2 year GSE MA in Multil.Education		
80	EDML 627	Application of CLIL in Teaching	3	6			2 year GSE MA in Multil.Education		
81	EDML 629	Multiliteracies: Teaching Language and Literacy for a Multilingual Context	3	6			2 year GSE MA in Multil.Education		
82	EDML 690	Thesis Research I	3	6			2 year GSE MA in Multil.Education		
MSc Educational Leadership HE									
83	EDHE 609	Introduction to Educational Leadership: Higher Education	3	6			1 year GSE Educ.Leadership		
84	EDHE 610	Applying Educational Leadership in Kazakhstan	3	6			1 year GSE Educ.Leadership		
85	EDHE 623	Transformations of Higher Education in Eurasia/Post-Soviet States	3	6			1 year GSE Educ.Leadership		
86	EDHE 691	Thesis Seminar II	3	6			2 year GSE Educ.Leadership		
87	EDUC 505	Academic English 1	1.5	3			1 year GSE Educ.Leadership		
88	EDUC 507	Academic English III	1.5	3			2 year GSE Educ.Leadership		
89	EDUC 510	Advanced English for Education Professionals 1	3	6			1 year GSE MA in Multil.Education		
90	EDUC 512	English for Thesis Writing I	3	6			2 year GSE MA in Multil.Education		
91	EDUC 571	Basic Kazakh	3	6			1 year GSE Educ.Leadership, 1 year GSE MA in Multil.Education, 1 year GSE PhD Education		
92	EDUC 590	Academic English Writing for Doctoral Students I	3	6			1 year GSE PhD Education		
93	EDUC 602	Educational Context and Reform in Kazakhstan	3	6			1 year GSE Educ.Leadership, 1 year GSE MA in Multil.Education		
94	EDUC 607	Research Methods 1	3	6			1 year GSE Educ.Leadership, 1 year GSE MA in Multil.Education		
95	EDUC 701	Education Research Methods	3	6			1 year GSE PhD Education		
96	EDUC 709	Introduction to Scholarship in Education	3	6			1 year GSE PhD Education		
97	EDUC 712	Educational Policy and Reform	3	6			1 year GSE PhD Education		
98	EDUC 727	Exploring the Research Topic 1	0	0			1 year GSE PhD Education		
99	EDUC 730	Preparation for Proposal Defence	0	0			2 year GSE PhD Education		
100	EDUC 740	Doctoral Seminar	3	6			3 year GSE PhD Education		
101	EDUC 750	Dissertation Research	9	18			3 year GSE PhD Education, 4 year GSE PhD Education		
102	EDUC 800	International Study	12	24			2 year GSE PhD Education		
MSc Educational Leadership IE									
103	EDIE 609	Introduction to Educational Leadership: Inclusive Education	3	6			1 year GSE Educ.Leadership		
104	EDIE 651	Inclusive Education: Policy Perspectives	3	6			1 year GSE Educ.Leadership		
105	EDIE 652	Curriculum Design: perspectives on Addressing Barriers to Teaching and Learning (Including SEN)	3	6			1 year GSE Educ.Leadership		

106	EDIE 691	Thesis Seminar II	3	6			2 year GSE Educ.Leadership		
MSc Educational Leadership SE									
107	EDSE 609	Introduction to Educational Leadership: School Education	3	6			1 year GSE Educ.Leadership		
108	EDSE 623	Foundations of Early Childhood Education	3	6			1 year GSE Educ.Leadership		
109	EDSE 633	Curriculum Design and Management	3	6			1 year GSE Educ.Leadership		
110	EDSE 691	Thesis Seminar II	3	6			2 year GSE Educ.Leadership		
111	EDSE 693	Thesis Seminar IV	9	18			2 year GSE Educ.Leadership		
Other									
Other									
112	TEST 001	TEST	3	6					
SoM									
MMM									
113	MMMM 501	Molecular Basis of Infection	3	6			1 year Gr SOM Molecular Medicine		
114	MMMM 502	Molecular Basis of Cancer	3	6			1 year Gr SOM Molecular Medicine		
115	MMMM 503	Bioethics in Research: Principles and Practice	3	6			2 year Gr SOM Molecular Medicine		
116	MMMM 504	Molecular Basis of Genetic Disease	3	6			1 year Gr SOM Molecular Medicine		
117	MMMM 513	Molecular Basis of Neurological Disorders	3	6			2 year Gr SOM Molecular Medicine		
118	MMMM 603	Recombinant Drugs	3	6			2 year Gr SOM Molecular Medicine		
119	MMMM 605	Developmental Biology	3	6			2 year Gr SOM Molecular Medicine		
MPTOX									
120	MPTX 501	Organ system and common diseases	3	6			1 year Gr SOM Pharmacology and Toxicology		
121	MPTX 502	Cellular Communications	3	6			1 year Gr SOM Pharmacology and Toxicology		
122	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		
123	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		
124	MPTX 604E	Scientific Writing	3	6			1 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Molecular Medicine	Molecular Medicine	
MSMR									
125	MSMR 501	Musculoskeletal System	3	6			1 year Gr SOM Sports Medicine and Rehabilitation		
126	MSMR 503	Exercise Genetics, Physiology and Endocrinology	3	6			1 year Gr SOM Sports Medicine and Rehabilitation		
127	MSMR 504	Pharmacology in Sports and Rehabilitation	3	6			1 year Gr SOM Sports Medicine and Rehabilitation		
128	MSMR 505	Exercise and Biomechanics	3	6			1 year Gr SOM Sports Medicine and Rehabilitation		
129	MSMR 510	Biostatistics and Epidemiology	3	6			1 year Gr SOM Sports Medicine and Rehabilitation		
Medical Sciences									

130	NUSM 101	Introduction to Medicine	2	4			Medical Sciences	Biological Sciences		
Nursing										
131	NUR 103L	Microbiology for Nurses with Lab	4	8			Nursing			
132	NUR 112	Introduction to Professional Nursing	2	4			Nursing			
133	NUR 121	Introduction to Basic Statistics for Evidence-Based Practice	3	6			Nursing			
134	NUR 201	Pathophysiologic Foundations of Nursing Care	3	6			Nursing			
135	NUR 203	Pharmacology and Therapeutics	3	6			Nursing			
136	NUR 211	Foundations of Nursing Practice I	3	6			Nursing			
137	NUR 301	Nutrition for Clinical Practice	3	6			Applied Nursing, Nursing (two year program)			
138	NUR 302	Physical Assessment Across the Lifespan	4	8			Applied Nursing, Nursing (two year program)			
139	NUR 303	Nursing Care of Older Adults	4	8			Applied Nursing, Nursing (two year program)			
140	NUR 304	Introduction to Basic Statistics for Evidence Based Practice	3	6			Applied Nursing, Nursing (two year program)			
141	NUR 401	Education: Principles and Practice for Teaching in Nursing	4	8			Applied Nursing, Nursing (two year program)			
142	NUR 403	Data Analytics for Quality Improvement in Healthcare	3	6			Applied Nursing, Nursing (two year program)			
143	NUR 404	Community and Home Health Nursing	4	8			Applied Nursing, Nursing (two year program)			
144	NUR 406.1	Medical-Surgical Nursing: Complex Surgical Management	4	8			Applied Nursing, Nursing (two year program)			
PHD										
145	PHDBS 701-0	Thesis Research	0	0			1 year PhD SOM BioMed Sciences, 2 year PhD SOM BioMed Sciences			
146	PHDBS 702	Molecular Basis of Health and Disease	4	8			1 year PhD SOM BioMed Sciences, 1 year PhD SSH Life Sciences, 2 year PhD SOM BioMed Sciences, Life Sciences			
147	PHDBS 703	Biomedical Research Analysis and Design of Experimentation	4	8			1 year PhD SOM BioMed Sciences, 1 year PhD SSH Life Sciences, 2 year PhD SOM BioMed Sciences, Life Sciences			
148	PHDBS 704-0	NUSOM seminar	0	0			1 year PhD SOM BioMed Sciences, 1 year PhD SSH Life Sciences, 2 year PhD SOM BioMed Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SSH		
149	PHDBS 705	Biosafety, Animal Welfare and Ethics	4	8			1 year PhD SOM BioMed Sciences, 1 year PhD SSH Life Sciences, 2 year PhD SOM BioMed Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SSH		
150	PHDBS 706	Advanced Biomedical Research Analysis and Design of Experimentation	4	8			2 year PhD SOM BioMed Sciences			
151	PHDBS 707	Publication Analysis	4	8			2 year PhD SOM BioMed Sciences			
152	PHDBS 708	Writing for Biomedical Sciences	3	6			2 year PhD SOM BioMed Sciences			
Public Health										
153	PUBH 501	Principles of Public Health Problem Solving	3	6			1 year Gr SOM Public Health			
154	PUBH 511	Inferential Biostatistics	3	6			1 year Gr SOM Molecular Medicine, 1 year Gr SOM Public Health			
155	PUBH 521	Principles of Analytical Epidemiology	3	6			1 year Gr SOM Public Health, 2 year Gr SOM Molecular Medicine			
156	PUBH 528	Qualitative Research Methods	3	6			1 year Gr SOM Public Health			
157	PUBH 531	Emerging Infectious Diseases	3	6			1 year Gr SOM Public Health, 2 year Gr SOM Molecular Medicine			

158	PUBH 552	Principles of Health Economics and Policy	3	6	PUBH 551 Health Services Management, Health Economic and Health Policy (3696) (C and above)		2 year Gr SOM Public Health		
159	PUBH 561	Graduate Research Seminar I	3	6			2 year Gr SOM Public Health		
160	PUBH 601	Health Education and Promotion	3	6			2 year Gr SOM Public Health		
161	PUBH 633	Methods in Public Health	3	6			2 year Gr SOM Public Health		
162	PUBH 681	Master's Project Planning	3	6			2 year Gr SOM Public Health		
SMG									
Mining Engineering									
163	MINE 301	Mine Surveying and Geographic Information Systems	3	6			3 year UG SMG, 5 year UG SEDS, 5 year UG SSH		
164	MINE 302	Geomechanics	3	6			3 year UG SMG, 5 year UG SEDS, 5 year UG SSH		
165	MINE 304	Resource Estimation	3	6			3 year UG SMG, 5 year UG SEDS, 5 year UG SSH		
166	MINE 405	Mine Ventilation	3	6			3 year UG SMG, 5 year UG SEDS, 5 year UG SSH		
167	MINE 501	Foundations of Mining	3	6			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
168	MINE 502	Geology for Mining Engineers	3	6			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
169	MINE 503	Applied Geostatistics	3	6			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
170	MINE 504	Mine Geomechanics	3	6			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
171	MINE 505	Advanced Mine Ventilation	3	6			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
172	MINE 601	Mine Management and Sustainability	3	6			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
173	MINE 602	Mine Maintenance and Services	3	6	MINE 502 Geology for Mining Engineers (3691) (C- and above)		Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
174	MINE 605	Mechanized Excavation and Tunnelling	3	6			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
175	MINE 606	Underground Hard Rock Geotechnical Engineering	3	6			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
176	MINE 690	Thesis I	6	12			Mining Engineering		
177	MINE 701	Advanced Mine Geomechanics	4	8			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
178	MINE 801	Advanced Mechanized Excavation and Tunneling	4	8			Mining Engineering	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM	
179	MINE 890-0	Thesis Research	0	0			Mining Engineering		
Petroleum Engineering									
180	PETE 201	Fluid Mechanics and Thermodynamics	3	6	MATH 161 Calculus I (118) (D and above) OR CHEM 101 General Chemistry I (113) (D and above)		5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS	
181	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)		5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS	

182	PETE 302	Reservoir Engineering I with Laboratory works	4	8	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above)			5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS		
183	PETE 303	Well Logging and Formation Evaluation	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS		
184	PETE 304	Well Completion and Stimulation	3	6	PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS		
185	PETE 501	Foundations of Petroleum Engineering	3	6				Petroleum Engineering			
186	PETE 502	Petroleum Geology	3	6				Petroleum Engineering			
187	PETE 503	Fluid Flow Through Porous Media	3	6				Petroleum Engineering			
188	PETE 504	Advanced Formation Evaluation	3	6				Petroleum Engineering			
189	PETE 505	Advanced Drilling Engineering	3	6				Petroleum Engineering			
190	PETE 509	Advanced Well Testing and Evaluation	3	6				Petroleum Engineering			
191	PETE 600	Thesis I	6	12				Petroleum Engineering			
192	PETE 601	Petroleum Data Analytics	3	6				Petroleum Engineering			
193	PETE 602	Research Seminar	3	6				Petroleum Engineering			
194	PETE 701	Advanced Well Engineering	4	8				Petroleum Engineering	Chemical Engineering, Civil Engineering, Computer Science, Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
195	PETE 806	Advanced Special Core Analysis	4	8				Petroleum Engineering	Chemical Engineering, Civil Engineering, Computer Science, Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology		
196	PETE 890	Thesis Research	0	0				Petroleum Engineering		SEDS	
School of Mining and Geosciences											
197	GEOL 201	Mineralogy	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			2 year UG SMG, 5 year UG SEDS, 5 year UG SSH			
198	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, 5 year UG SEDS, 5 year UG SSH			
199	GEOL 206	Field Geology 1	3	6	GEOL 202 Geologic Maps and Cross-Sections (5123) (C- and above)			3 year UG SMG, 5 year UG SEDS, 5 year UG SSH			
200	GEOL 301	Igneous and metamorphic petrology	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)			3 year UG SMG, 5 year UG SEDS, 5 year UG SSH			
201	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, 5 year UG SEDS, 5 year UG SSH			

202	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, 5 year UG SEDS, 5 year UG SSH			
203	GEOL 304	Geophysics	3	6	GEOL 204 Sedimentology and stratigraphy (5475) (D and above)			3 year UG SMG, 5 year UG SEDS, 5 year UG SSH			
204	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, 5 year UG SEDS, 5 year UG SSH			
205	SMG 710	Research Methods and Statistics	3	6				GSB, GSE, GSPP, SEDS, SMG, SSH, SoM			
SSH											
Area Studies											
206	EAS 500	Introduction to Eurasia	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
207	EAS 501	General Methodology	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
208	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)			2 year Gr SSH Eurasian Studies			
209	EAS 511	Independent Study in Eurasian Studies	4	8				Instructor's Permission Required. Registration through Add Course form only!			
210	EAS 700	Introduction to Eurasia	4	8				GSB, GSE, GSPP, SEDS, SMG, SSH, SoM			
211	EAS 701	Critical Issues in Eurasian Studies	2	4				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
212	EAS 702	Elective in Eurasian Humanities	4	8				Instructor's Permission Required. Registration through Add Course form only!			
213	EAS 703	Elective in Eurasian Social Sciences	4	8				Instructor's Permission Required. Registration through Add Course form only!			
214	EAS 708	Proseminar in Eurasian Humanities	4	8				Instructor's Permission Required. Registration through Add Course form only!			
215	EAS 710	Independent Study in Eurasian Studies	4	8				Instructor's Permission Required. Registration through Add Course form only!			
216	EAS 711	Doctoral Seminar in Eurasian Studies I	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
Area Studies, Political Science and International Relations, Sociology and Anthropology											
217	SOC 514/PLS 514/EAS 506	Qualitative Research Methods	4	8				Eurasian Studies, Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
Biological Science											
218	BIOL 101	Biology for non-Science majors	3	6			BIOL 110 Modern Biology I (1070) (C- and above)	5 year UG SEDS, 5 year UG SSH, Anthropology, Economics, History, Nursing, Political Science and International Relations, SEDS, SMG, Sociology, Undeclared SSH, World Languages, Literatures and Cultures			
219	BIOL 105	General Biology	3	6				5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
220	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, Chemistry	Computer Science, Mathematics, Physics, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
221	BIOL 120	Modern Biology II	3	6	BIOL 110 Modern Biology I (1070) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Undeclared SSH	Mathematics, Physics	SEDS, SMG, SSH, SoM	
222	BIOL 230	Human Anatomy and Physiology I	4	8	BIOL 110 Modern Biology I (107) (C and above) OR BIOL 110 Modern Biology I (1070) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences, Undeclared SSH	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
223	BIOL 301	Molecular Cell Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
224	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)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	

225	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)			4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
226	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)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
227	BIOL 321	Bioethics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
228	BIOL 333	Environmental Biology	3	6	BIOL 120 Modern Biology II (1195) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
229	BIOL 340	Introduction to Applied Bioinformatics	4	8	(BIOL 120 Modern Biology II (1195) (C and above) OR (BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 120L Modern Biology II Laboratory (5443) (C and above))) AND MATH 310 Applied Statistical Methods (82) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
230	BIOL 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (154) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
231	BIOL 355	Critical Research Reasoning	3	6	BIOL 120 Modern Biology II (1195) (C and above)			4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
232	BIOL 370	Genetics	3	6	BIOL 120 Modern Biology II (1195) (C and above)			4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
233	BIOL 380	Biology of Behavior	3	6	BIOL 120 Modern Biology II (1195) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
234	BIOL 385	Cell signaling: principles and mechanisms	3	6	BIOL 120 Modern Biology II (1195) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
235	BIOL 392	Directed Study in Biology	3	6				Instructor's Permission Required. Registration through Add Course form only!			
236	BIOL 425	Biomedical Research Methods	3	6	BIOL 110 Modern Biology I (1070) (C and above) AND (BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR (BIOL 301 Molecular Cell Biology (5809) (C and above) AND BIOL 301L Molecular Cell Biology Laboratory (5678) (C and above))) AND (BIOL 341 Biochemistry I (2002) (C and above) OR CHEM 341 Biochemistry I (1058) (C and above))			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
237	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)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
238	BIOL 455	Biotechnology	3	6	BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR (BIOL 301 Molecular Cell Biology (5809) (C and above) AND BIOL 301L Molecular Cell Biology Laboratory (5678) (C and above))			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
239	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)			5 year UG SEDS, 5 year UG SSH, Biological Sciences	Chemistry, Mathematics, Physics	SEDS, SMG, SSH, SoM	
240	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!			
241	BIOL 520	Statistical Methods in Life Sciences	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
242	BIOL 550	Structural and Molecular Biology in Health and Disease	3	6				Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	

243	BIOL 560	Molecular Biology of Prokaryotic Cells	3	6			Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
244	BIOL 592	Graduate Research Seminar	3	6			Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
245	BIOL 599	Master's Thesis Research	0	0			Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
246	BIOL 631	Synthetic Biology	3	6			Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
247	BIOL 634	Advanced Cancer Biology	3	6			Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
248	BIOL 635	Hot Topics in Life Sciences	3	6			Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
249	BIOL 670	Gene Therapy	3	6			Biological Sciences	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
250	BIOL 691	Master's Thesis Research Proposal	3	6			2 year Gr SSH Biological Sciences and Technologies			
251	BIOL 800-0	Thesis Research	0	0			Life Sciences			
252	BIOL 820	Statistical Methods in Life Sciences	3	6			Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
253	BIOL 831	Synthetic Biology	4	8			Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
254	BIOL 834	Advanced Cancer Biology	4	8			Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
255	BIOL 835	Hot Topics in Life Sciences	3	6			Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
256	BIOL 850	Structural and Molecular Biology in Health and Disease	4	8			Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
257	BIOL 875	Gene Therapy	4	8			Biomedical Sciences, Life Sciences	GSB, GSE, GSPP, SEDS, SMG, SoM		
Chemistry										
258	CHEM 090	Chemistry for Non-Science majors	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH, World Languages, Literatures and Cultures			
259	CHEM 091	Survey of Physical Science	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH, World Languages, Literatures and Cultures			
260	CHEM 101	General Chemistry I	3	6			1 year UG SMG, 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Medical Sciences	Computer Science, Mathematics, Physics, Robotics and Mechatronics, SMG	SEDS, SSH, SoM	
261	CHEM 102	General Chemistry II	3	6	CHEM 101 General Chemistry I (113) (C and above)		5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Undeclared SSH	Computer Science, Mathematics, Physics, Robotics and Mechatronics, SMG	SEDS, SSH, SoM	
262	CHEM 211	Organic Chemistry I	3	6	CHEM 102 General Chemistry II (232) (C and above)		5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Undeclared SSH	SEDS, SMG, SSH, SoM		
263	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			
264	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, Undeclared SSH	Biological Sciences	SEDS, SMG, SSH, SoM	
265	CHEM 250	Descriptive Inorganic Chemistry	3	6	CHEM 101 General Chemistry I (113) (C and above)					
266	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	
267	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	

268	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)			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
269	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)		4 year UG SSH			
270	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	
271	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	
272	CHEM 431	Computational Chemistry	3	6	CHEM 332 Physical Chemistry II (1056) (C and above) AND (CSCI 111 Web Programming and Problem Solving (110) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above))			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
273	CHEM 490	Nanochemistry	3	6	CHEM 331 Physical Chemistry I (634) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)			5 year UG SEDS, 5 year UG SSH, Chemistry	Biological Sciences	SEDS, SMG, SSH, SoM	
274	CHEM 510	Principles of Physical Chemistry	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
275	CHEM 520	Applied Analytical Chemistry	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
276	CHEM 522	Analytical Environmental Chemistry	3	6	CHEM 520 Applied Analytical Chemistry (5267) (C and above)			Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
277	CHEM 530	Inorganic Structures and Reaction Mechanisms	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
278	CHEM 531	Nanochemistry and Functional Nanomaterials	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
279	CHEM 541	Medicinal Chemistry and Drug Design	3	6	CHEM 540 Organic Reactions and Mechanisms (5460) (C and above)			Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
280	CHEM 543	Structural Identification of Organic Compounds	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
281	CHEM 550	Selected Topics in Chemistry	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
282	CHEM 591	Scientific Methods in Chemistry	3	6				Chemistry	SSH	GSB, GSE, GSPP, SEDS, SMG, SoM	
283	CHEM 691	Thesis Proposal	3	6				Chemistry			
Communication and Composition											
284	WCS 101	Communication and Society	3	6				1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
285	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 SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
286	WCS 200	Introduction to Public Speaking	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SSH, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH		2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 3 year UG SEDS, 3 year UG SMG	
287	WCS 210	Technical and Professional Writing	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SEDS, 2 year UG SMG, 3 year UG SEDS, 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH		SEDS, SMG, SSH, SoM	

288	WCS 220	Science Writing	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SOM, 2 year UG SSH, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH		SEDS, SMG, SSH, SoM	
289	WCS 230	Say What you Mean: Clarity, Precision, and Style in Academic Writing	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 5 year UG SEDS, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	SEDS, SMG, SSH, SoM	
290	WCS 240	Writing for Digital Media	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 5 year UG SEDS, 5 year UG SSH	3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH	SEDS, SMG, SSH, SoM	
291	WCS 250	Advanced Rhetoric and Composition	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH		SEDS, SMG, SSH, SoM	
292	WCS 390	Writing Fellows I - Composition and Collaboration in Theory and Practice	3	6	WCS 150 Rhetoric and Composition (2183) (B and above) AND (WCS 210 Technical and Professional Writing (4881) (B+ and above) OR 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 240 Writing for Digital Media (4421) (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, 5 year UG SEDS, 5 year UG SSH	4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH		
293	WCS 391	Writing Fellows II - Practicum in Composition & Collaboration	3	6	WCS 390 Writing Fellows I - Composition and Collaboration in Theory and Practice (1969) (B and above)			Instructor's Permission Required. Registration through Add Course form only!			
294	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)			Instructor's Permission Required. Registration through Add Course form only!			
295	WCS 501	Science Communication	3	6				SMG, SSH, SoM			
296	WCS 730	From Genre to Style and Back: Writing for PhD Students	4	8				Instructor's Permission Required. Registration through Add Course form only!			
Communication and Composition, Languages, Literature and Linguistics											
297	WCS 260/WLL 235	Creative Writing: Introduction to Fiction Writing I	3	6	WCS 150 Rhetoric and Composition (2183) (C- and above)			2 year UG SSH, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SSH	SEDS, SMG	
Economics											
298	ECON 101	Introduction to Microeconomics	3	6				5 year UG SEDS, 5 year UG SSH, Undeclared SSH	1 year UG SSH Mathematics, 2 year UG SSH Mathematics	2 year UG SSH	
299	ECON 102	Introduction to Macroeconomics	3	6				5 year UG SEDS, 5 year UG SSH, Undeclared SSH	1 year UG SSH Mathematics, 2 year UG SSH Mathematics	2 year UG SSH	
300	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))			5 year UG SEDS, 5 year UG SSH, Economics	2 year UG SSH Undeclared, Mathematics	SEDS, SMG, SSH, SoM	
301	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))			5 year UG SEDS, 5 year UG SSH, Economics	2 year UG SSH Undeclared, Mathematics	SEDS, SMG, SSH, SoM	
302	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)			5 year UG SEDS, 5 year UG SSH, Economics	2 year UG SSH Undeclared	SEDS, SMG, SSH, SoM	
303	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))			5 year UG SEDS, 5 year UG SSH, Economics		SEDS, SMG, SSH, SoM	
304	ECON 325	International Trade	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SEDS, 5 year UG SSH	Economics	SEDS, SMG, SSH, SoM	
305	ECON 333	Political Economy	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SEDS, 5 year UG SSH	Economics	SEDS, SMG, SSH, SoM	

306	ECON 345	The Economics of Family	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above)			3 year UG SSH Economics, 5 year UG SEDS, 5 year UG SSH	Economics	SEDS, SMG, SSH, SoM	
307	ECON 399	Independent Study in Economics	3	6				Instructor's Permission Required. Registration through Add Course form only!			
308	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)			5 year UG SEDS, 5 year UG SSH, Economics		SEDS, SMG, SSH, SoM	
309	ECON 405	Behavioral and Experimental Economics	3	6	ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)			5 year UG SEDS, 5 year UG SSH, Economics		SEDS, SMG, SSH, SoM	
310	ECON 413	Econometrics II Time Series	3	6	ECON 301 Econometrics I (664) (C- and above)			5 year UG SEDS, 5 year UG SSH, Economics		SEDS, SMG, SSH, SoM	
311	ECON 415	Industrial Organization	3	6	ECON 301 Econometrics I (664) (C- and above)			5 year UG SEDS, 5 year UG SSH, Economics		SEDS, SMG, SSH, SoM	
312	ECON 417	Development Economics	3	6	ECON 301 Econometrics I (664) (C- and above)			5 year UG SEDS, 5 year UG SSH, Economics		SEDS, SMG, SSH, SoM	
313	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)			5 year UG SEDS, 5 year UG SSH, Economics		SEDS, SMG, SSH, SoM	
314	ECON 501	Microeconomics I	4	8				Economics	SEDS, SMG, SSH, SoM		
315	ECON 502	Macroeconomics I	4	8				Economics	SEDS, SMG, SSH, SoM		
316	ECON 503	Introduction to Contract Theory and Auctions	4	8				Economics	SEDS, SMG, SSH, SoM		
317	ECON 505	Behavioral and Experimental Economics	4	8				Economics	SEDS, SMG, SSH, SoM		
318	ECON 511	Statistics	4	8				Economics	SEDS, SMG, SSH, SoM		
319	ECON 512	Mathematical Economics	4	8				Economics	SEDS, SMG, SSH, SoM		
320	ECON 515	Industrial Organization	4	8	ECON 531 Econometrics (2505) (C- and above)			Economics	SEDS, SMG, SSH, SoM		
321	ECON 517	Development Economics	4	8				Economics	SEDS, SMG, SSH, SoM		
322	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	SEDS, SMG, SSH, SoM		
323	ECON 532	Applied Econometrics	4	8				Economics	SEDS, SMG, SSH, SoM		
324	ECON 589	Thesis I	4	8				2 year Gr SSH Economics			
History, Philosophy and Religious Studies											
325	HST 100	History of Kazakhstan	3	6				4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SSH	1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH	SEDS, SMG, SSH, SoM	
326	HST 104	Central Asian History II (1700 - 1991)	3	6				5 year UG SEDS, 5 year UG SSH, History, Undeclared SEDS, Undeclared SMG, Undeclared SSH		SEDS, SMG, SSH, SoM	
327	HST 124	Introduction to the History of Medicine	3	6				5 year UG SEDS, 5 year UG SSH, History, Undeclared SEDS, Undeclared SMG, Undeclared SSH		SEDS, SMG, SSH, SoM	
328	HST 125	History of Magic	3	6				5 year UG SEDS, 5 year UG SSH, History, Undeclared SEDS, Undeclared SMG, Undeclared SSH		SEDS, SMG, SSH, SoM	
329	HST 131	European History I (to 1700)	3	6				5 year UG SEDS, 5 year UG SSH, History, Undeclared SEDS, Undeclared SMG, Undeclared SSH		SEDS, SMG, SSH, SoM	
330	HST 236	Eurasian revolutions, 1905-1949	3	6				5 year UG SEDS, 5 year UG SSH, SSH		SEDS, SMG, SoM	

331	HST 239	Modernizing the Periphery: Nationalism, Communism, and Empire in Central Europe, 1890-Present	3	6	Subject "HST" BETWEEN 100 and 199			5 year UG SEDS, 5 year UG SSH, SSH	SEDS, SMG, SoM		
332	HST 241	History of Sexuality	3	6				5 year UG SEDS, 5 year UG SSH, SSH	SEDS, SMG, SoM		
333	HST 435	Stalinist Central Asia	3	6				5 year UG SEDS, 5 year UG SSH, SSH	SEDS, SMG, SoM		
334	HST 498	Directed Reading	3	6				5 year UG SEDS, 5 year UG SSH, History			
335	HST 535	Stalinist Central Asia	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
336	PHIL 101	Introduction to Philosophy	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
337	PHIL 124	Knowledge and Reality	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
338	PHIL 141	Critical Thinking	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
339	PHIL 210	Ethics	3	6				3 year UG SEDS Chemical Engineering, 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SEDS Civil Engineering, 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Electrical and Electronic Engineering, 3 year UG SEDS Mechanical Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS SMG, 5 year UG SEDS, 5 year UG SSH	2 year UG SEDS Chemical Engineering, 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Civil Engineering, 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Electronic Engineering, 2 year UG SEDS Mechanical Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SMG	SEDS, SMG, SSH, SoM	
340	PHIL 215	Bioethics	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
341	PHIL 223	Philosophy of Science	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
History, Philosophy and Religious Studies, History, Philosophy and Religious Studies											
342	PHIL 266/HST 266	Sunzi's Art of War and Unorthodox Military Strategy in Ancient China	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
343	PHIL 267/REL 267	Chinese Roots of Martial Arts	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
344	REL 110/HST 110	Introduction to World Religions	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies											
345	HST 271/TUR 271	History of the Ottoman Empire	3	6	HST 100 History of Kazakhstan (172) (C- and above)			5 year UG SEDS, 5 year UG SSH, SSH	SEDS, SMG, SoM		
346	HST 454/TUR 454	Turkestan in the Nineteenth Century	3	6				5 year UG SEDS, 5 year UG SSH, SSH	SEDS, SMG, SoM		
347	HST 554/TUR 554	Turkestan in the Nineteenth Century	4	8				Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
History, Philosophy and Religious Studies, Sociology and Anthropology											
348	ANT 313/REL 332	Islam and Politics in Eurasia	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
349	HST 223/ANT 287	Cannibalism and Civilization	3	6				5 year UG SEDS, 5 year UG SSH, SSH	SEDS, SMG, SoM		
Kazakh Language and Turkic Studies											
350	KAZ 001	Kazakh Language Placement Test	0	0							
351	KAZ 201	Academic Kazakh I	3	6	KAZ 150 Basic Kazakh (1215) (C- and above) OR KLL "[B1.2] Intermediate"			1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
352	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 SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		

353	KAZ 211	Academic Speaking in Kazakh	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"	KAZ 212 Academic Writing in Kazakh (703) (C-and above)	1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
354	KAZ 212	Academic Writing in Kazakh	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"	KAZ 211 Academic Speaking in Kazakh (702) (C-and above)	1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
355	KAZ 226	Kazakh for Medical School	3	6	KLL "[B1.2] Intermediate"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
356	KAZ 313	Kazakh for Business	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
357	KAZ 349	Kazakh Mythology	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
358	KAZ 351	Kazakh Short Stories	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
359	KAZ 356	Kazakh Music History	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
360	KAZ 357	Literature of Alash	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
361	KAZ 363	Language and Globalization	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
362	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 SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
363	KAZ 365	Abai's World	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
364	KAZ 366	Kazakh Language for Engineers	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
365	KAZ 368	Onomastics: History and Function of Names	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
366	KAZ 371	Contemporary Kazakh Literature	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
367	KAZ 373	Kazakh Terminology	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
368	KAZ 374	Kazakh Diplomacy	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
369	KAZ 375	Cultural Studies and Kazakh Culture	3	6	KAZ 202 Academic Kazakh II (4562) (C-and above) OR KLL "[C1.1] Advanced"		1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH	SEDS, SMG, SSH, SoM		
370	KFL 101	Elementary Kazakh as a Foreign Language I	4	8			Instructor's Permission Required. Registration through Add Course form only!			
371	TUR 100	Languages, Cultures, and Communities of the Turkic World	3	6			5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
372	TUR 230	Literatures of Central Asia	3	6			5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
373	TUR 231	Istanbul in Literature and Culture	3	6			5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
Languages, Literature and Linguistics										
374	CHN 102	Beginning Mandarin II	4	8	CHN 101 Beginning Mandarin I (1384) (C and above)		2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH	2 year UG SSH, 3 year UG SSH, Undeclared SSH	SEDS, SMG, SSH, SoM	
375	CHN 201	Intermediate Mandarin I	4	8	CHN 102 Beginning Mandarin II (1844) (C and above)		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH, Undeclared SSH	SEDS, SMG, SSH, SoM	
376	FRE 101	Beginning French I	4	8			2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH	Undeclared SSH	SEDS, SMG, SSH, SoM	
377	FRE 102	Beginning French II	4	8	FRE 101 Beginning French I (246) (C-and above)		2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH	2 year UG SSH, 3 year UG SSH, Undeclared SSH	SEDS, SMG, SSH, SoM	

378	KOR 101	Beginning Korean I	4	8			2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH	2 year UG SSH, 3 year UG SSH, Undeclared SSH	SEDS, SMG, SSH, SoM	
379	KOR 102	Beginning Korean II	4	8	KOR 101 Beginning Korean I (4672) (C- and above)		2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH	2 year UG SSH, 3 year UG SSH, Undeclared SSH	SEDS, SMG, SSH, SoM	
380	KOR 201	Intermediate Korean I	4	8	KOR 102 Beginning Korean II (4791) (C- and above)		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	Undeclared SSH	SEDS, SMG, SSH, SoM	
381	LING 131	Introduction to Linguistics	3	6			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	Undeclared SSH	SEDS, SMG, SSH, SoM	
382	LING 273	Survey of Research Methods in Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
383	LING 277	Language Diversity and Language Universals	3	6	LING 131 Introduction to Linguistics (1394) (C and above)		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
384	LING 278	Sounds of the World's Languages	3	6			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
385	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		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SEDS, SMG, SSH, SoM	
386	LING 373	Advanced Topics in Linguistics	3	6	LING 131 Introduction to Linguistics (1394) (C- and above)		Instructor's Permission Required. Registration through Add Course form only!			
387	LING 470	Multilingualism and Language Contact	3	6	LING 131 Introduction to Linguistics (1394) (C- and above) OR LING 270 Languages of Eurasia (2485) (C- and above) OR ANT 277/WLL 271 Language and Society (1027) (C- and above) OR LING 272 Language and the Mind (1847) (C- and above) OR LING 273 Survey of Research Methods in Linguistics (2158) (C- and above) OR LING 274 Introduction to Applied Linguistics (2486) (C- and above) OR LING 275 Second Language Acquisition Theory and Research I (4473) (C- and above)		3 year UG SSH World Languages, Literatures and Cultures, 4 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH	3 year UG SSH, 4 year UG SSH	SEDS, SMG, SSH, SoM	
388	LING 570	Multilingualism and Language Contact	4	8			GSB, GSE, GSPP, SEDS, SMG, SSH, SoM			
389	SPA 101	Beginning Spanish I	4	8			2 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH	Undeclared SSH	SSH	
390	SPA 201	Intermediate Spanish I	4	8	SPA 102 Beginning Spanish II (1128) (C- and above)		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	Undeclared SSH	SEDS, SMG, SSH, SoM	
391	SPA 314	Advanced Spanish Grammar and Composition	3	6	SPA 202 Intermediate Spanish II (1842) (C- and above)		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM	
392	WLL 110	Introduction to Literary Studies	3	6			2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH	Undeclared SSH	SSH	
393	WLL 201	World Literature I	3	6			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SSH	
394	WLL 209	Introduction to Translation Studies	3	6			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SSH	
395	WLL 219	Myth and Adaptation	3	6			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SSH	
396	WLL 240	Introduction to the Novel	3	6			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SSH	
397	WLL 246	Survey of Contemporary Russian Literature and Culture	3	6	Subject "WLL" BETWEEN 100 and 199 OR WCS 150 Rhetoric and Composition (2183) (C- and above)		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SSH	
398	WLL 257	Fan Culture in the Age of Convergence	3	6			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SSH	

399	WLL 315	Shakespeare	3	6	WLL 201 World Literature I (686) (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 240 Introduction to the Novel (687) (C- and above) OR WLL 241 Survey of Folk Tales (466) (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 254/SPA 254 Superstition, Magical Realism, and Horror in Hispanic Culture (1851) (C- and above)			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SSH	
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400	WLL 349	Terrible Perfection: Women in 19th-Century Russian Literature	3	6	WLL 101 Introduction to Critical Issues in the Humanities and Social Sciences (234) (C and above) OR WLL 102 /PHIL 102 Language, Experience, Culture (2481) (C and above) OR WLL 110 Introduction to Literary Studies (244) (C and above) OR WLL 111 Introduction to Theatre (2160) (C and above) OR WLL 121 Introduction to Cultural Studies (243) (C and above) OR WLL 155 Introduction to the Comic Book (3046) (C and above) OR WLL 171/ANT 175 Introduction to Linguistic Anthropology (4417) (C and above) OR WLL 201 World Literature I (686) (C and above) OR WLL 209 Introduction to Translation Studies (2178) (C and above) OR WLL 210 Migrants, Nomads and Exiles (217) (C and above) OR WLL 211 World Literature II: from the 18th to the 20th century (492) (C and above) OR WLL 212 Introduction to Poetry (2167) (C and above) OR WLL 213/SPA 211 Introduction to the Hispanic World (1030) (C and above) OR WLL 218 Renaissance in Italy and Beyond (6573) (C and above) OR WLL 219 Myth and Adaptation (2489) (C and above) OR WLL 220 Ancient World Literature (to 1650) (218) (C and above) OR WLL 221 Creative Writing/Theatre (245) (C and above) OR WLL 222 Acting: Praxis, Theory and History (3336) (C and above) OR WLL 231 Beginning and Intermediate Playwriting (1625) (C and above) OR WLL 240 Introduction to the Novel (687) (C and above) OR WLL 241 Survey of Folk Tales (466) (C and above) OR WLL 243 Western Theatre, Literature and History From Ancient Greece to 1800 (1082) (C and above) OR WLL 244 Survey of Nineteenth-Century Russian Literature (1395) (C and above) OR WLL 246 Survey of Contemporary Russian Literature and Culture (3604) (C and above) OR WLL 247 Survey of East Asian Literature (1382) (C and above) OR WLL 248 Survey of Soviet Literature and Culture (3842) (C and above) OR WLL 250 From Page to Screen (472) (C and above) OR WLL 251 Hong Kong Cinema (3337) (C and above) OR WLL 253 Western Theatre Literature and History: 1800-Present (1396) (C and above) OR WLL 254/SPA 254 Superstition, Magical Realism, and Horror in Hispanic Culture (1851) (C and above) OR WLL 255 The Comic Book in Japan and America (1849) (C and above) OR WLL 257 Fan Culture in the Age of Convergence (2487) (C and above) OR WLL 291 Theatre Practicum (2168) (C and above)			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	2 year UG SSH, 3 year UG SSH	SSH	
401	WLL 498	Languages, Linguistics, and Literatures Capstone I	3	6			4 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH				
Languages, Literature and Linguistics, Languages, Literature and Linguistics											
402	SPA 351/WLL 351	Literature and Film of the Postcolonial World	3	6	Subject "WLL" BETWEEN 200 and 299		5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	SSH	SEDS, SMG, SoM		
403	WLL 213/SPA 211	Introduction to the Hispanic World	3	6			5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures	Undeclared SSH	SEDS, SMG, SSH, SoM		
Languages, Literature and Linguistics, Sociology and Anthropology											

404	ANT 385/WLL 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, World Languages, Literatures and Cultures	SSH		
405	WLL 171/ANT 175	Introduction to Linguistic Anthropology	3	6		ANT 277/WLL 271 Language and Society (1027) (C- and above)	2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	Undeclared SSH	SSH	
Mathematics										
406	MATH 161	Calculus I	4	8			1 year UG SEDS, 1 year UG SMG, 1 year UG SSH Biological Sciences, 1 year UG SSH Chemistry, 1 year UG SSH Mathematics, 1 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH	Biological Sciences, Chemistry, Mathematics, Physics, SEDS, SMG	SSH, SoM	
407	MATH 162	Calculus II	4	8	MATH 161 Calculus I (118) (C and above)		2 year UG SSH Chemistry, 5 year UG SEDS, 5 year UG SSH, Undeclared SSH	Chemistry, Mathematics, Physics, SEDS, SMG	SSH, SoM	
408	MATH 251	Discrete Mathematics	3	6	MATH 161 Calculus I (118) (C and above)		2 year UG SEDS Computer Science, 2 year UG SSH Mathematics, 5 year UG SEDS, 5 year UG SSH, Undeclared SSH	Computer Science, Mathematics	SEDS, SMG, SSH, SoM	
409	MATH 263	Calculus III	4	8	MATH 162 Calculus II (170) (C and above)		2 year UG SSH Mathematics, 2 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH, Undeclared SSH	Mathematics, Physics	SEDS, SMG, SSH, SoM	
410	MATH 273	Linear Algebra with Applications	4	8	MATH 161 Calculus I (118) (C and above)	MATH 162 Calculus II (170) (C and above)	2 year UG SEDS Computer Science, 2 year UG SEDS Robotics and Mechatronics, 2 year UG SSH Mathematics, 2 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH, Undeclared SSH	Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
411	MATH 274	Introduction to Differential Equations	3	6	MATH 162 Calculus II (170) (C and above)		3 year UG SSH Chemistry, 5 year UG SEDS, 5 year UG SSH, Physics	Chemistry, Mathematics, Robotics and Mechatronics	SEDS, SMG, SSH, SoM	
412	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)		5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
413	MATH 310	Applied Statistical Methods	3	6	MATH 161 Calculus I (118) (C and above)	MATH 321 Probability (482) (C and above)	5 year UG SEDS, 5 year UG SSH, Biological Sciences	SEDS, SMG, SSH, SoM		
414	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)	5 year UG SEDS, 5 year UG SSH, Computer Science, Mathematics, Robotics and Mechatronics	SEDS, SMG, SSH, SoM		
415	MATH 322	Mathematical Statistics	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)		5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
416	MATH 323	Actuarial Mathematics I	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above) OR (MATH 162 Calculus II (170) (C and above) AND MATH 310 Applied Statistical Methods (82) (C and above))		5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
417	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)	5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
418	MATH 361	Real Analysis I	3	6	MATH 263 Calculus III (81) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)		5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
419	MATH 411	Linear Programming	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 263 Calculus III (81) (C and above)		5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		

420	MATH 425	Stochastic Processes	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
421	MATH 449	Statistical Programming	3	6	MATH 322 Mathematical Statistics (1165) (C and above)			5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
422	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)			5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
423	MATH 480	Complex Analysis	3	6	MATH 263 Calculus III (81) (C and above)			5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
424	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)		5 year UG SEDS, 5 year UG SSH, Mathematics	SEDS, SMG, SSH, SoM		
425	MATH 490	Special Topics in Mathematics I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
426	MATH 498	Directed Study in Mathematics II	3	6				Instructor's Permission Required. Registration through Add Course form only!			
427	MATH 510	Measure Theory and Applications	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
428	MATH 519	Scientific Computing	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
429	MATH 540	Statistical Learning	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
430	MATH 542	Statistical Programming	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
431	MATH 571	Advanced Nonlinear Differential Equations	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
432	MATH 592	Research Seminar	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
433	MATH 676	Advanced Partial Differential Equations with Applications	3	6				Applied Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
434	MATH 691	Thesis Proposal	3	6	MATH 592 Research Seminar (5760) (C- and above)			2 year Gr SSH Applied Mathematics			
435	MATH 700-0	Thesis Research	0	0				Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
436	MATH 701	Real Analysis	4	8				Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
437	MATH 721	Nonlinear Differential Equations with Applications	4	8				Mathematics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
438	MATH 776	Advanced numerical methods for partial differential equations	4	8				GSB, GSE, GSPP, SEDS, SMG, SSH, SoM			
Physics											
439	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)	5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
440	PHYS 201	Introductory Astronomy I	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM			
441	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)			5 year UG SEDS, 5 year UG SSH, Physics, Undeclared SSH		SEDS, SMG, SSH, SoM	

442	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))			5 year UG SEDS, 5 year UG SSH, Physics, Undeclared SSH	SEDS, SMG, SSH, SoM		
443	PHYS 291	Introduction to Quantum Technologies	3	6				5 year UG SEDS, 5 year UG SSH, Physics	SEDS, SMG, SSH, SoM		
444	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)			5 year UG SEDS, 5 year UG SSH, Physics	SEDS, SMG, SSH, SoM		
445	PHYS 361	Classical Electrodynamics I	3	6		PHYS 315 Mathematical Methods of Physics (653) (D and above) OR PHYS 411 Advanced Mathematical Physics (3142) (D and above)		5 year UG SEDS, 5 year UG SSH, Physics	SEDS, SMG, SSH, SoM		
446	PHYS 395	Research Methods	3	6				5 year UG SEDS, 5 year UG SSH, Physics	SEDS, SMG, SSH, SoM		
447	PHYS 452	Quantum Mechanics II	3	6	PHYS 451 Quantum Mechanics I (1415) (C- and above)			5 year UG SEDS, 5 year UG SSH, Physics	SEDS, SMG, SSH, SoM		
448	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)			5 year UG SEDS, 5 year UG SSH, Physics	SEDS, SMG, SSH, SoM		
449	PHYS 491	Directed Study of Advanced Physics Topics	3	6				Instructor's Permission Required. Registration through Add Course form only!			
450	PHYS 498	Honors Thesis Research	0	0				4 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH			
451	PHYS 502	Teaching Practicum	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
452	PHYS 505	Classical Mechanics	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
453	PHYS 511	Computational Modeling and Simulation	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
454	PHYS 515	Classical Electrodynamics	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
455	PHYS 530	Solid State Physics	4	8				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
456	PHYS 550	Advanced Mathematical Physics	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
457	PHYS 591	Research Methods	3	6				Physics	SEDS, SSH	GSB, GSE, GSPP, SMG, SoM	
458	PHYS 600	Thesis Research	0	0				Physics			
459	PHYS 700-0	Thesis Research	0	0				Physics			
460	PHYS 705	Classical Mechanics	4	8				SEDS, SSH			
461	PHYS 711	Computational Modeling and Simulation	4	8				SEDS, SSH			
462	PHYS 750	Advanced Mathematical Physics	4	8				SEDS, SSH			

Political Science and International Relations

463	PLS 100	Introduction to the Politics of Central Asia	3	6				5 year UG SEDS, 5 year UG SSH, SSH	SEDS, SMG, SoM		
464	PLS 101	Introduction to Political Science	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG	Biological Sciences, Chemistry, Mathematics, Physics	SSH	
465	PLS 102	The Political Challenges of Technologies and Science: An Introduction	3	6				5 year UG SEDS, 5 year UG SSH, SEDS, SMG	Biological Sciences, Chemistry, Mathematics, Physics	SSH	
466	PLS 120	Introduction to Political Theory	3	6				5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SMG, SSH, SoM	
467	PLS 140	Introduction to Comparative Politics	3	6				5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SMG, SSH, SoM	
468	PLS 150	Introduction to International Relations	3	6				5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SMG, SSH, SoM	
469	PLS 210	Political Science Research Methods	3	6				5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
470	PLS 211	Quantitative Methods	3	6			ECON 211 Economic Statistics (2280) (C- and above)	5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
471	PLS 312	Public Opinion and Elections	3	6			PLS 211 Quantitative Methods (221) (C- and above) OR ECON 211 Economic Statistics (2280) (C- and above)	5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
472	PLS 338	U.S. Government and Politics	3	6			(PLS 140 Introduction to Comparative Politics (223) (C- and above) OR PLS 101 Introduction to Political Science (513) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)	5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
473	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, Political Science and International Relations	SEDS, SMG, SSH, SoM		
474	PLS 351	International Political Economy	3	6			PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)	5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
475	PLS 361	Memory Politics in East Asia	3	6				5 year UG SEDS, 5 year UG SSH, SSH	SEDS, SMG, SoM		
476	PLS 392	Politics of China	3	6			PLS 210 Political Science Research Methods (129) (C- and above)	5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
477	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!			
478	PLS 412	Scientific Research in International Relations	3	6			PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above)	5 year UG SEDS, 5 year UG SSH, Political Science and International Relations	SEDS, SMG, SSH, SoM		
479	PLS 415	Maximum Likelihood Models	3	6			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, Political Science and International Relations	SEDS, SMG, SSH, SoM		
480	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, Political Science and International Relations	SEDS, SMG, SSH, SoM		
481	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, Political Science and International Relations	SEDS, SMG, SSH, SoM		
482	PLS 449	Politics and Governance of the Gulf	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, Political Science and International Relations	SEDS, SMG, SSH, SoM		

483	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, Political Science and International Relations	SEDS, SMG, SSH, SoM		
484	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!			
485	PLS 511	Advanced Research I	4	8			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
486	PLS 512	Scientific Research in International Relations	4	8	PLS 511 Advanced Research I (1631) (C- and above) AND PLS 510 Advanced Research I (1946) (C- and above) AND PLS 550 Core Seminar in IR (1372) (C- and above)		Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
487	PLS 515	Maximum Likelihood Models	4	8	PLS 510 Advanced Research I (1946) (C- and above)		Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
488	PLS 540	Core Seminar in Comparative Politics	4	8			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
489	PLS 549	Politics and Governance of the Gulf	4	8			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
490	PLS 550	Core Seminar in IR	4	8			Political Science and International Relations	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
491	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		
492	PLS 581	Independent Study in Political Science	4	8			Instructor's Permission Required. Registration through Add Course form only!			
493	PLS 598	MA Thesis I	6	12			Political Science and International Relations			
SSH										
494	SSH 301	School of Sciences and Humanities Internship: Second Experience	3	6			Instructor's Permission Required. Registration through Add Course form only!			
495	SSH 503	Laboratory Practicum	3	6	SST 501 Teaching and Learning (2260) (C- and above) AND SEDS 502 Teaching Practicum (2824) (C- and above)		Applied Mathematics			
Sociology and Anthropology										
496	ANT 140	World Prehistory	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
497	ANT 262	Monkey business: Primate Society and Behavior	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
498	ANT 280	Introduction to Medical Anthropology	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
499	ANT 333	Anthropology of Space	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	
500	ANT 399	Special Topics in Anthropology	3	6			Instructor's Permission Required. Registration through Add Course form only!			
501	ANT 400	Research Assistance in Anthropology	1	2			Instructor's Permission Required. Registration through Add Course form only!			
502	ANT 421	Sport and Construction of Identity	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	
503	ANT 498	Capstone Seminar I	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology			
504	ANT 521	Sport and Construction of Identity	4	8			GSB, GSE, GSPP, SEDS, SMG, SSH, SoM			
505	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	
506	SOC 201	Social Science Research Methods	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	2 year UG SSH, Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SMG, SSH, SoM	
507	SOC 203	Quantitative Methods in Sociology	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	
508	SOC 213	Work and Society	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	
509	SOC 215	Sociology of Race and Ethnicity	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	
510	SOC 221	International Migration	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	

511	SOC 225	Environment and Society	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	
512	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)		5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	
513	SOC 317	Economy and Society	3	6	SOC 101 Introduction to Sociology (508) (C- and above) OR Subject "SOC" BETWEEN 200 and 299 OR Subject "SOC" BETWEEN 200 and 299 OR ECON 102 Introduction to Macroeconomics (503) (C- and above) OR PLS 120 Introduction to Political Theory (512) (C- and above) OR PLS 150 Introduction to International Relations (511) (C- and above)		5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology	SSH	SEDS, SMG, SoM	
514	SOC 322	Digital Media Research Methods	3	6	SOC 201 Social Science Research Methods (1341) (C- and above) OR SOC 203 Quantitative Methods in Sociology (1377) (C- and above) OR ECON 211 Economic Statistics (2280) (C- and above) OR PLS 210 Political Science Research Methods (129) (C- and above)					
515	SOC 400	Research Assistance in Sociology	1	2			Instructor's Permission Required. Registration through Add Course form only!			
516	SOC 498	Capstone Seminar Part I	3	6			5 year UG SEDS, 5 year UG SSH, Sociology			
517	SOC 510	Social Inequality	4	8			Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
518	SOC 710	Social Inequality	4	8			Eurasian Studies	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM		
Sociology and Anthropology, Sociology and Anthropology										
519	ANT 281/SOC 281	Health, Illness and Society	3	6			5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH	2 year UG SSH	SEDS, SMG, SSH, SoM	
SEDS										
Chemical and Materials Engineering										
520	CHME 200	Basic Principles and Calculations in Chemical Engineering	3	6			2 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical Engineering, Chemical and Materials Engineering		
521	CHME 201	Chemical Engineering Thermodynamics	3	6			2 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical Engineering, Chemical and Materials Engineering		
522	CHME 222	Inorganic and Analytical Chemistry	3	6			2 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical Engineering, Chemical and Materials Engineering		
523	CHME 300	Heat and Mass Transfer	3	6			3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical Engineering, Chemical and Materials Engineering		
524	CHME 301	Applied Mathematics for Process Design	3	6			3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical Engineering, Chemical and Materials Engineering		
525	CHME 302	Instrumental Methods of Analysis for Engineers	3	6			3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical Engineering, Chemical and Materials Engineering		
526	CHME 350	Soft Matter, Foods and Colloids	3	6			3 year UG SEDS Chemical Engineering, 3 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical and Materials Engineering		
527	CHME 351	Environment and Development	3	6			3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical Engineering, Chemical and Materials Engineering		
528	CHME 461	Powder technology	3	6			3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical Engineering, Chemical and Materials Engineering		
529	DCHME 700-0	Thesis Research	0	0			1 year PhD SEDS Chemical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science, Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		

530	DCHME 755	Integrated Computational Materials Engineering	4	8				1 year PhD SEDS Chemical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
531	DCHME 761	Advanced Chemical Reaction Engineering	4	8				1 year PhD SEDS Chemical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
532	DCHME 762	Advanced Materials Processing	4	8				1 year PhD SEDS Chemical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
533	DCHME 765	Biofilms Science and Engineering	4	8				1 year PhD SEDS Chemical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
534	ECHE 418	Capstone project 1	3	6	ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)			Registration by School Admin only.			
535	ECHE 419	Advanced Process Simulation	3	6	ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)			4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical and Materials Engineering		
536	ECHE 478	Electrochemical Engineering and Corrosion Protection	3	6	ECHE 222 Chemistry I (731) (D and above)			4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical and Materials Engineering		
537	ECHE 484	Multiphase Systems	3	6	ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above) AND ECHE 270 Transport Phenomena-1 (735) (D and above)			4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical and Materials Engineering		
538	ECHE 486	Chemical Process Safety	3	6				Registration by School Admin only.			
539	ECHE 488	Atmospheric Chemistry and Physics	3	6				4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH	Chemical and Materials Engineering		
540	MBME 601	Master Thesis I	12	24				2 year Gr SEDS Biomedical Engineering			
541	MBME 603	Biomaterials Science & Engineering	3	6				1 year Gr SEDS Biomedical Engineering, 2 year Gr SEDS Biomedical Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology	

542	MBME 604	Biosensors	3	6				1 year Gr SEDS Biomedical Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology
543	MBME 610	Anatomy and Physiology for Biomedical Engineers	3	6				1 year Gr SEDS Biomedical Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology
544	MCHME 601	Master Thesis I	12	24				2 year Gr SEDS Chemical and Materials Engineering		
545	MCHME 603	Advanced Materials Processing	3	6				1 year Gr SEDS Chemical and Materials Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology
546	MCHME 604	Advanced Materials Characterization Methods	3	6				1 year Gr SEDS Chemical and Materials Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology

547	MCHME 605	Advanced Chemical Reaction Engineering	3	6				1 year Gr SEDS Chemical and Materials Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology	
548	MCHME 702	Biofilms Science and Engineering	3	6				2 year Gr SEDS Chemical and Materials Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology	
549	MCHME 714	Computational Materials Engineering	3	6				2 year Gr SEDS Chemical and Materials Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology	
Civil Engineering											
550	MSC 600	Research Methods and Ethics	3	6				1 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
551	MSC 601	Technical Communication	3	6				1 year Gr SEDS Biomedical Engineering, 1 year Gr SEDS Chemical and Materials Engineering, 1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SEDS Computer Science, 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SEDS Mechanical and Aerospace Engineering, 1 year Gr SEDS Robotics and Mechatronics	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics		

552	MSC 602	Advanced Applied Mathematics	3	6				1 year Gr SEDS Biomedical Engineering, 1 year Gr SEDS Chemical and Materials Engineering, 1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SEDS Mechanical and Aerospace Engineering	Mining Engineering, Petroleum Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology
553	MSC 615	Advanced Statistics and Probability	3	6				1 year Gr SEDS Engineering Management		
Civil and Environmental Engineering										
554	CEE 200	Structural Mechanics I	3	6				2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SMG Mining Engineering, 2 year UG SMG Petroleum Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering	
555	CEE 201	Environmental Chemistry	3	6				2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering	
556	CEE 204	Civil Engineering CAD and Surveying	3	6				2 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering	
557	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 SSH	Civil Engineering, Civil and Environmental Engineering	
558	CEE 302	Geotechnical Engineering	3	6				3 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering	
559	CEE 306	Civil Engineering Materials	3	6	ENG 102 Engineering Materials I (4708) (D and above)			3 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering	
560	CEE 351	Application of Geomatics in Civil Engineering	3	6	CEE 204 Civil Engineering CAD and Surveying (5002) (D and above) OR ECE 215 Surveying (3153) (D and above)			4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering	
561	CEE 454	Foundation Engineering	3	6	ECE 306 Geotechnical Design (1043) (D and above) OR CEE 303 Geotechnical Design (6158) (D and above)			4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering	
562	DCEE 700-0	Thesis Research	0	0				1 year PhD SEDS Civil Engineering, Civil Engineering	Chemical Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology	
563	DCEE 756	Environmental Modeling Development	4	8				1 year PhD SEDS Civil Engineering	Chemical Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology	
564	DCEE 760	Advanced Foundation Engineering	4	8				1 year PhD SEDS Civil Engineering	Chemical Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology	
565	DCEE 761	Advanced Soil Mechanics	4	8				1 year PhD SEDS Civil Engineering	Chemical Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology	
566	DCEE 763	Building Information Modeling in Construction	4	8				1 year PhD SEDS Civil Engineering	Chemical Engineering, Computer Science , Electrical Engineering, Mechanical Engineering, Robotics Engineering, Science, Engineering and Technology	
567	ECE 303	Construction Management and Practice	3	6	BENG 148 Engineering Practice (1073) (D and above)			Registration by School Admin only.		
568	ECE 401	Capstone Project 1	3	6				Registration by School Admin only.		
569	ECE 416	Highway Engineering	3	6	ECE 302 Civil Engineering Materials (1040) (D and above)			Registration by School Admin only.		

570	ECE 421	Behaviour and Design of Structural System	3	6	(ECE 318 Structural Design - Concrete (3709) (D and above) OR ECE 314 Structural Engineering Applications I (1042) (D and above)) AND (ECE 319 Structural Design - Steel (4038) (D and above) OR ECE 315 Structural Engineering Applications II (1041) (D and above))			4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering		
571	ECE 423	Structure and Properties of Concrete Materials	3	6				4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering		
572	ECE 481	Individual Research Projects in Civil Engineering	3	6				4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering		
573	ECE 482	Solid and Hazardous Waste Management	3	6	ECE 405 Environmental Engineering (1265) (C- and above)			4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH	Civil Engineering, Civil and Environmental Engineering		
574	EMEM 507	Project Management	3	6				1 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
575	EMEM 509	Systems Engineering	3	6				2 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
576	EMEM 523	Supply Chain Management	3	6				2 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
577	EMEM 533	Engineering Management and Engineering Economy	3	6				1 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
578	EMEM 537	Engineering Decision Tools	3	6				2 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
579	EMEM 538	Knowledge and Innovation Management	3	6				1 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		

580	E MEM 539	Big Data and Information Management	3	6				2 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics			
581	E MEM 542	Production and Service Operations Management	3	6				2 year Gr SEDS Engineering Management	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics			
582	MCEE 601	Master Thesis I	12	24	MCEE 600 Research Seminar (4692) (P)			2 year Gr SEDS Civil and Environmental Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG			
583	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, Mining Engineering, Petroleum Engineering, Robotics			
584	MCEE 604	Advanced Soil Mechanics	3	6				1 year Gr SEDS Civil and Environmental Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG			
585	MCEE 605	Advanced Environmental Chemistry	3	6				1 year Gr SEDS Civil and Environmental Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG			
586	MCEE 705	Environmental Modeling Development	3	6				2 year Gr SEDS Civil and Environmental Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG			
587	MCEE 708	Advanced Foundation Engineering	3	6				2 year Gr SEDS Civil and Environmental Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG			
588	MCEE 709	Building Information Modeling in Construction	3	6				2 year Gr SEDS Civil and Environmental Engineering	1 year Gr SEDS, 1 year Gr SMG, 2 year Gr SEDS, 2 year Gr SMG			
Computer Science												
589	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)	5 year UG SEDS, 5 year UG SSH, SSH	Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS		

590	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)	5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry	Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH	SSH	
591	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)	1 year UG SEDS Computer Science, 1 year UG SEDS Robotics and Mechatronics, 1 year UG SSH Mathematics, 1 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH, Undeclared SEDS	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SSH	SSH	
592	CSCI 231	Computer Systems and Organization	3	6	CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR ENG 100 Introduction to Engineering (4518) (B- and above)		2 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH	Computer Science		
593	CSCI 235	Programming Languages	4	8	CSCI 152 Performance and Data Structures (489) (C- and above)		2 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH	Computer Science		
594	CSCI 262	Software Project Management	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)		5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SSH		
595	CSCI 299	Internship I	3	6						
596	CSCI 341	Database Systems	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)		3 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH	Computer Science		
597	CSCI 355	Compiler Construction	3	6	CSCI 235 Programming Languages (638) (C and above) AND CSCI 272 Formal Languages (4689) (C and above)		5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH	SSH		
598	CSCI 361	Software Engineering	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)		3 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH	Computer Science		
599	CSCI 371	Algorithmic Problem Solving	3	6	CSCI 270 Algorithms (648) (B and above)		5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH	SSH		
600	CSCI 390	Artificial Intelligence	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)		3 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH	Computer Science		
601	CSCI 398	Directed Study	3	6			Instructor's Permission Required. Registration through Add Course form only!			
602	CSCI 399	Internship II	3	6			Instructor's Permission Required. Registration through Add Course form only!			
603	CSCI 399F	Internship II - F	6	12			Instructor's Permission Required. Registration through Add Course form only!			
604	CSCI 408	Senior Project I	3	6			4 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH			

605	CSCI 434	Information Security	3	6		CSCI 333 Computer Networks (1145) (D and above)		5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH	SSH		
606	CSCI 490	Brain Computer Interface	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above)			5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH	SEDS, SSH		
607	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)			5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH	SSH		
608	CSCI 501	Software Principles and Practice	3	6				Computer Science, Robotics	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering	SSH	
609	CSCI 511	Theory of Computation	3	6				Computer Science	SEDS	SSH	
610	CSCI 515	Modeling and Simulation for Computer Science	3	6				Computer Science, Data Science	SEDS	SSH	
611	CSCI 585	Computer Vision	3	6				Computer Science, Data Science	SEDS	SSH	
612	CSCI 594	Deep Learning	3	6				Computer Science, Data Science	SEDS	SSH	
613	CSCI 693	Thesis Proposal	3	6	SEDS 591 Research Methods (3184) (C- and above)			2 year Gr SEDS Computer Science			
614	CSCI 700-0	Thesis Research	0	0				1 year PhD SEDS Computer Science, Computer Science			
615	CSCI 701	Advanced Software Principles and Practice	4	8				Computer Science , Robotics Engineering	Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Science, Engineering and Technology	SSH	
616	CSCI 711	Advanced Theory of Computation	4	8				Computer Science	SEDS	SSH	
617	CSCI 785	Advanced Computer Vision	4	8				Computer Science	SEDS	SSH	
618	CSCI 794	Advanced Deep Learning	4	8				Computer Science	SEDS	SSH	
619	DS 501	Fundamentals of Data Science	3	6				Data Science			
620	DS 502	Probability and Statistics for Data Science	3	6				Data Science			
621	DS 507	Database Management Systems	3	6				Data Science	Computer Science		
622	DS 551	Process and Project Management	3	6				Data Science	SEDS	SSH	
623	DS 552	Data-Driven Innovation	3	6				Data Science	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Robotics	Applied Mathematics, Biological Sciences, Chemistry, Economics, Eurasian Studies, Physics, Political Science and International Relations	
624	DS 693	Thesis Proposal	3	6	SEDS 591 Research Methods (3184) (C- and above)			2 year Gr SEDS Data Science			
625	SEDS 503	Laboratory Practicum	3	6	SEDS 502 Teaching Practicum (2824) (P)			2 year Gr SEDS Computer Science, 2 year Gr SEDS Robotics and Mechatronics			
626	SEDS 591	Research Methods	3	6				1 year Gr SEDS Computer Science, 1 year Gr SEDS Data Science, 1 year Gr SEDS Robotics and Mechatronics	Computer Science, Data Science, Robotics		

Electrical and Computer Engineering

627	DELCE 700-0	Thesis Research	0	0				Electrical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
628	DELCE 753	Stochastic Processes	4	8				Electrical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
629	DELCE 760	Advanced System Modelling and Control	4	8				Electrical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
630	DELCE 761	Advanced Data Structures and Algorithms	4	8				Electrical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
631	EEE 437	Capstone Project 1	3	6				Registration by School Admin only.			
632	EEE 448	Power Transmission and Distribution plants	3	6				4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
633	EEE 450	RF and Microwave Circuit Design	3	6				4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
634	EEE 451	High Voltage Engineering	3	6				4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
635	EEE 452	Power Systems Protection	3	6				4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
636	EEE 490	Introduction to Big Data	3	6				4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
637	EEE 493	Industry 4.0	3	6				Registration by School Admin only.			
638	EEE 494	Modern Characterizations for Semiconductor Industry	3	6				4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
639	ELCE 200	Introduction to Electrical Circuits	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, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
640	ELCE 202	Digital Logic Design	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) AND ENG 101 Programming for Engineers (4517) (C- and above)			2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
641	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, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
642	ELCE 301	Electronic Circuits	3	6	ELCE 201 Circuit Theory (5507) (C- and above)			3 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
643	ELCE 304	Computer Networks	3	6	ENG 101 Programming for Engineers (4517) (C- and above)			3 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
644	ELCE 306	Linear Control Theory	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			3 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		
645	ELCE 307	Digital Signal Processing	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			3 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH	Electrical and Computer Engineering		

646	MECE 601	Master Thesis I	12	24				2 year Gr SEDS Electrical and Computer Engineering		
647	MECE 603	Advanced Data Structures and Algorithms	3	6				1 year Gr SEDS Electrical and Computer Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology
648	MECE 605	Statistics and Probability for Electrical and Computer Engineers	3	6				1 year Gr SEDS Electrical and Computer Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology
649	MECE 724	System Modelling and Control	3	6				1 year Gr SEDS Electrical and Computer Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology
650	MECE 725	Smart Grids and Energy Systems	3	6	MECE 700 Industrial and Commercial Power System (4810) (D and above)			2 year Gr SEDS Electrical and Computer Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology

651	MECE 726	Modern Semiconductor Devices and Systems	3	6				2 year Gr SEDS Electrical and Computer Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology	
Mechanical and Aerospace Engineering											
652	DMAE 700-0	Thesis Research	0	0				1 year PhD SEDS Mechanical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
653	DMAE 701	Advanced Applied Mathematics	4	8				1 year PhD SEDS Mechanical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
654	DMAE 750	Advanced Statistics and Probability	4	8			MSC 615 Advanced Statistics and Probability (2394) (B- and above)	1 year PhD SEDS Mechanical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
655	DMAE 751	Modern Control Engineering	4	8				1 year PhD SEDS Mechanical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
656	DMAE 759	Space Structure Design	4	8				2 year PhD SEDS Mechanical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Education, Electrical Engineering, Eurasian Studies, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Public Policy, Robotics Engineering, Science, Engineering and Technology		
657	DMAE 763	Computational Fluid Structure Interaction	4	8				1 year PhD SEDS Mechanical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		

658	DMAE 765	Advanced Manufacturing Processes and Strategies	4	8				1 year PhD SEDS Mechanical Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science, Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology			
659	EME 358	Heat Transfer	3	6	BENG 226 Engineering Thermodynamics (1553) (D and above) AND EME 275 Fluid Mechanics I (1988) (D and above)			Instructor's Permission Required. Registration through Add Course form only!				
660	EME 377	Mechanical Systems Design	3	6	EME 361 Machine Design (1051) (D and above)			5 year UG SEDS				
661	EME 410	Aerodynamics	3	6	EME 357 Fluid Mechanics II (1280) (D and above)			Registration by School Admin only.				
662	EME 413	Computer Aided Geometric Design	3	6	EME 253 Computer Aided Engineering (1050) (C- and above)			4 year UG SEDS Mechanical Engineering, 5 year UG SEDS, 5 year UG SSH	Mechanical and Aerospace Engineering			
663	EME 451	Capstone Project 1	3	6				Registration by School Admin only.				
664	EME 467	Vehicle Propulsion Systems	3	6				4 year UG SEDS Mechanical Engineering, 5 year UG SEDS, 5 year UG SSH	Mechanical and Aerospace Engineering			
665	EME 490	Multiphase Systems	3	6	EME 275 Fluid Mechanics I (1988) (C- and above)			4 year UG SEDS Mechanical Engineering, 5 year UG SEDS, 5 year UG SSH	Mechanical and Aerospace Engineering			
666	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, 1 year UG SMG, 5 year UG SEDS, 5 year UG SSH, Undeclared SEDS	Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering			
667	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, 5 year UG SEDS, 5 year UG SSH, Undeclared SEDS	Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering		

668	ENG 200	Engineering Mathematics III (Differential Equations and Linear Algebra)	3	6	MATH 162 Calculus II (170) (C and above)			5 year UG SEDS, 5 year UG SSH	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	Chemical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering, Geology, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, SMG, Undeclared SMG	
669	MAE 201	Computer Aided Design	3	6				2 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH	Mechanical Engineering, Mechanical and Aerospace Engineering		
670	MAE 206	Engineering Dynamics I	3	6				Instructor's Permission Required. Registration through Add Course form only!			
671	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 Civil and Environmental Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH	Civil and Environmental Engineering, Mechanical and Aerospace Engineering		
672	MAE 301	Engineering Thermodynamics	3	6				3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH	Mechanical and Aerospace Engineering		
673	MAE 302	Machine Elements Design	3	6	MAE 205 Material and Manufacturing I (5534) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH	Mechanical and Aerospace Engineering		
674	MAE 303	Control Systems	3	6				3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH	Mechanical and Aerospace Engineering		
675	MAE 457	Feasibility Analysis of Clean Energy Technologies	3	6				4 year UG SEDS Mechanical Engineering, 5 year UG SEDS, 5 year UG SSH	Mechanical and Aerospace Engineering		
676	MMAE 601	Master Thesis I	12	24	MMAE 600 Research Seminar (4703) (P)			2 year Gr SEDS Mechanical and Aerospace Engineering			
677	MMAE 603	Modern Control Engineering	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
678	MMAE 605	Advanced Manufacturing Processes and Strategies	3	6				1 year Gr SEDS Mechanical and Aerospace Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
679	MMAE 710	Space Structures Design	3	6				2 year Gr SEDS Mechanical and Aerospace Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		

680	MMAE 713	Computational Fluid Structure Interaction	3	6				2 year Gr SEDS Mechanical and Aerospace Engineering	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics		
Robotics and Mechatronics											
681	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))			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics, SMG	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
682	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))			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
683	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))			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
684	ROBT 301	Mechanical Design I with CAD Laboratory	4	8	ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above)			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
685	ROBT 303	Linear Control Theory with Lab	4	8	ROBT 202 System Dynamics and Modeling (68) (C- and above) AND MATH 274 Introduction to Differential Equations (484) (C- and above)			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
686	ROBT 307	Power Electronics	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above)			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
687	ROBT 308	Industrial Automation	3	6				5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
688	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)			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
689	ROBT 407	Statistical Methods and Machine Learning	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)			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
690	ROBT 414	Human-Robot Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics	Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH		
691	ROBT 501	Robot Manipulation and Mobility	3	6				Robotics	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering		

692	ROBT 503	Dynamic Systems and Control	3	6				Robotics	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering		
693	ROBT 613	Brain-Machine Interfaces	3	6				Robotics	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering		
694	ROBT 615	Optimal Control and Planning	3	6	ROBT 501 Robot Manipulation and Mobility (2263) (C- and above) AND ROBT 503 Dynamic Systems and Control (2264) (C- and above)			Robotics	Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Industrial and Systems Engineering, Mechanical and Aerospace Engineering		
695	ROBT 691	Thesis Proposal	6	12				2 year Gr SEDS Robotics and Mechatronics			
696	ROBT 700-0	Thesis Research	0	0				1 year PhD SEDS Robotics Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
697	ROBT 701	Advanced Robot Manipulation and Mobility	4	8				1 year PhD SEDS Robotics Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
698	ROBT 703	Advanced Optimal Control and Planning	4	8				1 year PhD SEDS Robotics Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
699	ROBT 709	Advanced Robot Dynamics and Control	4	8				1 year PhD SEDS Robotics Engineering	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
School of Engineering											
700	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, 1 year PhD SMG Mining Engineering, 1 year PhD SMG Petroleum Engineering, 1 year PhD SOM BioMed Sciences, 1 year PhD SSH Life Sciences, 1 year PhD SSH Mathematics, 1 year PhD SSH Physics	Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		

701	DENG 784	Doctoral Proposal I	0	6			Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
702	DENG 785	PhD Proposal Oral Defence	0	0			Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
703	DENG 790	Doctoral Seminar II	3	6	DENG 789 Doctoral Seminar I (4598) (P)		Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
704	DENG 791	Doctoral Seminar III	3	6	DENG 790 Doctoral Seminar II (4599) (P)		Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
705	DENG 792	Doctoral Seminar IV	3	6	DENG 791 Doctoral Seminar III (4600) (P)		Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
706	DENG 793	Doctoral Seminar V	3	6	DENG 792 Doctoral Seminar IV (4601) (P)		Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
707	DENG 794	Dissertation Research	12	24	DENG 785 PhD Proposal Oral Defence (2604) (P)		Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
708	DENG 796	Thesis Completion	0	0			Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		
709	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)		Biomedical Sciences, Chemical Engineering, Civil Engineering, Computer Science , Electrical Engineering, Life Sciences, Mathematics, Mechanical Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering, Science, Engineering and Technology		