# Course Requirements and Registration Priorities
# Fall 2026

| # | Abbr | Title | Cr(US) | Cr(ECTS) | PreRequisite | CoRequisite | AntiRequisite | 1st priority registration | 2nd priority registration | 3rd priority registration | 4th priority registration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **CPS** | | | | | | | | | | | |
| **NUFYP** | | | | | | | | | | | |
| 1 | FEAP 010 | Foundation English for Academic Purposes 1 | 0 | 0 | | | | | | | |
| 2 | FLDP 090 | Leadership 1 | 0 | 0 | | | | | | | |
| 3 | FMAT 010 | Foundation Mathematics 1 | 0 | 0 | | | | | | | |
| **GSB** | | | | | | | | | | | |
| **Bachelor of Business Administration** | | | | | | | | | | | |
| 4 | BBA 208 | Data Analytics for Business | 3 | 6 | | | | Business Administration (UG) | | | |
| 5 | BBA 210 | Fundamentals of Marketing | 3 | 6 | | | | Business Administration (UG) | | | |
| 6 | BBA 230 | Entrepreneurship | 3 | 6 | | | | Business Administration (UG) | | | |
| 7 | BBA 311 | Digital Marketing | 3 | 6 | | | | Business Administration (UG) | | | |
| 8 | BBA 312 | Project Management | 3 | 6 | | | | Business Administration (UG) | | | |
| 9 | BBA 497 | Special Topics in Corporate Finance | 3 | 6 | | | | For GSB programs only! Registration by School admin. | | | |
| 10 | BBA 499 | Capstone | 6 | 12 | | | | 4 year UG GSB Business Administration (UG) | | | |
| **Economics** | | | | | | | | | | | |
| 11 | ECON 101 | Introduction to Microeconomics | 3 | 6 | | | | Business Administration (UG), Economics, Eurasian Business | Mathematics, SSH | SCAI, SEDS, SMG, SoE, SoM | |
| 12 | ECON 102 | Introduction to Macroeconomics | 3 | 6 | | | | Business Administration (UG), Economics, Eurasian Business | Mathematics, SSH | SCAI, SEDS, SMG, SoE, SoM | |
| 13 | ECON 120 | Managerial Economics | 3 | 6 | | | | SoE | | Business Administration (UG), SCAI, SMG, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 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)) | | | Business Administration (UG), Economics | Mathematics | SCAI, SEDS, SSH, SoE | |
| 15 | 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)) | | | Business Administration (UG), Economics | Mathematics | SCAI, SEDS, SSH, SoE | |
| 16 | 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) | | | Business Administration (UG), Economics | | SCAI, SEDS, SSH, SoE | |
| 17 | ECON 300 | Research Assistance in Economics | 1 | 2 | ECON 101 Introduction to Microeconomics (379) (C- and above) AND ECON 102 Introduction to Macroeconomics (503) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR CSCI 235 Programming Languages (638) (C- and above) OR CSCI 390 Artificial Intelligence (643) (C- and above) OR MATH 321 Probability (482) (C- and above) OR MATH 322 Mathematical Statistics (1165) (C- and above) | | | Instructor's Permission Required. Registration through Add Course form only! | | | |

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| 18 | 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))) | | | Business Administration (UG), Economics | Mathematics | SSH | |
| 19 | ECON 302 | Game Theory and Economic Analysis | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above) OR ECON 101 Introduction to Microeconomics (379) (C- and above) AND MATH 251 Discrete Mathematics (85) (C- and above) | | PLS 315 Political Game Theory (704) (C- and above) | 3 year UG GSB Economics, 3 year UG SSH Economics, 5 year UG SSH (pending graduation), 6 year UG SSH (pending graduation) | 4 year UG GSB Economics, 4 year UG SSH Economics | Mathematics, SSH | |
| 20 | ECON 318 | Applied Econometrics | 3 | 6 | ECON 301 Econometrics I (664) (C- and above) | | ECON 336 Programming for Economists (7979) (C- and above) | | | | |
| 21 | ECON 326 | The Economics of Financial Markets | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above) | | | 3 year UG GSB Economics, 3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH | 4 year UG GSB Economics, 4 year UG SSH Economics | Mathematics, SSH | |
| 22 | ECON 333 | Political Economy | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above) | | | 3 year UG GSB Economics, 3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH | 4 year UG GSB Economics, 4 year UG SSH Economics | Mathematics, SSH | |
| 23 | ECON 336 | Programming for Economists | 3 | 6 | ECON 301 Econometrics I (664) (C- and above) | | ECON 318 Applied Econometrics (6078) (C- and above) | | | | |
| 24 | ECON 337 | Empirical Finance | 3 | 6 | ECON 211 Economic Statistics (2280) (C- and above) OR MATH 322 Mathematical Statistics (1165) (C- and above) | | | 3 year UG GSB Economics, 3 year UG SSH Economics, 5 year UG SSH, 6 year UG SSH, GSB | 4 year UG GSB Economics, 4 year UG SSH Economics | Mathematics, SSH | |
| 25 | ECON 400 | Research Assistance in Economics 2 | 1 | 2 | ECON 300 Research Assistance in Economics (3080) (P) | | | Instructor's Permission Required. Registration through Add Course form only! | | | |

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| 26 | ECON 402 | Advanced Macroeconomics | 3 | 6 | ECON 202 Intermediate Macroeconomics (207) (C- and above) | | | | | | |
| 27 | ECON 413 | Econometrics II Time Series | 3 | 6 | ECON 301 Econometrics I (664) (C- and above) | | | | | | |
| 28 | ECON 414 | Advanced Monetary Policy | 3 | 6 | (ECON 202 Intermediate Macroeconomics (207) (C- and above) AND ECON 301 Econometrics I (664) (C- and above)) OR (ECON 202 Intermediate Macroeconomics (207) (C- and above) AND MATH 322 Mathematical Statistics (1165) (C- and above)) | | | Economics | | Mathematics, SSH | |
| 29 | ECON 418 | Corporate Finance and Governance | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above) AND (ECON 301 Econometrics I (664) (C- and above) OR MATH 322 Mathematical Statistics (1165) (C- and above)) | | | Business Administration (UG), Economics | | Mathematics, SSH | |
| 30 | ECON 433 | Econometrics II Panel Data | 3 | 6 | ECON 301 Econometrics I (664) (C- and above) | | | | | | |
| 31 | ECON 434 | Introduction to Big Data Analytics | 3 | 6 | ECON 301 Econometrics I (664) (C- and above) | | | Economics | | Mathematics, SSH | |
| 32 | ECON 443 | Topics in Macroeconomic Theory | 3 | 6 | ECON 202 Intermediate Macroeconomics (207) (C- and above) AND ECON 301 Econometrics I (664) (C- and above) | | | Economics | | Mathematics, SSH | |
| 33 | ECON 501 | Microeconomics | 4 | 8 | | | | Economics | | | |
| 34 | ECON 502 | Macroeconomics | 4 | 8 | | | | Economics | | | |

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| 35 | ECON 511 | Mathematics and Statistics | 4 | 8 | | | | Economics | | | |
| 36 | ECON 513 | Econometrics II Time Series | 4 | 8 | ECON 531 Econometrics (2505) (C- and above) | | | | | | |
| 37 | ECON 514 | Advanced Monetary Policy | 4 | 8 | ECON 502 Macroeconomics (2186) (C- and above) | | | Economics | | | |
| 38 | ECON 515 | Industrial Organization | 4 | 8 | ECON 531 Econometrics (2505) (C- and above) | | | | | | |
| 39 | ECON 518 | Corporate Finance and Governance | 4 | 8 | ECON 501 Microeconomics (2187) (C- and above) | | | Economics | | | |
| 40 | ECON 522 | Advanced Macroeconomics | 4 | 8 | () ( and above) | | | | | | |
| 41 | ECON 526 | The Economics of Financial Markets | 4 | 8 | ECON 501 Microeconomics (2187) (C- and above) | | | Economics | | | |
| 42 | ECON 531 | Econometrics | 4 | 8 | ECON 511 Mathematics and Statistics (2188) (C- and above) AND ECON 512 Mathematical Economics (2154) (C- and above) | | | Economics | | | |
| 43 | ECON 534 | Introduction to Big Data Analytics | 4 | 8 | ECON 531 Econometrics (2505) (C- and above) | | | Economics | | | |
| 44 | ECON 537 | Empirical Finance | 4 | 8 | ECON 531 Econometrics (2505) (C- and above) | | | Economics | | | |
| 45 | ECON 543 | Topics in Macroeconomic Theory | 4 | 8 | ECON 502 Macroeconomics (2186) (C- and above) | | | Economics | | | |
| 46 | ECON 551 | Mathematical Finance | 4 | 8 | ECON 511 Mathematics and Statistics (2188) (C and above) | | | | | | |
| 47 | ECON 589 | Thesis I | 4 | 8 | | | | Economics | | | |
| **GSB** | | | | | | | | | | | |
| 48 | BUS 101 | Core Course in Business | 3 | 6 | | | | 1 year UG GSB Eurasian Business, Business Administration (UG) | Economics, SSH, SoM | SCAI, SoE | |
| 49 | GSBF 501 | Team Building and Business Communications | .5 | 1 | | | | For GSB programs only! Registration by School admin. | | | |

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| 50 | GSBF 511 | Financial Data Analytics I | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | |
| 51 | GSBF 512 | Principles of Finance | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | |
| 52 | GSBF 515a | Investments I | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | |
| 53 | GSBF 517 | Macroeconomics for Finance | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | |
| 54 | GSBF 523 | Special Topics in Corporate Finance | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | |
| 55 | GSBF 550A | Master’s Thesis | 5 | 10 | | | | For GSB programs only! Registration by School admin. | | | |
| 56 | GSBPHD 01 | Foundations of Social Science Research | 4 | 8 | | | | 1 year GSB Business Administration (PhD) | | | |
| 57 | GSBPHD 05 | Subject Specific Course I | 4 | 8 | | | | 2 year GSB Business Administration (PhD) | | | |
| 58 | GSBPHD 06 | Subject Specific Course II | 4 | 8 | | | | 2 year GSB Business Administration (PhD) | | | |
| 59 | GSBPHD 07 | Subject Specific Course III | 4 | 8 | | | | 2 year GSB Business Administration (PhD) | | | |
| 60 | GSBPHD 14 | Thesis Research Progress | 0 | 0 | | | | 1 year GSB Business Administration (PhD), 2 year GSB Business Administration (PhD), 3 year GSB Business Administration (PhD) | | | |
| 61 | GSBPHD 15 | Thesis Proposal Presentation | 5 | 10 | | | | 3 year GSB Business Administration (PhD) | | | |
| 62 | GSBPHD 17 | Mathematical Economics | 4 | 8 | | | | 1 year GSB Business Administration (PhD) | | | |
| 63 | GSBPHD 18 | Microeconomics I | 4 | 8 | | | | 1 year GSB Business Administration (PhD) | | | |
| 64 | MBA 01 | Introduction to General Management Principles | 2 | 4 | | | | For GSB programs only! Registration by School admin. | | | |
| 65 | MBA 02 | Foundations of Financial and Managerial Accounting | 3 | 6 | | | | For GSB programs only! Registration by School admin. | | | |
| 66 | MBA 03 | Leadership & Communication | 3 | 6 | | | | For GSB programs only! Registration by School admin. | | | |

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| 67 | MBA 04 | Data Analytics for Managers | 3 | 6 | | | | For GSB programs only! Registration by School admin. | | | | |
| 68 | MBA 06 | Economics for Managers | 3 | 6 | | | | For GSB programs only! Registration by School admin. | | | | |
| 69 | MBA 20 | Practicum Project | 5 | 10 | | | | For GSB programs only! Registration by School admin. | | | | |
| 70 | MBAE 07 | Global Economics for Managers | 3 | 6 | | | | For GSB programs only! Registration by School admin. | | | | |
| 71 | MBAE 18 | Consumer Behavior | 3 | 6 | | | | For GSB programs only! Registration by School admin. | | | | |
| 72 | MBAE 22 | Business Law | 3 | 6 | | | | For GSB programs only! Registration by School admin. | | | | |
| 73 | MBAE 23 | AI and Emerging Technologies in Business | 3 | 6 | | | | | | | | |
| 74 | MSF 07 | Economic Policy in Global Markets | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | | |
| 75 | MSF 08 | Microeconomics for Finance | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | | |
| 76 | MSF 12 | Financial Accounting | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | | |
| 77 | MSF 513b | Industry Insights Initiative | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | | |
| 78 | MSF 514 | Advanced Empirical Methods | 2.5 | 5 | | | | For GSB programs only! Registration by School admin. | | | | |
| **GSPP** | | | | | | | | | | | | |
| **Master in Public Administration** | | | | | | | | | | | | |
| 79 | MPA 602 | Public Administration in Theory and Practice | 4 | 8 | | | | 1 year GSPP Public Administration | | | | |
| 80 | MPA 603 | Economic Applications for Public Managers | 4 | 8 | | | | 1 year GSPP Public Administration | | | | |
| 81 | MPA 605 | Research Methods for Public Managers | 4 | 8 | | | | 1 year GSPP Public Administration | | | | |
| 82 | MPA 607 | Fiscal Management and Budgeting | 4 | 8 | | | | 2 year GSPP Public Administration | | | | |
| 83 | MPA 699-c | Master’s Project with Overseas Component | 0 | 0 | | | | 2 year GSPP Public Administration | | | | |

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| 84 | MPE 620 | Circular Economy Strategy | 4 | 8 | | | | 2 year GSPP Public Administration, 2 year GSPP Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 85 | MPE 632 | Artificial Intelligence and Governance | 4 | 8 | | | | 2 year GSPP Public Administration, 2 year GSPP Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 86 | MPE 641 | Globalisation and Public Policy | 4 | 8 | | | MPE 640 International Political Economy (1307) (C- and above) OR DPE 623 International Political Economy (6338) (C- and above) | 2 year GSPP Public Administration | 2 year GSPP Public Policy | GSB, GSE, SCAI, SEDS, SMG, SSH, SoE, SoM | |
| 87 | MPE 646 | Communications for Public Leadership | 4 | 8 | | | | 2 year GSPP Public Administration | 2 year GSPP Public Policy | GSB, GSE, SCAI, SEDS, SMG, SSH, SoE, SoM | |
| 88 | MPE 649 | Public Sector Innovation | 4 | 8 | | | | 2 year GSPP Public Administration, 2 year GSPP Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 89 | MPE 671 | Game Theory and Public Policy | 4 | 8 | | | | 2 year GSPP Public Administration, 2 year GSPP Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 90 | MPE 673 | Development Assistance and Governance | 4 | 8 | | | | 2 year GSPP Public Administration | 2 year GSPP Public Policy | GSB, GSE, SCAI, SEDS, SMG, SSH, SoE, SoM | |
| 91 | MPE 682 | Sustainable Development and Environmental Governance | 4 | 8 | | | | 2 year GSPP Public Administration, 2 year GSPP Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 92 | MPE 685 | Water Resources Policy and Management | 4 | 8 | | | | 2 year GSPP Public Administration, 2 year GSPP Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 93 | MPE 688 | New Technologies and Public Policy | 4 | 8 | | | | 2 year GSPP Public Administration, 2 year GSPP Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| **Master in Public Policy** | | | | | | | | | | | |
| 94 | MPP 601 | Microeconomics and Public Policy | 4 | 8 | | | | 1 year GSPP Public Policy | | | |
| 95 | MPP 611 | Statistics for Public Policy | 4 | 8 | | | | 1 year GSPP Public Policy | | | |
| 96 | MPP 613 | Policy Research Design and Methods | 4 | 8 | | | | 1 year GSPP Public Policy | | | |
| 97 | MPP 621 | Public Policy and Analysis | 4 | 8 | | | | 1 year GSPP Public Policy | | | |
| 98 | MPP 631 | Politics and Public Policy | 4 | 8 | | | | 2 year GSPP Public Policy | | | |
| 99 | MPP 699-c | Policy Analysis Exercise with Overseas Component | 0 | 0 | | | | 2 year GSPP Public Policy | | | |
| **PhD in Public Policy** | | | | | | | | | | | |

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| 100 | DPE 620 | Circular Economy Strategy | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 101 | DPE 632 | Artificial Intelligence and Governance | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 102 | DPE 641 | Globalisation and Public Policy | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 103 | DPE 646 | Communications for Public Leadership | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 104 | DPE 649 | Public Sector Innovation | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 105 | DPE 671 | Game Theory and Public Policy | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 106 | DPE 673 | Development Assistance and Governance | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 107 | DPE 682 | Sustainable Development and Environmental Governance | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 108 | DPE 685 | Water Resources Policy and Management | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 109 | DPE 688 | New Technologies and Public Policy | 4 | 8 | | | | 2 year GSPP PhD Public Policy | GSB, GSE, SEDS, SMG, SSH, SoM | SCAI, SoE | |
| 110 | DPP 600 | Developing Dissertation Research | 0 | 0 | | | | Public Policy | | | |
| 111 | DPP 601 | Microeconomics in the Public Sector | 4 | 8 | | | | 1 year GSPP PhD Public Policy | | | |
| 112 | DPP 603 | Public Administration and Management | 4 | 8 | | | | 1 year GSPP PhD Public Policy | | | |
| 113 | DPP 611 | Statistics in Public Policy | 4 | 8 | | | | 1 year GSPP PhD Public Policy | | | |
| 114 | DPP 614 | Advanced Quantitative Methods | 4 | 8 | | | | 2 year GSPP PhD Public Policy | | | |
| 115 | DPP 616 | Advanced Qualitative Methods | 4 | 8 | | | | 2 year GSPP PhD Public Policy | | | |
| 116 | DPP 621 | Public Policy and Analysis | 4 | 8 | | | | 1 year GSPP PhD Public Policy | | | |
| 117 | DPP 690-0 | Thesis Preparation and Writing | 0 | 0 | | | | 3 year GSPP PhD Public Policy, 4 year GSPP PhD Public Policy, Public Management | | | |
| **GSE** | | | | | | | | | | | |
| **MA in Multilingual Education** | | | | | | | | | | | |
| 118 | EDML 601 | Introduction to Linguistics | 3 | 6 | | | | 1 year GSE MA in Multil.Education | | | |
| 119 | EDML 602 | Academic Literacies for Multilingual Education Professionals I | 3 | 6 | | | | 1 year GSE MA in Multil.Education | | | |

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| 120 | EDML 603 | Academic Literacies for Multilingual Education Professionals II | 3 | 6 | | | | | | | | |
| 121 | EDML 610 | Foundations of Multilingual Education | 3 | 6 | | | | 1 year GSE MA in Multil.Education | | | | |
| 122 | EDML 614 | Multilingual curriculum development and assessment | 3 | 6 | | | | 2 year GSE MA in Multil.Education | | | | |
| 123 | EDML 621 | Principles and Methods of Language Education in Multilingual Contexts | 3 | 6 | | | | 2 year GSE MA in Multil.Education | | | | |
| 124 | EDML 630 | Language Policy and Education Reform Across Contexts | 3 | 6 | | | | 2 year GSE MA in Multil.Education | | | | |
| 125 | EDML 694 | Thesis Research 2 | 0 | 0 | | | | 2 year GSE MA in Multil.Education | | | | |
| **MSc Educational Leadership HE** | | | | | | | | | | | | |
| 126 | EDHE 603 | Thesis Seminar 3 | 3 | 6 | | | | 2 year GSE Educ.Leadership | | | | |
| 127 | EDHE 621 | Artificial Intelligence and Educational Leadership: Policy and Practice | 3 | 6 | | | | | | | | |
| 128 | EDHE 625 | Fundamentals of Higher Education | 3 | 6 | | | | 1 year GSE Educ.Leadership | | | | |
| 129 | EDHE 631 | Sociology of Higher Education | 3 | 6 | | | | 2 year GSE Educ.Leadership | | | | |
| 130 | EDUC 535 | Academic English I | 2 | 4 | | | | 1 year GSE Educ.Leadership | | | | |
| 131 | EDUC 571 | Basic Kazakh | 3 | 6 | | | | 1 year GSE MA in Multil.Education, 1 year GSE PhD Education, 2 year GSE MA in Multil.Education, 2 year GSE PhD Education, 3 year GSE PhD Education, 4 year GSE PhD Education | | | | |
| 132 | EDUC 572 | Kazakh for Professional Purposes | 3 | 6 | | | | 1 year GSE MA in Multil.Education, 1 year GSE PhD Education, 2 year GSE MA in Multil.Education, 2 year GSE PhD Education, 3 year GSE PhD Education, 4 year GSE PhD Education | | | | |
| 133 | EDUC 581 | Basic Kazakh (MSc) | 2 | 4 | | | | 1 year GSE Educ.Leadership | | | | |
| 134 | EDUC 582 | Kazakh for Professional Purposes (MSc) | 2 | 4 | | | | 1 year GSE Educ.Leadership | | | | |

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| 135 | EDUC 602 | Educational Context and Reform in Kazakhstan | 3 | 6 | | | | 1 year GSE MA in Multil.Education | | | | |
| 136 | EDUC 606 | Introduction to Education Research | 2 | 4 | | | | 1 year GSE Educ.Leadership | | | | |
| 137 | EDUC 607 | Research Methods 1 | 3 | 6 | | | | 1 year GSE Educ.Leadership, 1 year GSE MA in Multil.Education | | | | |
| 138 | EDUC 617 | Contextualizing Education Reform in Kazakhstan and Beyond | 3 | 6 | | | | 1 year GSE Educ.Leadership | | | | |
| 139 | EDUC 627 | Psychology of Learning | 3 | 6 | | | | 2 year GSE Educ.Leadership | | | | |
| 140 | EDUC 701 | Education Research Methods | 3 | 6 | | | | 1 year GSE PhD Education | | | | |
| 141 | EDUC 709 | Introduction to Scholarship in Education | 3 | 6 | | | | 1 year GSE PhD Education | | | | |
| 142 | EDUC 712 | Educational Policy and Reform | 3 | 6 | | | | 1 year GSE PhD Education | | | | |
| 143 | EDUC 730 | Preparation for Proposal Defence | 0 | 0 | | | | 2 year GSE PhD Education | | | | |
| 144 | EDUC 751 | Dissertation Research | 0 | 0 | | | | 3 year GSE PhD Education, 4 year GSE PhD Education, 5 year GSE PhD Education (pending graduation) | | | | |
| 145 | EDUC 800 | International Study | 12 | 24 | | | | 2 year GSE PhD Education | | | | |
| **MSc Educational Leadership IE** | | | | | | | | | | | | |
| 146 | EDIE 603 | Thesis Seminar 3 | 3 | 6 | | | | 2 year GSE Educ.Leadership | | | | |
| 147 | EDIE 625 | Fundamentals of Inclusive Education | 3 | 6 | | | | 1 year GSE Educ.Leadership | | | | |
| **MSc Educational Leadership SE** | | | | | | | | | | | | |
| 148 | EDSE 603 | Thesis Seminar 3 | 3 | 6 | | | | 2 year GSE Educ.Leadership | | | | |
| 149 | EDSE 621 | Education Policy Analysis and Development | 3 | 6 | | | | 2 year GSE Educ.Leadership | | | | |
| 150 | EDSE 625 | Fundamentals of School Education | 3 | 6 | | | | 1 year GSE Educ.Leadership | | | | |
| **Other** | | | | | | | | | | | | |
| **Other** | | | | | | | | | | | | |
| 151 | STUMOB 001 | Student Mobility Course | 0 | 0 | | | | | | | | |
| **SoM** | | | | | | | | | | | | |
| **Biological Science** | | | | | | | | | | | | |

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| 152 | BIOL 101 | Introductory Biology | 3 | 6 | | | BIOL 110 Modern Biology I (1070) (C- and above) | 5 year UG SCAI, 5 year UG SCAI (pending graduation), 5 year UG SEDS, 5 year UG SSH, 5 year UG SoE, 5 year UG SoE (pending graduation), Anthropology, Economics, History, Linguistics and World Literature, Nursing, Political Science and International Relations, Sociology, Undeclared SSH | | SCAI, SEDS, SMG, SoE | |
| 153 | BIOL 105 | General Biology | 3 | 6 | | | | Biological Sciences | Undeclared SSH | | |
| 154 | BIOL 110 | Modern Biology I | 3 | 6 | | | | 2 year UG SOM Biological Sciences, 2 year UG SSH Biological Sciences, Undeclared SSH | | | |
| 155 | BIOL 120 | Modern Biology II | 3 | 6 | BIOL 110 Modern Biology I (1070) (C and above) | | | 2 year UG SOM Biological Sciences, 2 year UG SSH Biological Sciences, 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences, Undeclared SSH | 1 year UG SOM Biological Sciences, 1 year UG SSH Biological Sciences | SoM | |
| 156 | BIOL 120L | Modern Biology II Laboratory | 1 | 2 | BIOL 110 Modern Biology I (1070) (C and above) OR BIOL 110L Modern Biology I Laboratory (5448) (C and above) | BIOL 120 Modern Biology II (1195) (C and above) | | | | | |
| 157 | BIOL 230 | Human Anatomy and Physiology I | 3 | 6 | BIOL 110 Modern Biology I (107) (C and above) OR BIOL 110 Modern Biology I (1070) (C and above) | | | Biological Sciences | | | |
| 158 | BIOL 301 | Molecular Cell Biology | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above) | | | 2 year UG SOM Biological Sciences, 2 year UG SSH Biological Sciences, 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences | | | |

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| 159 | BIOL 305 | Introduction to Microbiology | 3 | 6 | (BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 120L Modern Biology II Laboratory (5443) (C and above)) OR BIOL 120 Modern Biology II (1195) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | | | |
| 160 | BIOL 305L | Introduction to Microbiology Laboratory | 1 | 2 | BIOL 120 Modern Biology II (1195) (C and above) OR BIOL 120L Modern Biology II Laboratory (5443) (C and above) | BIOL 305 Introduction to Microbiology (5789) (C and above) | | 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences, 5 year UG SOM (pending graduation) Biological Sciences | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences | | |
| 161 | BIOL 310 | Immunology | 3 | 6 | BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 301 Molecular Cell Biology (5809) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |
| 162 | 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) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |
| 163 | BIOL 321 | Bioethics | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |

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| 164 | BIOL 340 | Introduction to Bioinformatics with Lab | 4 | 8 | (BIOL 120 Modern Biology II (1195) (C and above) OR (BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 120L Modern Biology II Laboratory (5443) (C and above))) AND MATH 310 Applied Statistical Methods (82) (C and above) | | | Biological Sciences | | | |
| 165 | BIOL 341 | Biochemistry I | 3 | 6 | CHEM 211 Organic Chemistry I (154) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |
| 166 | BIOL 355 | Critical Research Reasoning | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences, SoM | Biological Sciences | | |
| 167 | BIOL 363 | Structural Bioinformatics | 4 | 8 | BIOL 341 Biochemistry I (2002) (C and above) OR CHEM 341 Biochemistry I (1058) (C and above) OR CSCI 235 Programming Languages (638) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | 3 year UG SCAI Mathematics, 3 year UG SSH Mathematics, 4 year UG SCAI Mathematics, 4 year UG SSH Mathematics, Chemistry, Computer Science | | |
| 168 | BIOL 370 | Genetics | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |
| 169 | BIOL 380 | Biology of Behavior | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |

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| 170 | BIOL 385 | Cell signaling: principles and mechanisms | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above) | | | 2 year UG SOM A Six-Year Medical Program, 2 year UG SOM Biological Sciences, 2 year UG SSH Biological Sciences, 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences | | | |
| 171 | BIOL 452 | Biology of Cancer | 3 | 6 | BIOL 231 Human Anatomy and Physiology II (479) (C and above) OR BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 331 Human Anatomy and Physiology II (6218) (C and above) OR BIOL 301 Molecular Cell Biology (5809) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |
| 172 | BIOL 456 | Biology Research Design | 3 | 6 | | BIOL 355 Critical Research Reasoning (1000) (C and above) | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |
| 173 | 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) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |
| 174 | BIOL 468 | Integrated Cell Biology | 3 | 6 | (BIOL 110 Modern Biology I (107) (C and above) OR BIOL 110 Modern Biology I (1070) (C and above)) AND BIOL 120 Modern Biology II (1195) (C and above) | | | 3 year UG SOM Biological Sciences, 3 year UG SSH Biological Sciences, 4 year UG SOM Biological Sciences, 4 year UG SSH Biological Sciences | Biological Sciences | | |
| 175 | BIOL 490 | Honors Thesis Research | 3 | 6 | BIOL 355 Critical Research Reasoning (1000) (B and above) | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 176 | BIOL 520 | Statistical Methods in Life Sciences | 3 | 6 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |

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| 177 | BIOL 550 | Structural and Molecular Biology in Health and Disease | 3 | 6 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 178 | BIOL 560 | Molecular Biology of Prokaryotic Cells | 3 | 6 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 179 | BIOL 571 | Advanced Cell and Molecular Biology | 3 | 6 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 180 | BIOL 592 | Research Seminar | 3 | 6 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 181 | BIOL 599 | Master’s Thesis Research | 0 | 0 | | | | Life Sciences | | SCAI, SoE | |
| 182 | BIOL 605 | Radiation Biology | 4 | 8 | BIOL 520 Statistical Methods in Life Sciences (1203) (C and above) | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 183 | BIOL 623 | Advanced Immunology | 4 | 8 | | | | | | | |
| 184 | BIOL 631 | Synthetic Biology | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 185 | BIOL 632 | Drug Discovery and Design | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 186 | BIOL 634 | Advanced Cancer Biology | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 187 | BIOL 670 | Gene Therapy | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 188 | BIOL 675 | Regenerative Medicine | 4 | 8 | | | | | | | |
| 189 | BIOL 691 | Master’s Thesis Research Proposal | 3 | 6 | | | | Life Sciences | | SCAI, SoE | |
| 190 | BIOL 775 | Gene Therapy | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 191 | BIOL 800-0 | Thesis Research | 0 | 0 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 192 | BIOL 820 | Statistical Methods in Life Sciences | 3 | 6 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 193 | BIOL 831 | Synthetic Biology | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 194 | BIOL 832 | Drug Discovery and Design | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 195 | BIOL 834 | Advanced Cancer Biology | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 196 | BIOL 850 | Structural and Molecular Biology in Health and Disease | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| 197 | BIOL 860 | Molecular Biology of Prokaryotic Cells | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |

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| 198 | BIOL 871 | Advanced Cell and Molecular Biology | 4 | 8 | | | | Life Sciences | | SCAI, SEDS, SSH, SoE, SoM | |
| **Master of Science in Nursing** | | | | | | | | | | | |
| 199 | MSN 601 | Nursing Leadership Development | 3 | 6 | | | | 2 year Gr SOM Nursing | | | |
| 200 | MSN 602 | Organizational and Systems Management for Healthcare Leaders | 3 | 6 | | | | 2 year Gr SOM Nursing | | | |
| 201 | MSN 501 | Theoretical Foundations of Advanced Nursing | 3 | 6 | | | | 1 year Gr SOM Nursing | | | |
| 202 | MSN 502 | Advanced Physical and Health Assessment | 3 | 6 | | | | 1 year Gr SOM Nursing | | | |
| 203 | MSN 503 | Statistics for Nursing Research, Evidence-Based Practice, and Quality Improvement | 3 | 6 | | | | 1 year Gr SOM Nursing | | | |
| 204 | MSN 504 | Informatics and Healthcare Technologies | 3 | 6 | | | | 1 year Gr SOM Nursing | | | |
| 205 | MSN 505 | Health Policy and Advocacy | 3 | 6 | | | | 1 year Gr SOM Nursing | | | |
| 206 | MSN 603 | Financial, Business, and Economics Drivers in Healthcare Management | 3 | 6 | | | | 2 year Gr SOM Nursing | | | |
| 207 | MSN 604 | Clinical Nurse Leader Practicum 1 | 3 | 6 | | | | 2 year Gr SOM Nursing | | | |
| 208 | MSN 605 | Thesis Planning | 3 | 6 | | | | 2 year Gr SOM Nursing | | | |
| **Master of Sciences in Biomedicine** | | | | | | | | | | | |
| 209 | MSBM 614 | Adaptive Physical Activity | 3 | 6 | | | | 2 year Gr SOM Biomedicine, 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| 210 | MSBM 501 | Bioethics | 3 | 6 | | | | 1 year Gr SOM Biomedicine | | | |
| 211 | MSBM 502 | Organ system and common diseases | 3 | 6 | | | | 1 year Gr SOM Biomedicine, 2 year Gr SOM Molecular Medicine | | | |
| 212 | MSBM 503 | Scientific Writing | 3 | 6 | | | | 1 year Gr SOM Biomedicine, 2 year Gr SOM Molecular Medicine | | | |
| 213 | MSBM 504 | Biostatistics and Critical Appraisal | 3 | 6 | | | | 1 year Gr SOM Biomedicine | | | |
| 214 | MSBM 505 | Cellular communications | 3 | 6 | | | | 1 year Gr SOM Biomedicine, 2 year Gr SOM Molecular Medicine | | | |

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| 215 | MSBM 601 | Introduction to Research Project | 3 | 6 | | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| 216 | MSBM 602 | Current topics in biomedical research | 3 | 6 | | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| 217 | MSBM 604 | Systemic Pharmacology | 3 | 6 | MSBM 512 Principles of Pharmacology and Toxicology (8727) (C- and above) | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| 218 | MSBM 605 | Molecular Toxicology | 3 | 6 | MSBM 512 Principles of Pharmacology and Toxicology (8727) (C- and above) | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| 219 | MSBM 606 | Molecular basis of Genetics and Epigenetics Disease | 3 | 6 | | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| 220 | MSBM 607 | Molecular Basis of Cancer | 3 | 6 | | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| 221 | MSBM 609 | Robots for Rehabilitation | 3 | 6 | | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| 222 | MSBM 611 | Recombinant and Natural Drugs | 3 | 6 | | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |

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| 223 | MSBM 612 | Developmental Biology | 3 | 6 | | | | 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | | | |
| **Medical Sciences** | | | | | | | | | | | |
| 224 | NUSM 101 | Introduction to Medicine | 2 | 4 | | | | 1 year UG SOM A Six-Year Medical Program, 2 year UG SOM A Six-Year Medical Program | | | |
| 225 | NUSM 102 | Biology for Medical students I with Lab | 4 | 8 | | | | 1 year UG SOM A Six-Year Medical Program | | | |
| 226 | NUSM 301 | Introduction to Immunology, Microbiology and Genetics | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above) | | | 3 year UG SOM Medical Sciences | | | |
| 227 | NUSM 302 | Introduction to Statistics for Evidence-Based Practice | 3 | 6 | MATH 161 Calculus I (118) (C- and above) | | | 3 year UG SOM Medical Sciences | | | |
| 228 | NUSM 303 | Introduction to Anatomy and Histology | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above) | | | 3 year UG SOM Medical Sciences | | | |
| 229 | NUSM 401 | Introduction to Being a Physician | 2 | 4 | NUSM 310 Capstone Project (7138) (C and above) | | | 4 year UG SOM Medical Sciences | | | |
| 230 | NUSM 402 | Medical Anatomy | 8 | 16 | NUSM 310 Capstone Project (7138) (C and above) | | | 4 year UG SOM Medical Sciences | | | |
| 231 | NUSM 403 | Human Genetics | 3 | 6 | NUSM 310 Capstone Project (7138) (C and above) | | | 4 year UG SOM Medical Sciences | | | |
| 232 | NUSM 405 | Fuel Metabolism | 3 | 6 | NUSM 310 Capstone Project (7138) (C and above) | | | 4 year UG SOM Medical Sciences | | | |
| 233 | NUSM 408 | Pharmacology | 2 | 4 | NUSM 310 Capstone Project (7138) (C and above) | | | 4 year UG SOM Medical Sciences | | | |
| 234 | NUSM 410 | Basics of Medical Interviewing | 0 | 0 | NUSM 310 Capstone Project (7138) (C- and above) | | | 4 year UG SOM Medical Sciences | | | |
| 235 | NUSM 411a | Basics of Physical Examination | 0 | 0 | NUSM 310 Capstone Project (7138) (C- and above) | | | 4 year UG SOM Medical Sciences | | | |
| 236 | NUSM 412 | Evidence-based Medicine I and Biostatistics | 0 | 0 | NUSM 310 Capstone Project (7138) (C- and above) | | | 4 year UG SOM Medical Sciences | | | |
| 237 | NUSM 413 | English-Russian-Kazakh Medical Terminology | 0 | 0 | NUSM 310 Capstone Project (7138) (C- and above) | | | 4 year UG SOM Medical Sciences | | | |

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| 238 | NUSM 414 | Medical Ethics and Professionalism | 0 | 0 | NUSM 310 Capstone Project (7138) (C- and above) | | | 4 year UG SOM Medical Sciences | | | |
| **Nursing** | | | | | | | | | | | |
| 239 | NUR 302 | Physical Assessment Across the Lifespan | 4 | 8 | | | | 1 year UG SOM Nursing | | | |
| 240 | NUR 303 | Nursing Care of Older Adults | 4 | 8 | | | | 1 year UG SOM Nursing | | | |
| 241 | NUR 304 | Introduction to Basic Statistics for Evidence Based Practice | 3 | 6 | | | | 1 year UG SOM Nursing | | | |
| 242 | NUR 308 | Enhanced Communication in Professional Nursing | 4 | 8 | | | | 1 year UG SOM Nursing | | | |
| 243 | NUR 401 | Education: Principles and Practice for Teaching in Nursing | 4 | 8 | | | | 2 year UG SOM Nursing | | | |
| 244 | NUR 403 | Capstone I: Evidence-Based Clinical/Quality Improvement Research Project Development | 3 | 6 | | | | 2 year UG SOM Nursing | | | |
| 245 | NUR 404 | Community and Home Health Nursing | 4 | 8 | | | | 2 year UG SOM Nursing | | | |
| 246 | NUR 406.1 | Medical-Surgical Nursing: Complex Surgical Management | 4 | 8 | | | | 2 year UG SOM Nursing | | | |
| 247 | NUR 411C | Community and Home Health Nursing and Clinical | 4 | 8 | | | | 4 year UG SOM Nursing | | | |
| 248 | NUR 412 | Geriatric Nursing: Nursing Care of the Older Adult | 3 | 6 | | | | 4 year UG SOM Nursing | | | |
| 249 | NUR 413C | Medical Surgical Nursing 3 - Management of the Complex and Critically Ill Patient and Clinical | 7 | 14 | | | | 4 year UG SOM Nursing | | | |
| 250 | NUR 421 | Capstone I: Developing a Project Proposal in Nursing | 3 | 6 | | | | 4 year UG SOM Nursing | | | |
| **PHD** | | | | | | | | | | | |
| 251 | PHDBS 701 | Thesis Research | 90 | 180 | | | | 4 year PhD SOM BioMed Sciences, 5 year PhD SOM BioMed Sciences (pending graduation) | | | |
| 252 | PHDBS 701-0 | Thesis Research | 0 | 0 | | | | 1 year PhD SOM BioMed Sciences, 2 year PhD SOM BioMed Sciences, 3 year PhD SOM BioMed Sciences, 4 year PhD SOM BioMed Sciences, 5 year PhD SOM BioMed Sciences (pending graduation) | | | |

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| 253 | PHDBS 702a | Molecular Basis of Health and Disease | 0 | 0 | | | | 1 year PhD SOM BioMed Sciences | 1 year PhD SOM Life Sciences, 1 year PhD SSH Life Sciences | | |
| 254 | PHDBS 704 | NUSOM seminar (final semester) | 4 | 8 | | | | 4 year PhD SOM BioMed Sciences, 5 year PhD SOM BioMed Sciences (pending graduation) | | | |
| 255 | PHDBS 704-0 | NUSOM seminar | 0 | 0 | | | | 1 year PhD SOM BioMed Sciences, 2 year PhD SOM BioMed Sciences, 3 year PhD SOM BioMed Sciences, 4 year PhD SOM BioMed Sciences, 5 year PhD SOM BioMed Sciences (pending graduation) | | | |
| 256 | PHDBS 706a | Advanced Biomedical Research Analysis and Design of Experimentation | 0 | 0 | | | | 2 year PhD SOM BioMed Sciences | | | |
| 257 | PHDBS 707a | Publication Analysis | 0 | 0 | | | | 2 year PhD SOM BioMed Sciences | | | |
| 258 | PHDBS 708 | Writing for Biomedical Sciences | 3 | 6 | | | | 2 year PhD SOM BioMed Sciences, 2 year PhD SOM Global Health | | | |
| 259 | PHDBS 717 | Organ System and Common Diseases | 3 | 6 | | | | 2 year PhD SOM BioMed Sciences, 2 year PhD SOM Global Health | 1 year PhD SOM Life Sciences, 1 year PhD SSH Life Sciences | | |
| 260 | PHDGH 701-0 | Thesis Research | 0 | 0 | | | | 1 year PhD SOM Global Health, 2 year PhD SOM Global Health, 3 year PhD SOM Global Health, 4 year PhD SOM Global Health | | | |
| 261 | PHDGH 704-0 | NUSOM Seminar in Global Health | 0 | 0 | | | | 2 year PhD SOM Global Health, 3 year PhD SOM Global Health, 4 year PhD SOM Global Health | | | |
| 262 | PHDGH 708 | Advanced Methods in Global Health Research | 3 | 6 | | | | 2 year PhD SOM Global Health | | | |
| 263 | PHDGH 711 | Introduction to Global Health | 3 | 6 | | | | 1 year PhD SOM Global Health | | | |
| 264 | PHDGH 712 | Scientific Communication and Critical Thinking in Health Sciences | 3 | 6 | | | | 1 year PhD SOM Global Health | | | |
| **Public Health** | | | | | | | | | | | |
| 265 | PUBH 501 | Principles of Public Health Problem Solving | 3 | 6 | | | | 1 year Gr SOM Public Health | 1 year Gr SOM Biomedicine | | |

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| 266 | PUBH 511 | Inferential Biostatistics | 3 | 6 | | | | 1 year Gr SOM Public Health | 1 year Gr SOM Biomedicine | | |
| 267 | PUBH 521 | Principles of Analytical Epidemiology | 3 | 6 | | | | 1 year Gr SOM Public Health | 1 year Gr SOM Biomedicine | | |
| 268 | PUBH 528 | Qualitative Research Methods | 3 | 6 | | | | 1 year Gr SOM Public Health | 1 year Gr SOM Biomedicine | | |
| 269 | PUBH 552 | Principles of Heath Economics and Policy | 3 | 6 | PUBH 551 Health Services Management, Health Economic and Health Policy (3696) (C and above) | | | 1 year Gr SOM Public Health, 2 year Gr SOM Public Health | 2 year Gr SOM Biomedicine | | |
| 270 | PUBH 561 | Graduate Research Seminar I | 3 | 6 | | | | 1 year Gr SOM Public Health, 2 year Gr SOM Public Health | 2 year Gr SOM Biomedicine | | |
| 271 | PUBH 599 | Global Nutrition and Sustainability | 3 | 6 | | | | 1 year Gr SOM Public Health, 2 year Gr SOM Molecular Medicine, 2 year Gr SOM Pharmacology and Toxicology, 2 year Gr SOM Sports Medicine and Rehabilitation | 1 year Gr SOM Biomedicine | | |
| 272 | PUBH 601 | Health Education and Promotion | 3 | 6 | | | | 1 year Gr SOM Public Health, 2 year Gr SOM Public Health | 2 year Gr SOM Biomedicine | | |
| 273 | PUBH 633 | Methods in Public Health | 3 | 6 | | | | 1 year Gr SOM Public Health, 2 year Gr SOM Public Health | 2 year Gr SOM Biomedicine | | |
| 274 | PUBH 681 | Master’s Project Planning | 3 | 6 | | | | 1 year Gr SOM Public Health, 2 year Gr SOM Public Health | | | |
| **SSH** | | | | | | | | | | | |
| **Academic Success Centre** | | | | | | | | | | | |

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| 275 | ASC 200 | Academic Writing, Science Communication, and Media Literacy | 3 | 6 | ASC 100 Advanced English for Academic Purposes (9234) (C- and above) OR Test "IELTS" BETWEEN 6.5 and 9 OR WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above) | | WCS 200 Introduction to Public Speaking (175) (C- and above) OR WCS 210/ASC 200 Academic Writing, Science Communication, and Media Literacy (4881) (C- and above) OR WCS 220 Science Writing (5686) (C- and above) OR WCS 230 Say What you Mean: Clarity, Precision, and Style in Academic Writing (3026) (C- and above) OR WCS 240 Writing for Digital Media (4421) (C- and above) OR WCS 250 Advanced Rhetoric and Composition (3027) (C- and above) OR WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (C- and above) OR WCS 270 Academic and Professional Presentations (8409) (C- and above) | 1 year UG GSB | | 1 year UG SCAI,<br>1 year UG SOM,<br>1 year UG SSH,<br>1 year UG SoE | |
| 276 | ASC 300 | Internship: Peer Tutor I | 3 | 6 | ASC 200 Academic Writing, Science Communication, and Media Literacy (9251) (A- and above) | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 277 | ASC 301 | Internship: Peer Tutor II | 3 | 6 | ASC 300 Internship: Peer Tutor I (9254) (A- and above) | | | Instructor's Permission Required. Registration through Add Course form only! | | | |

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| **Academic Success Centre, Communication and Composition** | | | | | | | | | | | |
| 278 | WCS 150/ASC 100 | Advanced English for Academic Purposes | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 279 | WCS 210/ASC 200 | Academic Writing, Science Communication, and Media Literacy | 3 | 6 | ASC 100 Advanced English for Academic Purposes (9234) (C- and above) OR Test "IELTS" BETWEEN 6.5 and 9 OR WCS 150/ASC 100 Advanced English for Academic Purposes (2183) (C- and above) | | WCS 200 Introduction to Public Speaking (175) (D and above) OR WCS 220 Science Writing (5686) (D and above) OR WCS 230 Say What you Mean: Clarity, Precision, and Style in Academic Writing (3026) (D and above) OR WCS 240 Writing for Digital Media (4421) (D and above) OR WCS 250 Advanced Rhetoric and Composition (3027) (D and above) OR WCS 260/WLL 235 Creative Writing: Introduction to Fiction Writing I (4000) (D and above) OR WCS 270 Academic and Professional Presentations (8409) (D and above) | 2 year UG GSB, 2 year UG SCAI, 2 year UG SOM, 2 year UG SSH, 2 year UG SoE | 3 year UG GSB, 3 year UG SCAI, 3 year UG SOM, 3 year UG SSH, 3 year UG SoE, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE | |
| **Area Studies** | | | | | | | | | | | |
| 280 | EAS 500 | Introduction to Eurasia | 4 | 8 | | | | Eurasian Studies | | | |
| 281 | EAS 501 | General Methodology | 4 | 8 | | | | Eurasian Studies | | | |
| 282 | 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) | | | Eurasian Studies | | | |

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| 283 | EAS 511 | Independent Study in Eurasian Studies | 4 | 8 | | | | You are not in the current priority. Please check the priority requirements. | | | |
| 284 | EAS 512 | Topics in Eurasian Studies | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 285 | EAS 513 | Critical Issues in Eurasian Studies | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 286 | EAS 514 | Topics in Eurasian Social Sciences | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 287 | EAS 700 | Introduction to Eurasia | 4 | 8 | | | | Eurasian Studies | | | |
| 288 | EAS 701 | Critical Issues in Eurasian Studies | 2 | 4 | | | | Eurasian Studies | | | |
| 289 | EAS 702 | Elective in Eurasian Humanities | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 290 | EAS 703 | Elective in Eurasian Social Sciences | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 291 | EAS 704 | Elective 2 in Eurasian Humanities | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 292 | EAS 705 | Elective 2 in Social Sciences | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 293 | EAS 708 | Proseminar in Eurasian Humanities | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 294 | EAS 709 | Proseminar in Eurasian Social Sciences | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 295 | EAS 710 | Independent Study in Eurasian Studies | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 296 | EAS 711 | Doctoral Seminar in Eurasian Studies I | 4 | 8 | | | | Eurasian Studies | | | |

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| 297 | EAS 800-0 | Dissertation Research in Eurasian Studies | 0 | 0 | | | | Eurasian Studies | | | |
| **Area Studies, Political Science and International Relations, Sociology and Anthropology** | | | | | | | | | | | |
| 298 | PLS 514/EAS 506/SOC 514 | Qualitative Research Methods | 4 | 8 | | | | Political Science and International Relations | Eurasian Studies, GSPP | | |
| **Chemistry** | | | | | | | | | | | |
| 299 | CHEM 100 | Introduction to Chemistry | 3 | 6 | | | CHEM 090 Chemistry for Non-Science majors (152) (D+ and above) | 5 year UG GSB (pending graduation), 5 year UG SCAI (pending graduation), 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), Anthropology, Economics, History, Linguistics and World Literature, Nursing, Political Science and International Relations, Sociology, Undeclared SSH | 3 year UG GSB, 3 year UG SCAI, 3 year UG SOM, 3 year UG SSH, 3 year UG SoE, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | GSB, SCAI, SoE, SoM | |
| 300 | CHEM 101 | General Chemistry I | 3 | 6 | | | | Chemistry | SoM | GSB, SCAI, SSH, SoE | |
| 301 | CHEM 101L | General Chemistry I lab | 1 | 2 | | CHEM 101 General Chemistry I (113) (C and above) | | Chemistry | SoM | GSB, SCAI, SSH, SoE | |
| 302 | CHEM 102 | General Chemistry II | 3 | 6 | CHEM 101 General Chemistry I (113) (C and above) | | | Chemistry | SoM | GSB, SCAI, SSH, SoE | |
| 303 | CHEM 104 | Introduction to Physical and Chemical Sciences | 3 | 6 | | | CHEM 091 Survey of Physical Science (149) (D+ and above) | Anthropology, Economics, History, Linguistics and World Literature, Nursing, Political Science and International Relations, Sociology, Undeclared SSH | | GSB, SCAI, SoE | |
| 304 | CHEM 211 | Organic Chemistry I | 3 | 6 | CHEM 102 General Chemistry II (232) (C and above) | | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |
| 305 | CHEM 211L | Organic Chemistry I Lab | 1 | 2 | CHEM 101L General Chemistry I lab (179) (C and above) | CHEM 211 Organic Chemistry I (154) (C and above) | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 306 | CHEM 212 | Organic Chemistry II | 3 | 6 | CHEM 211 Organic Chemistry I (154) (C and above) OR CHEM 191 Chemistry I for Engineers (1908) (C and above) | | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |
| 307 | CHEM 212L | Organic Chemistry II Lab | 1 | 2 | CHEM 211L Organic Chemistry I Lab (156) (C and above) | CHEM 212 Organic Chemistry II (443) (C and above) OR CHEM 292 Organic Chemistry for Biologists II (1901) (C and above) | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |
| 308 | CHEM 220 | Quantitative Chemical Analysis | 3 | 6 | CHEM 102 General Chemistry II (232) (C and above) | | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |
| 309 | CHEM 220L | Quantitative Chemical Analysis Lab | 1 | 2 | CHEM 101L General Chemistry I lab (179) (C and above) | CHEM 220 Quantitative Chemical Analysis (555) (C and above) | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |
| 310 | CHEM 331 | Physical Chemistry I | 3 | 6 | CHEM 220 Quantitative Chemical Analysis (555) (C and above) AND PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C and above) | | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |
| 311 | CHEM 331L | Physical Chemistry Lab | 1 | 2 | | CHEM 331 Physical Chemistry I (634) (C and above) | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |
| 312 | CHEM 341 | Biochemistry I | 3 | 6 | CHEM 211 Organic Chemistry I (154) (C and above) | | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |
| 313 | CHEM 341L | Biochemistry I Lab | 1 | 2 | CHEM 212L Organic Chemistry II Lab (444) (C and above) | CHEM 341 Biochemistry I (1058) (C and above) | | Chemistry | Biological Sciences, SoM | GSB, SCAI, SSH, SoE | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 314 | CHEM 350 | Advanced Inorganic Chemistry | 3 | 6 | CHEM 212 Organic Chemistry II (443) (C and above) AND CHEM 212L Organic Chemistry II Lab (444) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above) | | | Chemistry | Biological Sciences | GSB, SCAI, SSH, SoE | |
| 315 | CHEM 350L | Advanced Inorganic Chemistry Laboratory | 1 | 2 | CHEM 212 Organic Chemistry II (443) (C and above) AND CHEM 212L Organic Chemistry II Lab (444) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above) | CHEM 350 Advanced Inorganic Chemistry (1905) (C and above) | | Chemistry | Biological Sciences | GSB, SCAI, SSH, SoE | |
| 316 | CHEM 410 | Structural Spectroscopy | 4 | 8 | CHEM 212 Organic Chemistry II (443) (C and above) | | | Chemistry | Biological Sciences, SoM | SSH, SoE | |
| 317 | CHEM 432 | Introduction to Cheminformatics and Computer aided drug design | 3 | 6 | CHEM 341 Biochemistry I (1058) (C- and above) AND (CSCI 111 Web Programming and Problem Solving (110) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above)) | | | Chemistry | Biological Sciences, SSH, SoE | SoM | |
| 318 | CHEM 440 | Pharmaceutical and Medicinal Chemistry | 3 | 6 | CHEM 211 Organic Chemistry I (154) (C and above) | | | Chemistry | Biological Sciences, SoM | SSH, SoE | |
| 319 | CHEM 471 | Environmental Chemistry | 3 | 6 | CHEM 102 General Chemistry II (232) (C and above) | | | Chemistry | SSH, SoE, SoM | | |
| 320 | CHEM 488 | Directed Research I | 3 | 6 | CHEM 380 Research Methods (636) (C and above) | | | Chemistry | | | |
| 321 | CHEM 510 | Principles of Physical Chemistry | 3 | 6 | | | | Chemistry | SSH | SCAI, SoE | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 322 | CHEM 511 | Theoretical Chemistry | 4 | 8 | CHEM 510 Principles of Physical Chemistry (5266) (C and above) | | | | | | |
| 323 | CHEM 512 | Cheminformatics | 4 | 8 | | | | Chemistry | Life Sciences, SSH, SoE | SoM | |
| 324 | CHEM 515 | Applied Colloid and Surfactant Science | 4 | 8 | | | | | | | |
| 325 | CHEM 518 | Applied Polymer Science | 4 | 8 | | | | Chemistry | SSH | SCAI, SoE | |
| 326 | CHEM 520 | Applied Analytical Chemistry | 3 | 6 | | | | Chemistry | SSH | SCAI, SoE | |
| 327 | CHEM 522 | Analytical Environmental Chemistry | 4 | 8 | CHEM 520 Applied Analytical Chemistry (5267) (C and above) | | | Chemistry | SSH | SCAI, SoE | |
| 328 | CHEM 524 | Advanced Membrane Science | 4 | 8 | | | | | | | |
| 329 | CHEM 530 | Inorganic Structures and Reaction Mechanisms | 3 | 6 | | | | Chemistry | SSH | SCAI, SoE | |
| 330 | CHEM 531 | Nanochemistry and Functional Nanomaterials | 4 | 8 | | | | Chemistry | SSH | SCAI, SoE | |
| 331 | CHEM 532 | Organometallic Chemistry | 4 | 8 | CHEM 530 Inorganic Structures and Reaction Mechanisms (5265) (C and above) | | | | | | |
| 332 | CHEM 541 | Medicinal Chemistry and Drug Design | 4 | 8 | CHEM 540 Organic Reactions and Mechanisms (5460) (C and above) | | | Chemistry | Life Sciences, SoM | SCAI, SSH, SoE | |
| 333 | CHEM 543 | Structural Identification of Organic Compounds | 4 | 8 | | | | Chemistry | Life Sciences, SoM | SCAI, SSH, SoE | |
| 334 | CHEM 560 | Directed research in chemistry | 4 | 8 | | | | | | | |
| 335 | CHEM 591 | Scientific Methods in Chemistry | 3 | 6 | | | | Chemistry | SSH | SCAI, SoE | |
| 336 | CHEM 592 | Chemistry Seminar | 4 | 8 | | | | | | | |
| 337 | CHEM 691 | Thesis Proposal | 4 | 8 | | | | Chemistry | | | |
| 338 | CHEM 700 | Hot Topics in Chemistry | 4 | 8 | | | | Chemistry | SSH | SCAI, SoE | |
| 339 | CHEM 711 | Polymer Chemistry | 4 | 8 | | | | Chemistry | SSH | SCAI, SoE | |
| 340 | CHEM 720 | Spectrochemical Methods of analysis | 4 | 8 | | | | Chemistry | SSH | SCAI, SoE | |
| 341 | CHEM 722 | Advanced Environmental Chemistry | 4 | 8 | | | | Chemistry | SSH | SCAI, SoE | |

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| 342 | CHEM 730 | Chemical Thermodynamics and Kinetics | 4 | 8 | | | | Chemistry | SSH | SCAI, SoE | |
| 343 | CHEM 732 | Machine Learning in Cheminformatics | 4 | 8 | | | | Chemistry | SSH, SoE | SoM | |
| 344 | CHEM 740 | Advanced Medicinal Chemistry | 4 | 8 | | | | Chemistry | SoM | SCAI, SSH, SoE | |
| 345 | CHEM 750 | Modern Inorganic Chemistry | 4 | 8 | | | | Chemistry | SSH | SCAI, SoE | |
| 346 | CHEM 798-0 | Thesis Research | 0 | 0 | | | | Chemistry | | | |
| **Communication and Composition** | | | | | | | | | | | |
| 347 | WCS 101 | Communication and Society | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| **History, Philosophy and Religious Studies** | | | | | | | | | | | |
| 348 | HST 100 | History of Kazakhstan | 3 | 6 | | | | 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE, 5 year UG GSB (pending graduation), 5 year UG SOM (pending graduation), 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), 6 year UG GSB (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation), 6 year UG SoE (pending graduation), Eurasian Business | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE | GSB, SCAI, SSH, SoE, SoM | |
| 349 | HST 104 | Central Asian History II (1700 - 1991) | 3 | 6 | | | | 1 year UG SSH Undeclared, History | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |
| 350 | HST 122 | World History II (from 1500) | 3 | 6 | | | | 1 year UG SSH Undeclared, History | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |
| 351 | HST 131 | European History I (to 1700) | 3 | 6 | | | | 1 year UG SSH Undeclared, History | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 352 | HST 243 | Soviet History Through Film | 3 | 6 | HST 100 History of Kazakhstan (172) (C- and above) | | | 1 year UG SSH Undeclared, History | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |
| 353 | HST 345 | The Silk Roads | 3 | 6 | | | | History | 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE, 5 year UG GSB (pending graduation), 5 year UG SOM (pending graduation), 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), 6 year UG GSB (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation), 6 year UG SoE (pending graduation) | GSB, SCAI, SSH, SoE, SoM | |
| 354 | HST 400 | Research Assistance | 1 | 2 | HST 100 History of Kazakhstan (172) (B and above) AND Subject "HST" BETWEEN 100 and 499 | | | Instructor's Permission Required. Registration through Add Course form only! | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 355 | HST 443 | Imperial Apocalypse: 1917 and 1991 in Comparative Perspective | 3 | 6 | HST 100 History of Kazakhstan (172) (C- and above) AND Subject "HST" BETWEEN 200 and 299 AND Subject "HST" BETWEEN 300 and 399 | | | History | 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE, 5 year UG GSB (pending graduation), 5 year UG SOM (pending graduation), 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), 6 year UG GSB (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation), 6 year UG SoE (pending graduation) | GSB, SCAI, SSH, SoE, SoM | |
| 356 | HST 498 | Directed Reading | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 357 | HST 543 | Imperial Apocalypse: 1917 and 1991 in Comparative Perspective | 4 | 8 | | | | Eurasian Studies | GSB, GSE, GSPP, SSH | | |
| 358 | HST 743 | Imperial Apocalypse: 1917 and 1991 in Comparative Perspective | 4 | 8 | | | | Eurasian Studies | GSB, GSE, GSPP, SSH | | |
| 359 | PHIL 124 | Knowledge and Reality | 3 | 6 | | | | 1 year UG SSH Undeclared | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |
| 360 | PHIL 131 | Introduction to Contemporary Political Philosophy | 3 | 6 | | | | 1 year UG SSH Undeclared | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |

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| 361 | PHIL 160 | Philosophy of Religion | 3 | 6 | | | | 1 year UG SSH Undeclared | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |
| 362 | PHIL 210 | Ethics | 3 | 6 | | | | 3 year UG GSB, 3 year UG SCAI, 3 year UG SOM, 3 year UG SSH, 3 year UG SoE, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE, 5 year UG GSB (pending graduation), 5 year UG SCAI (pending graduation), 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), 6 year UG SCAI (pending graduation), 6 year UG SSH (pending graduation), 6 year UG SoE (pending graduation) | 2 year UG GSB, 2 year UG SCAI, 2 year UG SOM, 2 year UG SSH, 2 year UG SoE | GSB, SCAI, SSH, SoE, SoM | |
| 363 | PHIL 232 | Philosophy of Law | 3 | 6 | | | | 1 year UG SSH Undeclared | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |
| 364 | PHIL 320 | Truth, Knowledge and Belief | 3 | 6 | | | | 4 year UG SOM, 4 year UG SSH, 4 year UG SoE, 5 year UG SOM (pending graduation), 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation), 6 year UG SoE (pending graduation) | Economics, SSH | GSB, SCAI, SoE, SoM | |

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| 365 | PHIL 352 | Sex, Life, and Death: The Philosophy of Biology | 3 | 6 | | | | 4 year UG SOM, 4 year UG SSH, 4 year UG SoE, 5 year UG SOM (pending graduation), 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), 6 year UG SOM (pending graduation), 6 year UG SSH (pending graduation), 6 year UG SoE (pending graduation) | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 366 | PHIL 398 | Independent Study | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 367 | REL 212 | Buddhist Religious Traditions | 3 | 6 | | | | 1 year UG SSH Undeclared, History | 1 year UG SSH, 2 year UG SSH | GSB, SCAI, SSH, SoE | |
| **History, Philosophy and Religious Studies, History, Philosophy and Religious Studies** | | | | | | | | | | | |
| 368 | HST 551/REL 551 | Conversion to Islam in Medieval Central Asia | 4 | 8 | | | | Eurasian Studies | | | |
| **History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies** | | | | | | | | | | | |
| 369 | HST 271/TUR 271 | History of the Ottoman Empire | 3 | 6 | HST 100 History of Kazakhstan (172) (C- and above) | | | 1 year UG SSH Undeclared, History | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH | GSB, SCAI, SSH, SoE, SoM | |
| **History, Philosophy and Religious Studies, Languages, Literature and Linguistics** | | | | | | | | | | | |
| 370 | HST 274/WLL 274 | Texts and Contexts | 3 | 6 | | | | 1 year UG SSH Undeclared, History | 1 year UG GSB Economics, 1 year UG SSH, 2 year UG GSB Economics, 2 year UG SSH, Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 371 | HST 441/WLL 441 | Utopias in Russian and Soviet Literature | 3 | 6 | Subject "HST" BETWEEN 200 and 299 OR Subject "HST" BETWEEN 300 and 399 OR Subject "WLL" BETWEEN 200 and 299 OR Subject "WLL" BETWEEN 300 and 399 | | | History, Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 372 | HST 541/WLL 541 | Utopias in Russian and Soviet Literature | 4 | 8 | | | | Eurasian Studies | | | |

| Kazakh Language and Turkic Studies | | | | | | | | | | | |
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| 373 | KAZ 001 | Kazakh Language Placement Test | 0 | 0 | | | | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE | | GSB, SCAI, SSH, SoE, SoM | |
| 374 | KAZ 201 | Academic Kazakh I | 3 | 6 | KAZ 150 Basic Kazakh (1215) (C- and above) OR KLL "[B1.2] Intermediate" | | | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE | 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | GSB, SCAI, SSH, SoE, SoM | |
| 375 | 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 GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE | 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | GSB, SCAI, SSH, SoE, SoM | |
| 376 | KAZ 300 | Kazakh Studies in the Post-Colonial Era | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C and above) OR KLL "[C1.1] Advanced" | | | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE | | GSB, SCAI, SSH, SoE, SoM | |
| 377 | KAZ 304 | Academic Writing in Kazakh | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | KAZ 304 Academic Writing in Kazakh (703) (C- and above) OR KAZ 303 Academic Speaking in Kazakh (702) (C- and above) | 1 year UG SOM Medical Sciences, 2 year UG GSB, 2 year UG SCAI Mathematics, 2 year UG SOM Biological Sciences, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 3 year UG GSB Economics, 3 year UG SCAI Computer Science, 3 year UG SCAI Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH History, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 3 year UG SoE Electrical and Computer Engineering, 4 year UG SSH Physics, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | | GSB, SCAI, SSH, SoE, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 378 | KAZ 312 | Kazakh discourse | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB, 2 year UG SCAI Mathematics, 2 year UG SOM Biological Sciences, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 3 year UG GSB Economics, 3 year UG SCAI Computer Science, 3 year UG SCAI Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH History, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 3 year UG SoE Electrical and Computer Engineering, 4 year UG SSH Physics, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | | GSB, SCAI, SSH, SoE, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 379 | KAZ 313 | Kazakh for Business | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB, 2 year UG SCAI Mathematics, 2 year UG SOM Biological Sciences, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 3 year UG GSB Economics, 3 year UG SCAI Computer Science, 3 year UG SCAI Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH History, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 3 year UG SoE Electrical and Computer Engineering, 4 year UG SSH Physics, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | | GSB, SCAI, SSH, SoE, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 380 | KAZ 350 | Kazakh Literature | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB, 2 year UG SCAI Mathematics, 2 year UG SOM Biological Sciences, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 3 year UG GSB Economics, 3 year UG SCAI Computer Science, 3 year UG SCAI Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH History, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 3 year UG SoE Electrical and Computer Engineering, 4 year UG SSH Physics, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | | GSB, SCAI, SSH, SoE, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 381 | KAZ 357 | Literature of Alash | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB, 2 year UG SCAI Mathematics, 2 year UG SOM Biological Sciences, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 3 year UG GSB Economics, 3 year UG SCAI Computer Science, 3 year UG SCAI Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH History, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 3 year UG SoE Electrical and Computer Engineering, 4 year UG SSH Physics, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | | GSB, SCAI, SSH, SoE, SoM | |
| 382 | KAZ 359 | Professional Kazakh for Medicine | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | SoM | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 383 | KAZ 363 | Language and Globalization | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB, 2 year UG SCAI Mathematics, 2 year UG SOM Biological Sciences, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 3 year UG GSB Economics, 3 year UG SCAI Computer Science, 3 year UG SCAI Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH History, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 3 year UG SoE Electrical and Computer Engineering, 4 year UG SSH Physics, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | | GSB, SCAI, SSH, SoE, SoM | |

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| 384 | KAZ 366 | Kazakh Language for Engineers | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM Medical Sciences, 2 year UG GSB, 2 year UG SCAI Mathematics, 2 year UG SOM Biological Sciences, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 3 year UG GSB Economics, 3 year UG SCAI Computer Science, 3 year UG SCAI Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH History, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 3 year UG SoE Electrical and Computer Engineering, 4 year UG SSH Physics, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | | GSB, SCAI, SSH, SoE, SoM | |

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| 385 | KAZ 368 | Onomastics: History and Function of Names | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 1 year UG SOM A Six-Year Medical Program, 2 year UG GSB, 2 year UG SCAI Mathematics, 2 year UG SOM Biological Sciences, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 3 year UG GSB Economics, 3 year UG SCAI Computer Science, 3 year UG SCAI Robotics Engineering, 3 year UG SSH Anthropology, 3 year UG SSH Chemistry, 3 year UG SSH History, 3 year UG SSH Physics, 3 year UG SSH Political Sciences and International Relations, 3 year UG SSH Sociology, 3 year UG SoE Electrical and Computer Engineering, 4 year UG SSH Physics, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | | GSB, SCAI, SSH, SoE, SoM | |
| 386 | KAZ 371 | Contemporary Kazakh Literature | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 2 year UG SOM A Six-Year Medical Program, 4 year UG GSB Economics, 4 year UG SCAI Computer Science, 4 year UG SCAI Mathematics, 4 year UG SCAI Robotics Engineering, 4 year UG SOM Biological Sciences, 4 year UG SSH Anthropology, 4 year UG SSH Chemistry, 4 year UG SSH History, 4 year UG SSH Linguistics and World Literature, 4 year UG SSH Political Sciences and International Relations, 4 year UG SSH Sociology, 4 year UG SoE Electrical and Computer Engineering, 4 year UG SoE Geology, 4 year UG SoE Mining Engineering | | GSB, SCAI, SSH, SoE, SoM | |

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| 387 | KAZ 373 | Kazakh Terminology | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 2 year UG SOM A Six-Year Medical Program, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | | GSB, SCAI, SSH, SoE, SoM | |
| 388 | KAZ 374 | Kazakh Diplomacy | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 2 year UG SOM A Six-Year Medical Program, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | | GSB, SCAI, SSH, SoE, SoM | |
| 389 | KAZ 376 | Language and Culture | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 2 year UG SOM A Six-Year Medical Program, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | | GSB, SCAI, SSH, SoE, SoM | |
| 390 | KAZ 378 | Kazakh for Social Science | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 2 year UG SOM A Six-Year Medical Program, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | | GSB, SCAI, SSH, SoE, SoM | |
| 391 | KAZ 379 | Kazakh Cinema | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" | | | 2 year UG SOM A Six-Year Medical Program, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | | GSB, SCAI, SSH, SoE, SoM | |
| 392 | KAZ 411 | Shoqan Studies: A Decolonialist Discourse | 3 | 6 | Subject "KAZ" BETWEEN 300 and 399 | | | 2 year UG SOM A Six-Year Medical Program, 4 year UG GSB, 4 year UG SCAI, 4 year UG SOM, 4 year UG SSH, 4 year UG SoE | | GSB, SCAI, SSH, SoE, SoM | |
| 393 | KFL 101 | Elementary Kazakh as a Foreign Language I | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 394 | KFL 201 | Intermediate Kazakh as a Foreign Language I | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 395 | TUR 100 | Languages, Cultures, and Communities of the Turkic World | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| 396 | TUR 230 | Literatures of Central Asia | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| 397 | TUR 451 | The Turkish Novel | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| 398 | TUR 775 | Doctoral Topic in Turkic Studies | 4 | 8 | | | | Eurasian Studies | | | |
| **Kazakh Language and Turkic Studies, Languages, Literature and Linguistics** | | | | | | | | | | | |

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| 399 | TUR 180/LING 180 | Introduction to Turkic languages | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| 400 | TUR 280/LING 280 | Introduction to Turkic Historical and Comparative Linguistics | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| **Languages, Literature and Linguistics** | | | | | | | | | | | |
| 401 | CHN 101 | Beginning Mandarin I | 4 | 8 | | | | 1 year UG SSH Linguistics and World Literature, 1 year UG SSH Undeclared, 2 year UG SSH Linguistics and World Literature | 3 year UG SSH Linguistics and World Literature | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE, 2 year UG GSB, 2 year UG SCAI, 2 year UG SOM, 2 year UG SSH, 2 year UG SoE, 3 year UG GSB, 3 year UG SCAI, 3 year UG SSH, 3 year UG SoE | |
| 402 | CHN 201 | Intermediate Mandarin I | 4 | 8 | CHN 102 Beginning Mandarin II (1844) (C and above) | | | SSH | GSB, SCAI, SoE, SoM | | |
| 403 | FRE 101 | Beginning French I | 4 | 8 | | | | 1 year UG SSH Linguistics and World Literature, 1 year UG SSH Undeclared, 2 year UG SSH Linguistics and World Literature | 3 year UG SSH Linguistics and World Literature | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE, 2 year UG GSB, 2 year UG SCAI, 2 year UG SOM, 2 year UG SSH, 2 year UG SoE, 3 year UG GSB, 3 year UG SCAI, 3 year UG SSH, 3 year UG SoE | |
| 404 | GER 101 | Beginning German | 4 | 8 | | | | 1 year UG SSH Linguistics and World Literature, 1 year UG SSH Undeclared, 2 year UG SSH Linguistics and World Literature | 3 year UG SSH Linguistics and World Literature | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE, 2 year UG GSB, 2 year UG SCAI, 2 year UG SOM, 2 year UG SSH, 2 year UG SoE, 3 year UG GSB, 3 year UG SCAI, 3 year UG SSH, 3 year UG SoE | |

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| 405 | GER 201 | Intermediate German I | 4 | 8 | GER 102 Beginning German II (3335) (C- and above) | | | Economics, SSH | GSB, SCAI, SoE, SoM | | |
| 406 | LING 130 | Introduction to Language and Communication | 3 | 6 | | | | 1 year UG SOM, 1 year UG SSH, 1 year UG SoE, Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 407 | LING 131 | Introduction to Linguistics | 3 | 6 | | | | 1 year UG SOM, 1 year UG SSH, 1 year UG SoE, Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 408 | LING 231 | Computer Programming for the Humanities and Social Sciences | 3 | 6 | | | | 2 year UG SSH Linguistics and World Literature | Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 409 | LING 270 | Languages of Eurasia | 3 | 6 | | | | 2 year UG SSH Linguistics and World Literature | Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 410 | LING 273 | Survey of Research Methods in Linguistics | 3 | 6 | LING 131 Introduction to Linguistics (1394) (C- and above) | | | 2 year UG SSH Linguistics and World Literature | Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 411 | LING 277 | Language Diversity and Language Universals | 3 | 6 | LING 131 Introduction to Linguistics (1394) (C and above) | | | 2 year UG SSH Linguistics and World Literature | Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 412 | LING 346 | Corpus Linguistics | 3 | 6 | LING 131 Introduction to Linguistics (1394) (D and above) | | | Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 413 | LING 371 | Practicum in Teaching Foreign Languages | 2 | 4 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 414 | LING 375 | The Art and Science of Analyzing Languages: Morphosyntax of the World's Languages | 3 | 6 | LING 131 Introduction to Linguistics (1394) (C- and above) | | | Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 415 | LING 431 | Statistics and computational methods in Linguistics | 3 | 6 | LING 131 Introduction to Linguistics (1394) (C- and above) AND Subject "LING" BETWEEN 200 and 299 | | | Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 416 | LING 531 | Statistics and computational methods in Linguistics | 4 | 8 | | | | SSH | GSB, GSE, GSPP | | |

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| 417 | POL 101 | Beginning Polish | 4 | 8 | | | | 1 year UG SSH Linguistics and World Literature, 1 year UG SSH Undeclared, 2 year UG SSH Linguistics and World Literature | 3 year UG SSH Linguistics and World Literature | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE, 2 year UG GSB, 2 year UG SCAI, 2 year UG SOM, 2 year UG SSH, 2 year UG SoE, 3 year UG GSB, 3 year UG SCAI, 3 year UG SSH, 3 year UG SoE | |
| 418 | POL 201 | Intermediate Polish I | 4 | 8 | POL 102 Beginning Polish II (8214) (C- and above) | | | Economics, SSH | GSB, SCAI, SoE, SoM | | |
| 419 | RFL 156 | Kazakhstan - history, culture, traditions, society, modernity | 6 | 3 | | | | | | | |
| 420 | RFL 211 | East in Soviet Russian-language culture: origin and fate | 3 | 6 | | | | | | | |
| 421 | RFL 213 | Soviet Everyday Life through Cinema | 3 | 6 | | | | | | | |
| 422 | RFL 303 | Intensive Advanced Russian | 4 | 8 | | | | | | | |
| 423 | SPA 101 | Beginning Spanish I | 4 | 8 | | | | 1 year UG SSH Linguistics and World Literature, 1 year UG SSH Undeclared, 2 year UG SSH Linguistics and World Literature | 3 year UG SSH Linguistics and World Literature | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE, 2 year UG GSB, 2 year UG SCAI, 2 year UG SOM, 2 year UG SSH, 2 year UG SoE, 3 year UG GSB, 3 year UG SCAI, 3 year UG SSH, 3 year UG SoE | |
| 424 | SPA 201 | Intermediate Spanish I | 4 | 8 | SPA 102 Beginning Spanish II (1128) (C- and above) | | | Economics, SSH | GSB, SCAI, SoE, SoM | | |
| 425 | SPA 314 | Advanced Spanish Grammar and Composition | 3 | 6 | SPA 202 Intermediate Spanish II (1842) (C- and above) | | | Economics, SSH | GSB, SCAI, SoE, SoM | | |
| 426 | WLL 110 | Introduction to Literary Studies | 3 | 6 | | | | 1 year UG GSB, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE | Economics, SSH | GSB, SCAI, SoE, SoM | |

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| 427 | WLL 201 | World Literature I | 3 | 6 | | | | 2 year UG SSH Linguistics and World Literature | Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 428 | WLL 209 | Introduction to Translation Studies | 3 | 6 | | | | 2 year UG SSH Linguistics and World Literature | Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 429 | WLL 237 | Literature and Other Media | 3 | 6 | | | | 2 year UG SSH Linguistics and World Literature | Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 430 | WLL 334 | Postmodern Fiction: Forms and Messages | 3 | 6 | Subject "WLL" BETWEEN 100 and 399 | | | Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 431 | WLL 341 | Soviet Literature as Multinational Literature | 3 | 6 | | | | | | GSB, SCAI, SSH, SoE, SoM | |
| 432 | WLL 359 | Terror and Perfection: Soviet Female Writers and Poets | 3 | 6 | | | | Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 433 | WLL 399 | Independent Study | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 434 | WLL 400 | Research Assistance in Linguistics and Literature | 1 | 2 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 435 | WLL 401 | Advanced Topics in World Literature | 3 | 6 | | | | Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| 436 | WLL 498 | Languages, Linguistics, and Literatures Capstone I | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| **Languages, Literature and Linguistics, Languages, Literature and Linguistics** | | | | | | | | | | | |
| 437 | SPA 254/WLL 254 | Superstition, Magical Realism, and Horror in Hispanic Culture | 3 | 6 | Subject "WLL" BETWEEN 100 and 499 OR Subject "HST" BETWEEN 100 and 499 | | | 2 year UG SSH Linguistics and World Literature | Linguistics and World Literature | GSB, SCAI, SSH, SoE, SoM | |
| 438 | SPA 351/WLL 351 | Literature and Film of the Postcolonial World | 3 | 6 | Subject "WLL" BETWEEN 200 and 299 | | | Linguistics and World Literature | Economics, SSH | GSB, SCAI, SoE, SoM | |
| **Languages, Literature and Linguistics, Sociology and Anthropology** | | | | | | | | | | | |

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| 439 | WLL 385/ANT 385 | Postcolonial Theory and its Applications in Eurasia | 3 | 6 | ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above) OR SOC 101 Introduction to Sociology (508) (C- and above) OR WLL 121 Introduction to Cultural Studies (243) (C- and above) OR WLL 102 /PHIL 102 Language, Experience, Culture (2481) (C- and above) | | | Anthropology | Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| **Physics** | | | | | | | | | | | |
| 440 | PHYS 161 | Physics I for Scientists and Engineers with Laboratory | 4 | 8 | | MATH 161 Calculus I (118) (C and above) | PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above) | 1 year UG SCAI Computer Science, 1 year UG SCAI Robotics Engineering, 1 year UG SSH Physics, 1 year UG SoE, SoM | | | |
| 441 | PHYS 201 | Introductory Astronomy I | 3 | 6 | | | | 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 442 | PHYS 221 | Classical Mechanics I | 3 | 6 | (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above)) AND MATH 273 Linear Algebra with Applications (84) (C- and above) | | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 443 | PHYS 250 | Introduction to Nuclear Science and Technology | 3 | 6 | | | | Physics, SSH | GSB, SCAI, SoE, SoM | | |

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| 444 | PHYS 261 | Modern Physics with laboratory | 4 | 8 | MATH 162 Calculus II (170) (C- and above) AND (PHYS 152 Introductory Physics II with Lab (1176) (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above)) | | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 445 | PHYS 291 | Introduction to Quantum Technologies | 3 | 6 | | | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 446 | PHYS 315 | Applied Mathematical Methods | 3 | 6 | (PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)) AND MATH 274 Introduction to Differential Equations (484) (C- and above) | | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 447 | PHYS 361 | Classical Electrodynamics I | 3 | 6 | | PHYS 315 Applied Mathematical Methods (653) (D and above) OR PHYS 411 Advanced Mathematical Physics (3142) (D and above) | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 448 | PHYS 395 | Research Methods | 3 | 6 | | | | Physics | | | |

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| 449 | PHYS 421 | Parallel Computing | 4 | 8 | PHYS 270 Introduction to Scientific Computing and Data Analysis (488) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR CSCI 115 Programming Fundamentals (5257) (C- and above) | | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 450 | PHYS 452 | Quantum Mechanics II | 3 | 6 | PHYS 451 Quantum Mechanics I (1415) (C- and above) | | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 451 | PHYS 463 | Astrophysics and General Relativity | 3 | 6 | MATH 162 Calculus II (170) (C- and above) AND PHYS 221 Classical Mechanics I (652) (C- and above) AND MATH 274 Introduction to Differential Equations (484) (C- and above) | | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 452 | PHYS 473 | Introduction to Solid State Physics | 4 | 8 | PHYS 261 Modern Physics with laboratory (125) (C- and above) OR CHEM 331 Physical Chemistry I (634) (C- and above) OR MAE 301 Engineering Thermodynamics (5927) (C- and above) OR CHME 201 Chemical Engineering Thermodynamics (5007) (C- and above) OR ELCE 204 Solid State Devices (5508) (C- and above) | | | Physics | GSB, SCAI, SSH, SoE, SoM | | |
| 453 | PHYS 491 | Directed Study of Advanced Physics Topics | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 454 | PHYS 498 | Honors Thesis Research | 0 | 0 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |

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| 455 | PHYS 505 | Classical Mechanics | 4 | 8 | | | | Physics | SCAI, SSH, SoE | | |
| 456 | PHYS 515 | Classical Electrodynamics | 4 | 8 | | | | Physics | SCAI, SSH, SoE | | |
| 457 | PHYS 521 | Parallel Programming for Scientific Computing | 4 | 8 | PHYS 511 Scientific Computing and Data Analysis (3169) (C- and above) OR CSCI 501 Software Principles and Practice (2408) (C- and above) OR DS 501 Fundamentals of Data Science (5218) (C- and above) | | | Physics | SCAI, SSH, SoE | | |
| 458 | PHYS 530 | Solid State Physics | 4 | 8 | | | | Physics | SCAI, SSH, SoE | | |
| 459 | PHYS 550 | Analytical Methods in Science | 4 | 8 | | | | Physics | SCAI, SSH, SoE | | |
| 460 | PHYS 563 | General Relativity | 4 | 8 | | | | Physics | SCAI, SSH, SoE | | |
| 461 | PHYS 565 | Advanced Physics Laboratory | 4 | 8 | | | | Physics | SCAI, SSH, SoE | | |
| 462 | PHYS 590 | Directed Study of Advanced Topics in Modern Physics | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 463 | PHYS 591 | Research Methods | 4 | 8 | | | | Physics | SCAI, SSH, SoE | | |
| 464 | PHYS 600 | Thesis study | 0 | 0 | | | | Physics | | | |
| 465 | PHYS 690 | Thesis Research | 12 | 24 | | | | Physics | | | |
| 466 | PHYS 700-0 | Thesis Research | 0 | 0 | | | | Physics | | | |
| 467 | PHYS 790 | Directed Study of Advanced Modern Physics Topics | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 468 | PHYS 791 | Research methods and ethics | 4 | 8 | | | | Physics | SCAI, SSH, SoE | | |
| **Political Science and International Relations** | | | | | | | | | | | |

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| 469 | PLS 101 | Introduction to Political Science | 3 | 6 | | | | 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), 6 year UG SSH (pending graduation), 6 year UG SoE (pending graduation), Undeclared SSH | 2 year UG SOM A Six-Year Medical Program, Anthropology, Biological Sciences, Chemistry, Economics, GSB, History, Linguistics and World Literature, Mathematics, Physics, Sociology | | |
| 470 | PLS 120 | Introduction to Political Theory | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| 471 | PLS 140 | Introduction to Comparative Politics | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| 472 | PLS 150 | Introduction to International Relations | 3 | 6 | | | | GSB, SCAI, SSH, SoE, SoM | | | |
| 473 | PLS 210 | Political Science Research Methods | 3 | 6 | | | | 2 year UG SSH Political Sciences and International Relations, 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 474 | PLS 211 | Quantitative Methods | 3 | 6 | | | ECON 211 Economic Statistics (2280) (C- and above) | 2 year UG SSH Political Sciences and International Relations, 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 475 | 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) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 476 | PLS 330 | Politics and Governance of Eurasia | 3 | 6 | PLS 210 Political Science Research Methods (129) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 477 | PLS 341 | Politics of Development | 3 | 6 | PLS 210 Political Science Research Methods (129) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |

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| 478 | 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) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 479 | PLS 354 | Introduction to International Law | 3 | 6 | PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 140 Introduction to Comparative Politics (223) (C- and above) AND PLS 120 Introduction to Political Theory (512) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 480 | PLS 356 | International Politics of the Korean Peninsula | 3 | 6 | PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 150 Introduction to International Relations (511) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 481 | PLS 360 | Foreign Policy Analysis | 3 | 6 | PLS 150 Introduction to International Relations (511) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 482 | PLS 362 | Science, Technology and International Affairs | 3 | 6 | PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 483 | PLS 363 | Visual Politics | 3 | 6 | PLS 140 Introduction to Comparative Politics (223) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 484 | PLS 374 | Moot Court in Public International Law | 3 | 6 | PLS 120 Introduction to Political Theory (512) (C- and above) AND PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 485 | PLS 391 | Intermediate Special Topics in Comparative Politics | 3 | 6 | PLS 210 Political Science Research Methods (129) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 486 | PLS 392 | Politics of China | 3 | 6 | PLS 210 Political Science Research Methods (129) (C- and above) | | | 3 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 487 | PLS 395 | Independent Study | 3 | 6 | PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above) | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 488 | PLS 419 | AI from a Social Science Perspective | 3 | 6 | PLS 120 Introduction to Political Theory (512) (C- and above) | | | 4 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 489 | PLS 424 | Issues in the Philosophy of Social Science | 3 | 6 | PLS 120 Introduction to Political Theory (512) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) | | | 4 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 490 | PLS 441 | Advanced Topics in Comparative Politics | 3 | 6 | PLS 140 Introduction to Comparative Politics (223) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) | | | 4 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |
| 491 | PLS 448 | Comparative Electoral System | 3 | 6 | PLS 140 Introduction to Comparative Politics (223) (C- and above) | | | 4 year UG SSH Political Sciences and International Relations | Political Science and International Relations | Economics, SSH | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 492 | 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! | | | |
| 493 | PLS 510 | Quantitative Research Methods | 4 | 8 | | | | Political Science and International Relations | Eurasian Studies, GSPP | | |
| 494 | PLS 519 | AI from a Social Science Perspective | 4 | 8 | | | | Political Science and International Relations | Eurasian Studies, GSPP | | |
| 495 | PLS 524 | Issues in the Philosophy of Social Science | 4 | 8 | | | | Political Science and International Relations | Eurasian Studies, GSPP | | |
| 496 | PLS 541 | Advanced Topics in Comparative Politics | 4 | 8 | | | | Political Science and International Relations | Eurasian Studies, GSPP | | |
| 497 | PLS 548 | Comparative Electoral System | 4 | 8 | | | | Political Science and International Relations | Eurasian Studies, GSPP | | |
| 498 | PLS 550 | Core Seminar in IR | 4 | 8 | | | | Political Science and International Relations | Eurasian Studies, GSPP | | |
| 499 | PLS 581 | Independent Study in Political Science | 4 | 8 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 500 | PLS 598 | MA Thesis I | 6 | 12 | | | | Political Science and International Relations | | | |
| 501 | PLS 710 | Quantitative Research Methods | 4 | 8 | | | | Eurasian Studies | | GSE, GSPP, SSH | |
| 502 | PLS 714 | Qualitative Research Methods | 4 | 8 | | | | Eurasian Studies | | GSE, GSPP, SSH | |
| 503 | PLS 724 | Issues in the Philosophy of Social Science | 4 | 8 | | | | Eurasian Studies | | GSE, GSPP, SSH | |
| 504 | PLS 741 | Advanced Topics in Comparative Politics | 4 | 8 | | | | Eurasian Studies | | GSE, GSPP, SSH | |
| 505 | PLS 748 | Comparative Electoral System | 4 | 8 | | | | Eurasian Studies | | GSE, GSPP, SSH | |
| 506 | PLS 750 | Core Seminar in IR | 4 | 8 | | | | Eurasian Studies | | GSE, GSPP, SSH | |
| **SSH** | | | | | | | | | | | |
| 507 | SSH 300 | School of Sciences and Humanities Internship | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 508 | SSH 301 | School of Sciences and Humanities Internship: Second Experience | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| **Sociology and Anthropology** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 509 | ANT 101 | Being Human: An Introduction to Four Field Anthropology | 3 | 6 | | | | 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), Anthropology, Undeclared SSH | 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE, 2 year UG SOM A Six-Year Medical Program | GSB, SCAI, SSH, SoE, SoM | |
| 510 | ANT 160 | Introduction to Biological Anthropology | 3 | 6 | | | ANT 361 Human Evolution: Bones, Stones and Genomes (160) (C- and above) | 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), Anthropology, Undeclared SSH | 1 year UG GSB Economics, 1 year UG SCAI, 1 year UG SOM, 1 year UG SSH, 1 year UG SoE | GSB, SCAI, SSH, SoE, SoM | |
| 511 | ANT 233 | Cavemen, Mammoths, and Sabertooths: Stone Age Archaeology in Eurasia | 3 | 6 | | | | Anthropology | 1 year UG SSH Sociology, 2 year UG SSH Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 512 | ANT 240 | Laboratory Methods in Archaeology | 3 | 6 | | | | Anthropology | 1 year UG SSH Sociology, 2 year UG SSH Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 513 | ANT 290 | Foundations of Cultural Heritage Studies | 3 | 6 | | | | Anthropology | 1 year UG SSH Sociology, 2 year UG SSH Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 514 | ANT 306 | Anthropology of Performance | 3 | 6 | | | | Anthropology | Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 515 | ANT 312 | Political Anthropology | 3 | 6 | | | | Anthropology | Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 516 | ANT 317 | Museum space: collections, collectors and society | 3 | 6 | ANT 101 Being Human: An Introduction to Four Field Anthropology (2960) (C and above) OR ANT 140 World Prehistory (227) (C and above) OR ANT 110 Introduction to Sociocultural Anthropology (501) (C and above) OR WLL 171/ANT 175 Introduction to Linguistic Anthropology (4417) (C and above) | | | Anthropology | Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 517 | ANT 400 | Research Assistance in Anthropology | 1 | 2 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 518 | ANT 401 | Research Assistance in Anthropology | 1 | 2 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 519 | ANT 402 | Research Assistance in Anthropology | 1 | 2 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 520 | ANT 403 | Research Assistance in Anthropology | 2 | 4 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 521 | ANT 410 | Ethnography, Fiction, Memoir | 3 | 6 | | | | Anthropology | Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 522 | ANT 420 | Materiality and Eurasian Society | 3 | 6 | Subject "ANT" BETWEEN 200 and 399 OR Subject "ANT" BETWEEN 200 and 399 OR Subject "SOC" BETWEEN 200 and 399 OR Subject "SOC" BETWEEN 200 and 399 | | | Anthropology | Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 523 | ANT 481 | Anthropology of Entrepreneurship | 3 | 6 | ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above) | | | Anthropology | Sociology, Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 524 | ANT 498 | Capstone Seminar I | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 525 | ANT 510 | Ethnography, Fiction, Memoir | 4 | 8 | | | | Eurasian Studies | | | |
| 526 | ANT 520 | Materiality and Eurasian Society | 4 | 8 | | | | Eurasian Studies | | | |
| 527 | ANT 585 | Postcolonial Theory and Its Application in Eurasia | 4 | 8 | | | | Eurasian Studies | | | |
| 528 | ANT 710 | Ethnography, Fiction, Memoir | 4 | 8 | | | | Eurasian Studies | | | |
| 529 | SOC 101 | Introduction to Sociology | 3 | 6 | | | | 5 year UG SSH (pending graduation), 5 year UG SoE (pending graduation), Sociology, Undeclared SSH | 2 year UG SOM A Six-Year Medical Program, 2 year UG SSH, Anthropology, SoM | GSB, SCAI, SSH, SoE | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 530 | SOC 201 | Social Science Research Methods | 3 | 6 | | | | 3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology (pending graduation), 5 year UG SSH Sociology (pending graduation) | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 531 | SOC 203 | Quantitative Methods in Sociology | 3 | 6 | | | | Anthropology, Sociology | Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 532 | SOC 217 | Sociology of the Family | 3 | 6 | | | | 2 year UG SSH Sociology, 3 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 533 | 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) | | | Anthropology, Sociology | Undeclared SSH | GSB, SCAI, SSH, SoE, SoM | |
| 534 | SOC 313 | Social Foundations of Education | 3 | 6 | SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above) | | | 3 year UG SSH Sociology, 4 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 535 | SOC 330 | Art and Society | 3 | 6 | SOC 201 Social Science Research Methods (1341) (C- and above) OR ANT 214/SOC 214 Qualitative Methods (1033) (C- and above) | | | 3 year UG SSH Sociology, 4 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 536 | SOC 350 | Digital Deviance | 3 | 6 | SOC 201 Social Science Research Methods (1341) (C- and above) OR SOC 203 Quantitative Methods in Sociology (1377) (C- and above) OR SOC 210 Gender and Society (226) (C- and above) OR SOC 211 Social Justice in a Global Society (162) (C- and above) OR SOC 213 Work and Society (453) (C- and above) OR SOC 215 Sociology of Race and Ethnicity (3647) (C- and above) OR SOC 217 Sociology of the Family (1324) (C- and above) OR SOC 220 Science, Technology, and Society (2512) (C- and above) OR SOC 221 International Migration (2516) (C- and above) OR SOC 223 Social Movements: How People Make Change (3357) (C- and above) OR SOC 301 Classical Sociological Theory (683) (C- and above) OR SOC 310 Social Inequality (1031) (C- and above) OR SOC 314 Organizations and Society (1328) (C- and above) OR SOC 317 Economy and Society (2513) (C- and above) OR SOC 318 Sexuality and Gender in a Transnational World (3648) (C- and above) | | | 3 year UG SSH Sociology, 4 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 537 | SOC 400 | Research Assistance in Sociology | 1 | 2 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 538 | SOC 401 | Research Assistance in Sociology | 1 | 2 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 539 | SOC 402 | Research Assistance in Sociology | 1 | 2 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 540 | SOC 410 | Violence Against Women: An Intersectional Approach | 3 | 6 | Subject "SOC" BETWEEN 200 and 299 OR Subject "SOC" BETWEEN 200 and 299 OR Subject "SOC" BETWEEN 300 and 399 OR Subject "SOC" BETWEEN 300 and 399 | | | 3 year UG SSH Sociology, 4 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 541 | SOC 411 | Citizenship in Eurasia: Political Sociology of Civic Belonging | 3 | 6 | SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above) OR SOC 180 Introducing Kazakhstan: from the Past to the Future (5063) (C- and above) OR SOC 201 Social Science Research Methods (1341) (C- and above) OR SOC 301 Classical Sociological Theory (683) (C- and above) | | | 3 year UG SSH Sociology, 4 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 542 | SOC 416 | Sociology of Punishment | 3 | 6 | SOC 301 Classical Sociological Theory (683) (C- and above) | | | 3 year UG SSH Sociology, 4 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 543 | SOC 475 | Sociology of Consumption | 3 | 6 | Subject "SOC" BETWEEN 200 and 299 | | | 3 year UG SSH Sociology, 4 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 544 | SOC 498 | Capstone Seminar Part I | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 545 | SOC 511 | Citizenship in Eurasia: Political Sociology of Civic Belonging | 4 | 8 | | | | Eurasian Studies | | | |
| **Sociology and Anthropology, Sociology and Anthropology** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 546 | ANT 214/SOC 214 | Qualitative Methods | 3 | 6 | | | | 3 year UG SSH Anthropology, 3 year UG SSH Sociology, 4 year UG SSH Anthropology, 4 year UG SSH Sociology, 5 year UG SSH Anthropology (pending graduation), 5 year UG SSH Sociology (pending graduation) | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| 547 | ANT 285/SOC 212 | Food and Society | 3 | 6 | | | | 2 year UG SSH Anthropology, 2 year UG SSH Sociology, 3 year UG SSH Anthropology, 3 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 548 | ANT 389/SOC 389 | Fundamentals of Social and Cultural Data Science with Python | 3 | 6 | CSCI 100 Computation and Problem Solving (1078) (C- and above) OR CSCI 115 Programming Fundamentals (5257) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above) AND Subject "ANT" BETWEEN 100 and 499 OR Subject "SOC" BETWEEN 100 and 499 AND SOC 203 Quantitative Methods in Sociology (1377) (C- and above) OR PLS 211 Quantitative Methods (221) (C- and above) OR PHIL 240 Formal Logic (1337) (C- and above) OR HST 274/WLL 274 Texts and Contexts (5701) (C- and above) OR ECON 301 Econometrics I (664) (C- and above) OR NUSM 302 Introduction to Statistics for Evidence-Based Practice (6959) (C- and above) OR GEOL 307 Geographic Information Systems (6156) (C- and above) OR NUR 403 Capstone I: Evidence-Based Clinical/Quality Improvement Research Project Development (4467) (C- and above) OR LING 431 Statistics and computational methods in Linguistics (7973) (C- and above) | | | 3 year UG SSH Sociology, 4 year UG SSH Sociology | Anthropology, Sociology | GSB, SCAI, SSH, SoE, SoM | |
| **SEDS** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| **Civil and Environmental Engineering** | | | | | | | | | | | |
| 549 | DCEE 700 | Thesis Research | 105 | 210 | | | | | | | |
| **Electrical and Computer Engineering** | | | | | | | | | | | |
| 550 | DELCE 700 | Thesis Research | 105 | 210 | | | | | | | |
| **SoE** | | | | | | | | | | | |
| **Chemical and Materials Engineering** | | | | | | | | | | | |
| 551 | CHME 200 | Basic Principles and Calculations in Chemical Engineering | 3 | 6 | | | | 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 552 | CHME 201 | Chemical Engineering Thermodynamics | 3 | 6 | | | | 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 553 | CHME 222 | Inorganic and Analytical Chemistry | 3 | 6 | | | | 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 554 | CHME 300 | Heat and Mass Transfer | 3 | 6 | | | | 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 555 | CHME 301 | Applied Mathematics for Process Design | 3 | 6 | | | | 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 556 | CHME 302 | Instrumental Methods of Analysis for Engineers | 3 | 6 | | | | 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 557 | CHME 351 | Environment and Development | 3 | 6 | | | | 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SoE Chemical and Materials Engineering | 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SoE Chemical and Materials Engineering | | |

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| 558 | CHME 353 | Electrochemical Engineering | 3 | 6 | | | | 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SoE Chemical and Materials Engineering | 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SoE Chemical and Materials Engineering | | |
| 559 | CHME 354 | Introduction to Metallurgy | 3 | 6 | | | | 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SoE Chemical and Materials Engineering | 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SoE Chemical and Materials Engineering | | |
| 560 | CHME 400 | Process Design and Simulation | 3 | 6 | CHME 300 Heat and Mass Transfer (5952) (D and above) AND CHME 304 Chemical Reaction Engineering (6168) (D and above) | | | 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 561 | CHME 401 | Chemical Engineering Lab II | 3 | 6 | | | | 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 562 | CHME 453 | Multiphase Systems | 3 | 6 | CHME 202 Fluid Mechanics (5543) (D and above) | | | 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SoE Chemical and Materials Engineering | Chemical and Materials Engineering | | |
| 563 | DCHME 700 | Thesis Research | 105 | 210 | | | | | | | |
| 564 | DCHME 700-0 | Thesis Research | 0 | 0 | | | | Chemical Engineering | Science, Engineering and Technology | | |
| 565 | DCHME 755 | Integrated Computational Materials Engineering | 3 | 6 | | | | Chemical Engineering | Science, Engineering and Technology | | |
| 566 | DCHME 761 | Advanced Chemical Reaction Engineering | 3 | 6 | | | | Chemical Engineering | Science, Engineering and Technology | | |
| 567 | DCHME 762 | Advanced Materials Processing | 3 | 6 | | | | Chemical Engineering | Science, Engineering and Technology | | |
| 568 | MBME 601 | Master Thesis I | 12 | 24 | | | | 2 year Gr SEDS Biomedical Engineering, 2 year Gr SoE Biomedical Engineering | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 569 | MBME 603 | Biomaterials Science & Engineering | 3 | 6 | | | | 1 year Gr SEDS Biomedical Engineering, 1 year Gr SoE Biomedical Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | | |
| 570 | MBME 604 | Biosensors | 3 | 6 | | | | 1 year Gr SEDS Biomedical Engineering, 1 year Gr SoE Biomedical Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 571 | MBME 610 | Anatomy and Physiology for Biomedical Engineers | 3 | 6 | | | | 1 year Gr SEDS Biomedical Engineering, 1 year Gr SoE Biomedical Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | | |
| 572 | MBME 703 | Medical Device Technology | 3 | 6 | | | | 1 year Gr SoE Biomedical Engineering, 2 year Gr SEDS Biomedical Engineering, 2 year Gr SoE Biomedical Engineering | | | |
| 573 | MBME 710 | Biophotonics | 3 | 6 | | | | 1 year Gr SoE Biomedical Engineering, 2 year Gr SEDS Biomedical Engineering, 2 year Gr SoE Biomedical Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | | |
| 574 | MCHME 601 | Master Thesis I | 12 | 24 | | | | 2 year Gr SEDS Chemical and Materials Engineering, 2 year Gr SoE Chemical and Materials Engineering | | | |

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| 575 | MCHME 603 | Advanced Materials Processing | 3 | 6 | | | | 1 year Gr SEDS Chemical and Materials Engineering, 1 year Gr SoE Chemical and Materials Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | | |
| 576 | MCHME 604 | Advanced Materials Characterization Methods | 3 | 6 | | | | 1 year Gr SEDS Chemical and Materials Engineering, 1 year Gr SoE Chemical and Materials Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 577 | MCHME 605 | Advanced Chemical Reaction Engineering | 3 | 6 | | | | 1 year Gr SEDS Chemical and Materials Engineering, 1 year Gr SoE Chemical and Materials Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | | |
| 578 | MCHME 714 | Computational Materials Engineering | 3 | 6 | | | | 1 year Gr SoE Chemical and Materials Engineering, 2 year Gr SEDS Chemical and Materials Engineering, 2 year Gr SoE Chemical and Materials Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | | |
| **Civil Engineering** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 579 | 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, 1 year Gr SoE Biomedical Engineering, 1 year Gr SoE Chemical and Materials Engineering, 1 year Gr SoE Civil and Environmental Engineering, 1 year Gr SoE Electrical and Computer Engineering, 1 year Gr SoE Mechanical and Aerospace Engineering, 2 year Gr SEDS Biomedical Engineering, 2 year Gr SEDS Chemical and Materials Engineering, 2 year Gr SoE Biomedical Engineering, 2 year Gr SoE Chemical and Materials Engineering | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SEDS Mechanical and Aerospace Engineering, 2 year Gr SoE Electrical and Computer Engineering, 2 year Gr SoE Mechanical and Aerospace Engineering | | |
| 580 | MSC 615 | Advanced Statistics and Probability | 3 | 6 | | | | 1 year Gr SEDS Engineering Management, 1 year Gr SoE Engineering Management | 2 year Gr SEDS Civil and Environmental Engineering, 2 year Gr SoE Civil and Environmental Engineering | | |
| **Civil Engineering, Communication and Composition** | | | | | | | | | | | |
| 581 | MSC 601 | Technical Communication | 3 | 6 | | | | 1 year Gr SoE Civil and Environmental Engineering | | | |
| **Civil and Environmental Engineering** | | | | | | | | | | | |

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| 582 | 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 SoE Civil and Environmental Engineering, 2 year UG SoE Mechanical and Aerospace Engineering | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SoE Civil and Environmental Engineering, 3 year UG SoE Mechanical and Aerospace Engineering | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Mechanical and Aerospace Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | |
| 583 | CEE 201 | Environmental Chemistry | 3 | 6 | | | | 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SoE Civil and Environmental Engineering | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SoE Civil and Environmental Engineering | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | |

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| 584 | CEE 204 | Civil Engineering CAD and Surveying | 3 | 6 | | | | 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SoE Civil and Environmental Engineering | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SoE Civil and Environmental Engineering | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | |
| 585 | CEE 300 | Structural Design – Concrete | 3 | 6 | CEE 203 Structural Analysis (5500) (D and above) | | | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SoE Civil and Environmental Engineering | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |
| 586 | CEE 302 | Geotechnical Engineering | 3 | 6 | | | | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SoE Civil and Environmental Engineering | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |

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| 587 | CEE 304 | Fluid Mechanics | 3 | 6 | | | | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SoE Civil and Environmental Engineering | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |
| 588 | CEE 306 | Civil Engineering Materials | 3 | 6 | ENG 102 Engineering Materials I (4708) (D and above) | | | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SoE Civil and Environmental Engineering | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |
| 589 | CEE 401 | Construction Technology and Management | 3 | 6 | CEE 306 Civil Engineering Materials (5897) (D and above) | | | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering | 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |
| 590 | CEE 450 | Behavior and Design of Structural System | 3 | 6 | CEE 300 Structural Design – Concrete (5895) (D and above) AND CEE 301 Structural Design – Steel (6157) (D and above) | | | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering | 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |

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| 591 | CEE 460 | Water Supply and Distribution Management | 3 | 6 | CEE 305 Hydraulics and Hydrology (6177) (D and above) | | | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering | 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |
| 592 | CEE 462 | Pavement Design and Performance | 3 | 6 | CEE 306 Civil Engineering Materials (5897) (D and above) AND CEE 303 Geotechnical Design (6158) (D and above) | | | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering | 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |
| 593 | CEE 463 | Individual Research Project in Civil & Environmental Engineering 1 | 3 | 6 | | | | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering | 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |
| 594 | CEE 467 | Building Information Modelling for Geotechnical Engineering | 3 | 6 | CEE 303 Geotechnical Design (6158) (D and above) | | | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering | 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SoE Civil and Environmental Engineering | | |
| 595 | DCEE 700-0 | Thesis Research | 0 | 0 | | | | Civil Engineering | | | |
| 596 | DCEE 750 | Finite Element Methods | 3 | 6 | | | | 1 year PhD SEDS Civil Engineering, 1 year PhD SoE Civil Engineering | | | |
| 597 | DCEE 757 | Advanced Environmental Chemistry | 3 | 6 | | | | 1 year PhD SEDS Civil Engineering, 1 year PhD SoE Civil Engineering | | | |
| 598 | DCEE 760 | Advanced Foundation Engineering | 4 | 8 | | | | SoE | | | |
| 599 | DCEE 761 | Advanced Soil Mechanics | 3 | 6 | | | | 1 year PhD SEDS Civil Engineering, 1 year PhD SoE Civil Engineering | | | |
| 600 | DCEE 772 | Engineering Management and Engineering Economy | 3 | 6 | | | | Civil Engineering | | | |
| 601 | DCEE 773 | Unsaturated Soil Mechanics for Engineering Practice | 3 | 6 | | | | 1 year PhD SEDS Civil Engineering, 1 year PhD SoE Civil Engineering | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 602 | EMEM 533 | Engineering Management and Engineering Economy | 3 | 6 | | | | Engineering Management | | | |
| 603 | EMEM 535 | Managing Product and Service Development | 3 | 6 | | | | Engineering Management | | | |
| 604 | EMEM 537 | Engineering Decision Tools | 3 | 6 | | | | Engineering Management | | | |
| 605 | EMEM 538 | Knowledge and Innovation Management | 3 | 6 | | | | Engineering Management | | | |
| 606 | EMEM 539 | Big Data and Information Management | 3 | 6 | | | | Engineering Management | 2 year Gr SEDS Civil and Environmental Engineering | | |
| 607 | EMEM 549 | Capstone Project I | 3 | 6 | | | | | | | |
| 608 | EMEM 552 | Capstone Project Planning | 6 | 12 | | | | Engineering Management | | | |
| 609 | EMEM 554 | Operations and Supply Chain Management | 3 | 6 | | | | Engineering Management | | | |
| 610 | EMEM 555 | AI Applications in Engineering Management | 3 | 6 | | | | Engineering Management | | | |
| 611 | MCEE 601 | Master Thesis I | 12 | 24 | MCEE 600 Research Seminar (4692) (P) | | | 2 year Gr SEDS Civil and Environmental Engineering, 2 year Gr SoE Civil and Environmental Engineering | | | |
| 612 | MCEE 603 | Finite Element Methods | 3 | 6 | | | | 1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SoE Civil and Environmental Engineering | | | |
| 613 | MCEE 604 | Advanced Soil Mechanics | 3 | 6 | | | | 1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SoE Civil and Environmental Engineering | | | |
| 614 | MCEE 605 | Advanced Environmental Chemistry | 3 | 6 | | | | 1 year Gr SEDS Civil and Environmental Engineering, 1 year Gr SoE Civil and Environmental Engineering | | | |
| 615 | MCEE 708 | Advanced Foundation Engineering | 3 | 6 | | | | 2 year Gr SoE Civil and Environmental Engineering | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 616 | MCEE 716 | Unsaturated Soil Mechanics for Engineering Practice | 3 | 6 | | | | 2 year Gr SEDS Civil and Environmental Engineering, 2 year Gr SoE Civil and Environmental Engineering | | | |
| **Computer Science** | | | | | | | | | | | |
| 617 | SEDS 506 | Teaching and Laboratory Practicum II | 3 | 6 | | | | 2 year Gr SEDS Civil and Environmental Engineering, 2 year Gr SoE Civil and Environmental Engineering | | | |
| **Economics, SMG** | | | | | | | | | | | |
| 618 | ECON 220/SMG 200 | Resource Economics | 3 | 6 | MATH 161 Calculus I (118) (C- and above) OR MATH 162 Calculus II (170) (C- and above) | | ECON 201 Intermediate Microeconomics (133) (C- and above) OR ECON 202 Intermediate Macroeconomics (207) (C- and above) | 3 year UG SMG, 3 year UG SoE Geology, 3 year UG SoE Mining Engineering, 3 year UG SoE Petroleum Engineering, 4 year UG SMG, 4 year UG SoE Geology, 4 year UG SoE Mining Engineering, 4 year UG SoE Petroleum Engineering | | | |
| **Electrical and Computer Engineering** | | | | | | | | | | | |
| 619 | DELCE 700-0 | Thesis Research | 0 | 0 | | | | Electrical Engineering | | | |
| 620 | DELCE 753 | Stochastic Processes | 3 | 6 | | | | Electrical Engineering | Science, Engineering and Technology | Chemical Engineering, Civil Engineering, Computer Science, Mechanical Engineering, Robotics Engineering | |
| 621 | DELCE 759 | Advanced Pattern Recognition and Machine Learning | 4 | 8 | | | | 1 year PhD SoE Electrical Engineering | 2 year PhD SoE Electrical Engineering | | |
| 622 | DELCE 760 | Advanced System Modelling and Control | 3 | 6 | | | | Electrical Engineering | Science, Engineering and Technology | Chemical Engineering, Civil Engineering, Computer Science, Mechanical Engineering, Robotics Engineering | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 623 | DELCE 761 | Advanced Data Structures and Algorithms | 3 | 6 | | | | Electrical Engineering | Science, Engineering and Technology | Chemical Engineering, Civil Engineering, Computer Science, Mechanical Engineering, Robotics Engineering | |
| 624 | ELCE 200 | Circuits Theory I | 3 | 6 | MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) | | | 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 625 | 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, 2 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 626 | ELCE 203L | Signals and Systems Laboratory | 1 | 2 | | ELCE 203 Signals and Systems (4993) (D and above) | | 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 627 | ELCE 204 | Solid State Devices | 3 | 6 | ENG 103 Engineering Materials II (4818) (C- and above) | | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 628 | ELCE 204L | Solid State Devices Laboratory | 1 | 2 | ENG 103 Engineering Materials II (4818) (C- and above) | ELCE 204 Solid State Devices (5508) (D and above) | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 629 | ELCE 205 | Discrete Mathematics | 3 | 6 | MATH 162 Calculus II (170) (C- and above) | | | 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 630 | ELCE 301 | Electronic Circuits | 3 | 6 | ELCE 201 Circuit Theory (5507) (C- and above) | | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 631 | ELCE 301L | Electronic Circuits Laboratory | 1 | 2 | ELCE 201L Circuit Theory Laboratory (6179) (C- and above) | ELCE 301 Electronic Circuits (5918) (C- and above) | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 632 | ELCE 303L | Power System Analysis Laboratory | 1 | 2 | ELCE 200 Introduction to Electrical Circuits (4991) (C- and above) | ELCE 303 Power System Analysis (6180) (D and above) | | 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 633 | ELCE 304 | Computer Networks | 3 | 6 | ENG 101 Programming for Engineers (4517) (C- and above) | | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 634 | ELCE 304L | Computer Networks Laboratory | 1 | 2 | | ELCE 304 Computer Networks (5920) (D and above) | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 635 | ELCE 306 | Linear Control Theory | 3 | 6 | ELCE 203 Signals and Systems (4993) (C- and above) | | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 636 | ELCE 307 | Digital Signal Processing | 3 | 6 | ELCE 203 Signals and Systems (4993) (C- and above) | | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 637 | ELCE 307L | Digital Signal Processing Laboratory | 1 | 2 | ELCE 203 Signals and Systems (4993) (C- and above) AND ELCE 203L Signals and Systems Laboratory (6182) (C- and above) | ELCE 307 Digital Signal Processing (5921) (D and above) | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 638 | ELCE 352 | Applied Simulation Laboratory | 2 | 4 | ELCE 200 Introduction to Electrical Circuits (4991) (D+ and above) | | | 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SoE Electrical and Computer Engineering | 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SoE Electrical and Computer Engineering | 5 year UG SEDS Electrical and Computer Engineering, 5 year UG SoE Electrical and Computer Engineering | |
| 639 | ELCE 354 | Power Electronics | 3 | 6 | ELCE 201 Circuit Theory (5507) (D and above) | | | 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 640 | ELCE 452 | Renewable Energy and Electric Vehicles | 3 | 6 | ELCE 200 Introduction to Electrical Circuits (4991) (C- and above) | | | | | | |
| 641 | ELCE 455 | Machine Learning with Python | 3 | 6 | ENG 101 Programming for Engineers (4517) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above) | | | 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 642 | ELCE 462 | Wireless Networks | 3 | 6 | ENG 201 Applied Probability and Statistics (5505) (C- and above) AND (ELCE 308 Communication Systems (5922) (C- and above) OR ELCE 304 Computer Networks (5920) (C- and above)) | | | 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 643 | ELCE 463 | Network Science: Methods and Applications | 3 | 6 | ENG 101 Programming for Engineers (4517) (C- and above) AND MATH 162 Calculus II (170) (C- and above) AND ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) | | | 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |
| 644 | ELCE 466 | RF and Microwave Circuits | 3 | 6 | | | | 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SoE Electrical and Computer Engineering | Electrical and Computer Engineering | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 645 | ENG 101 | Programming for Engineers | 3 | 6 | | | CSCI 151 Programming for Scientists and Engineers (192) (F) OR CSCI 111 Web Programming and Problem Solving (110) (F) OR CSCI 115 Programming Fundamentals (5257) (F) OR CSCI 152 Performance and Data Structures (489) (F) OR CSCI 408 Senior Project I (1481) (F) OR CSCI 409 Senior Project II (1483) (F) | 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SoE Chemical and Materials Engineering, 1 year UG SoE Electrical and Computer Engineering | Chemical and Materials Engineering, Electrical and Computer Engineering | | |
| 646 | MECE 601 | Master Thesis I | 12 | 24 | | | | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | | |
| 647 | MECE 603 | Advanced Data Structures and Algorithms | 3 | 6 | | | | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | | |
| 648 | MECE 605 | Statistics and Probability for Electrical and Computer Engineers | 3 | 6 | | | | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 649 | MECE 606 | Embedded Systems and Applications | 3 | 6 | | | | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | | |
| 650 | MECE 702 | Advanced Power Electronics | 3 | 6 | | | | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | |
| 651 | MECE 717 | Pattern Recognition and Machine Learning | 3 | 6 | | | | 2 year Gr SoE Electrical and Computer Engineering | SoE | | |
| 652 | MECE 724 | System Modelling and Control | 3 | 6 | | | | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 653 | MECE 726 | Modern Semiconductor Devices and Systems | 3 | 6 | | | | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | |
| 654 | MECE 727 | Biosensors | 3 | 6 | | | | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 655 | MECE 731 | RF and Microwave Circuits | 3 | 6 | | | | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | |
| 656 | MECE 734 | Complex Networks: Modeling and Analysis | 3 | 6 | | | | 2 year Gr SEDS Electrical and Computer Engineering, 2 year Gr SoE Electrical and Computer Engineering | 1 year Gr SEDS Electrical and Computer Engineering, 1 year Gr SoE Electrical and Computer Engineering | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Robotics | |
| **Geosciences** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 657 | GEOL 201 | Mineralogy | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (C- and above) | | | 2 year UG SMG Geology, 2 year UG SoE Geology, 3 year UG SMG Mining Engineering, 3 year UG SoE Mining Engineering | 2 year UG SMG Mining Engineering, 2 year UG SoE Mining Engineering, 3 year UG SMG Geology, 3 year UG SoE Geology, 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SoE Geology, 4 year UG SoE Mining Engineering | | |
| 658 | GEOL 202 | Geologic Maps and Cross-Sections | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above) | | | 2 year UG SMG Geology, 2 year UG SoE Geology | 3 year UG SMG Geology, 3 year UG SoE Geology | | |
| 659 | GEOL 203 | Sedimentary petrology | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above) | GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above) | | 3 year UG SMG Geology, 3 year UG SoE Geology | 4 year UG SMG Geology, 4 year UG SoE Geology | | |
| 660 | GEOL 207 | Geomorphology | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (C- and above) OR GEOL 102 Fundamentals of Geology (4772) (C- and above) | | | 2 year UG SMG Geology, 2 year UG SoE Geology | 3 year UG SMG Geology, 3 year UG SoE Geology | | |
| 661 | GEOL 302 | Thermodynamics and Geochemistry | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above) | | | 3 year UG SMG Geology, 3 year UG SoE Geology | 4 year UG SMG Geology, 4 year UG SoE Geology | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 662 | GEOL 303 | Structural Geology and Tectonics | 3 | 6 | (GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)) AND GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above) | | | 3 year UG SMG Geology, 3 year UG SoE Geology | 4 year UG SMG Geology, 4 year UG SoE Geology | | |
| 663 | GEOL 305 | Geology of ore deposits | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above) OR GEOL 201 Mineralogy (5122) (D and above) | | | 3 year UG SMG Geology, 3 year UG SMG Mining Engineering, 3 year UG SoE Geology, 3 year UG SoE Mining Engineering | 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SoE Geology, 4 year UG SoE Mining Engineering | | |
| 664 | GEOL 310 | Field Geology 2 | 3 | 6 | GEOL 303 Structural Geology and Tectonics (5874) (D and above) OR GEOL 301 Igneous and metamorphic petrology (5886) (D and above) | | | 4 year UG SMG Geology, 4 year UG SoE Geology, 4 year UG SoE Mining Engineering | | | |
| 665 | GEOL 401 | Petroleum Geology and Geochemistry | 3 | 6 | | | | 4 year UG SMG Geology, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Geology, 4 year UG SoE Petroleum Engineering | | | |
| 666 | GEOL 402 | Water Resource Management | 3 | 6 | | | | 4 year UG SMG Geology, 4 year UG SoE Geology | 4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Mining Engineering, 4 year UG SoE Petroleum Engineering | | |
| 667 | GEOL 404 | Research Project I | 3 | 6 | | | | 4 year UG SMG Geology, 4 year UG SoE Geology | | | |

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| 668 | GEOL 408 | Remote Sensing of the Earth | 3 | 6 | GEOL 402 Water Resource Management (6422) (C- and above) | | | 4 year UG SMG Geology, 4 year UG SoE Geology | 4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Mining Engineering, 4 year UG SoE Petroleum Engineering | | |
| 669 | GEOL 501 | Advanced Economic Geology | 3 | 6 | | | | 1 year Gr SMG Geosciences, 1 year Gr SoE Geosciences | | | |
| 670 | GEOL 502 | Advanced Petroleum Geology | 3 | 6 | | | | 1 year Gr SMG Geosciences, 1 year Gr SMG Petroleum Engineering, 1 year Gr SoE Geosciences, 1 year Gr SoE Petroleum Engineering | | | |
| 671 | GEOL 503 | Advanced Sedimentology | 3 | 6 | | | | 1 year Gr SMG Geosciences, 1 year Gr SoE Geosciences | | | |
| 672 | GEOL 504 | Advanced Geochemistry | 3 | 6 | | | | 1 year Gr SMG Geosciences, 1 year Gr SoE Geosciences | | | |
| 673 | GEOL 505 | Advanced Geophysics | 3 | 6 | | | | 1 year Gr SMG Geosciences, 1 year Gr SoE Geosciences | | | |
| 674 | GEOL 509 | Advanced Field Geology | 3 | 6 | | | | 2 year Gr SMG Geosciences, 2 year Gr SoE Geosciences | | | |
| 675 | GEOL 601 | Advanced Tectonics and Geodynamics | 3 | 6 | | | | 2 year Gr SMG Geosciences, 2 year Gr SoE Geosciences | | | |
| 676 | GEOL 689 | Thesis I | 9 | 18 | | | | 2 year Gr SMG Geosciences, 2 year Gr SoE Geosciences | | | |
| 677 | GEOSCI 701 | Geology and Resources of Central Asia | 4 | 8 | | | | | | | |
| 678 | GEOSCI 890-0 | Thesis Research | 0 | 0 | | | | | | | |
| **Mechanical and Aerospace Engineering** | | | | | | | | | | | |
| 679 | DMAE 700 | Thesis Research | 105 | 210 | | | | | | | |
| 680 | DMAE 700-0 | Thesis Research | 0 | 0 | | | | Mechanical Engineering | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 681 | DMAE 701 | Advanced Applied Mathematics | 3 | 6 | | | | Civil Engineering, Mechanical Engineering | | | |
| 682 | DMAE 751 | Modern Control Engineering | 3 | 6 | | | | Mechanical Engineering | SoE | | |
| 683 | DMAE 757 | Design Optimization | 3 | 6 | | | | Mechanical Engineering | SoE | | |
| 684 | DMAE 765 | Advanced Manufacturing Processes and Strategies | 3 | 6 | | | | Mechanical Engineering | SoE | | |
| 685 | DMAE 772 | Advanced Materials and Composites | 3 | 6 | | | | Mechanical Engineering | SoE | | |
| 686 | DMAE 773 | Advanced Fluid Mechanics with Applications | 3 | 6 | | | | Mechanical Engineering | SoE | | |
| 687 | 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 SoE Chemical and Materials Engineering, 1 year UG SoE Civil and Environmental Engineering, 1 year UG SoE Electrical and Computer Engineering, 1 year UG SoE Mechanical and Aerospace Engineering | SoE | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 688 | ENG 200 | Engineering Mathematics III (Differential Equations and Linear Algebra) | 3 | 6 | MATH 162 Calculus II (170) (C and above) | | | 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SoE Chemical and Materials Engineering, 2 year UG SoE Civil and Environmental Engineering, 2 year UG SoE Electrical and Computer Engineering, 2 year UG SoE Mechanical and Aerospace Engineering | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SoE Civil and Environmental Engineering, Chemical and Materials Engineering, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering | 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SoE Civil and Environmental Engineering | |
| 689 | ENG 400 | Capstone Project | 3 | 6 | | | | 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Chemical and Materials Engineering, 4 year UG SoE Civil and Environmental Engineering, 4 year UG SoE Electrical and Computer Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Electrical and Computer Engineering, 5 year UG SoE Civil and Environmental Engineering, 5 year UG SoE Electrical and Computer Engineering, Chemical and Materials Engineering | | |
| 690 | MAE 201 | Computer Aided Design | 3 | 6 | | | | 2 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SoE Mechanical and Aerospace Engineering | 3 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SoE Mechanical and Aerospace Engineering | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 691 | MAE 202 | Environmental Science | 3 | 6 | | | | 2 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SoE Mechanical and Aerospace Engineering | 3 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SoE Mechanical and Aerospace Engineering | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | |
| 692 | MAE 300 | Fluid Mechanics I | 3 | 6 | PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (D and above) | | | 3 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SoE Mechanical and Aerospace Engineering | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | |
| 693 | MAE 301 | Engineering Thermodynamics | 3 | 6 | | | | 3 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SoE Mechanical and Aerospace Engineering | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | |
| 694 | MAE 303 | Control Systems | 3 | 6 | | | | 3 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SoE Mechanical and Aerospace Engineering | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | |
| 695 | MAE 307 | Mechanics of Machines | 3 | 6 | MAE 206 Engineering Dynamics I (5535) (D and above) | | | 4 year UG SoE Mechanical and Aerospace Engineering | | | |
| 696 | MAE 400 | Heat Transfer | 3 | 6 | MAE 300 Fluid Mechanics I (5926) (D and above) AND MAE 301 Engineering Thermodynamics (5927) (D and above) | | | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | | |
| 697 | MAE 401 | Mechanical Systems Design | 3 | 6 | MAE 302 Machine Elements Design (5928) (D and above) | | | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 698 | MAE 450 | Additive Manufacturing | 3 | 6 | MAE 205 Material and Manufacturing I (5534) (D and above) | | | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | | |
| 699 | MAE 455 | Flight Performance and Mechanics | 3 | 6 | MAE 340 Aerodynamics (6576) (D and above) OR MAE 305 Fluid Mechanics II (6173) (D and above) | | | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | | |
| 700 | MAE 462 | Multiphase Systems | 3 | 6 | MAE 300 Fluid Mechanics I (5926) (D and above) AND MAE 305 Fluid Mechanics II (6173) (D and above) | | | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | Mechanical and Aerospace Engineering | | |
| 701 | MAE 467 | Heating, Ventilating and Air Conditioning | 3 | 6 | MAE 301 Engineering Thermodynamics (5927) (D and above) | | | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | | |
| 702 | MAE 468 | Introduction to Aerospace Propulsion. | 3 | 6 | MAE 300 Fluid Mechanics I (5926) (D and above) AND MAE 301 Engineering Thermodynamics (5927) (D and above) | | | 4 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SoE Mechanical and Aerospace Engineering | 5 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SoE Mechanical and Aerospace Engineering | | |
| 703 | MMAE 600 | Research Seminar | 3 | 6 | | | | 1 year Gr SoE Mechanical and Aerospace Engineering, 2 year Gr SoE Mechanical and Aerospace Engineering | | | |
| 704 | MMAE 601 | Master Thesis I | 12 | 24 | MMAE 600 Research Seminar (4703) (P) | | | 2 year Gr SEDS Mechanical and Aerospace Engineering, 2 year Gr SoE Mechanical and Aerospace Engineering | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 705 | MMAE 603 | Modern Control Engineering | 3 | 6 | | | | 1 year Gr SEDS Mechanical and Aerospace Engineering, 1 year Gr SoE Mechanical and Aerospace Engineering | | | |
| 706 | MMAE 605 | Advanced Manufacturing Processes and Strategies | 3 | 6 | | | | 1 year Gr SEDS Mechanical and Aerospace Engineering, 1 year Gr SoE Mechanical and Aerospace Engineering | | | |
| 707 | MMAE 621 | Advanced Fluid Mechanics with Applications | 3 | 6 | | | | 2 year Gr SEDS Mechanical and Aerospace Engineering, 2 year Gr SoE Mechanical and Aerospace Engineering | 1 year Gr SEDS Mechanical and Aerospace Engineering, 1 year Gr SoE Mechanical and Aerospace Engineering | | |
| 708 | MMAE 705 | Design Optimization | 3 | 6 | | | | 2 year Gr SEDS Mechanical and Aerospace Engineering, 2 year Gr SoE Mechanical and Aerospace Engineering | 1 year Gr SEDS Mechanical and Aerospace Engineering, 1 year Gr SoE Mechanical and Aerospace Engineering | | |
| 709 | MMAE 717 | Advanced Materials and Composites | 3 | 6 | | | | 2 year Gr SEDS Mechanical and Aerospace Engineering, 2 year Gr SoE Mechanical and Aerospace Engineering | 1 year Gr SEDS Mechanical and Aerospace Engineering, 1 year Gr SoE Mechanical and Aerospace Engineering | | |
| 710 | SEDS 505 | Teaching and Laboratory Practicum I | 3 | 6 | | | | Chemical and Materials Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering | | | |
| **Mining Engineering** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 711 | MINE 201 | Mineral Processing | 3 | 6 | SMG 100 Introduction to Natural Resources Extraction (4773) ( and above) AND MATH 162 Calculus II (170) ( and above) AND CHEM 101 General Chemistry I (113) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) | | | | | | |
| 712 | MINE 301 | Mine Surveying and Geographic Information Systems | 3 | 6 | SMG 100 Introduction to Natural Resources Extraction (4773) (C- and above) | | | 3 year UG SMG Mining Engineering, 3 year UG SoE Mining Engineering | 4 year UG SMG Geology, 4 year UG SoE Geology | | |
| 713 | MINE 302 | Geomechanics | 3 | 6 | | | | 3 year UG SMG Mining Engineering, 3 year UG SoE Mining Engineering | | | |
| 714 | MINE 401 | Mining Geotechnical Engineering | 3 | 6 | MINE 302 Geomechanics (5878) (C- and above) | | | 4 year UG SMG Mining Engineering, 4 year UG SoE Mining Engineering | | | |
| 715 | MINE 402 | Mine Planning | 3 | 6 | | | | 4 year UG SMG Mining Engineering, 4 year UG SoE Mining Engineering | | | |
| 716 | MINE 403 | Coal Mining | 3 | 6 | | | | 4 year UG SMG Mining Engineering, 4 year UG SoE Mining Engineering | | | |
| 717 | MINE 405 | Mine Ventilation | 3 | 6 | | | | 4 year UG SMG Mining Engineering, 4 year UG SoE Mining Engineering | | | |
| 718 | MINE 407 | Mining and Environment | 3 | 6 | | | | 4 year UG SMG Mining Engineering, 4 year UG SoE Mining Engineering | 4 year UG SMG Geology, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Geology, 4 year UG SoE Petroleum Engineering | | |
| 719 | MINE 489 | Mine Design Project I | 3 | 6 | | | | 4 year UG SMG Mining Engineering, 4 year UG SoE Mining Engineering | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 720 | MINE 501 | Foundations of Mining | 3 | 6 | | | | 1 year Gr SMG Mining Engineering, 1 year Gr SoE Mining Engineering | | | |
| 721 | MINE 502 | Geology for Mining Engineers | 3 | 6 | | | | | | | |
| 722 | MINE 503 | Applied Geostatistics | 3 | 6 | | | | 1 year Gr SMG Mining Engineering, 1 year Gr SoE Mining Engineering | | | |
| 723 | MINE 504 | Mine Geomechanics | 3 | 6 | | | | 1 year Gr SMG Mining Engineering, 1 year Gr SoE Mining Engineering | | | |
| 724 | MINE 511 | Mineral Processing Plant Design | 3 | 6 | | | | 1 year Gr SMG Mining Engineering, 1 year Gr SoE Mining Engineering | | | |
| 725 | MINE 602 | Mine Maintenance and Services | 3 | 6 | MINE 502 Geology for Mining Engineers (3691) (C- and above) | | | 2 year Gr SMG Mining Engineering, 2 year Gr SoE Mining Engineering | | | |
| 726 | MINE 605 | Mechanized Excavation and Tunnelling | 3 | 6 | | | | | | | |
| 727 | MINE 690 | Thesis I | 6 | 12 | | | | 2 year Gr SMG Mining Engineering, 2 year Gr SoE Mining Engineering | | | |
| 728 | MINE 701 | Advanced Mine Geomechanics | 4 | 8 | | | | 1 year PhD SMG Mining Engineering, 1 year PhD SoE Mining Engineering | | | |
| 729 | MINE 890-0 | Thesis Research | 0 | 0 | | | | 1 year PhD SMG Mining Engineering, 1 year PhD SoE Mining Engineering, 2 year PhD SMG Mining Engineering, 2 year PhD SoE Mining Engineering, 3 year PhD SMG Mining Engineering, 3 year PhD SoE Mining Engineering, 4 year PhD SMG Mining Engineering, 4 year PhD SoE Mining Engineering, 5 year PhD SMG Mining Engineering (pending graduation), 6 year Gr SoE (pending graduation) Mining Engineering | | | |
| **Petroleum Engineering** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 730 | PETE 201 | Fluid Mechanics and Thermodynamics | 3 | 6 | MATH 161 Calculus I (118) (C- and above) | | | 2 year UG SMG Petroleum Engineering, 2 year UG SoE Mining Engineering, 2 year UG SoE Petroleum Engineering, 3 year UG SMG Petroleum Engineering, 3 year UG SoE Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation) | | | |
| 731 | PETE 301 | Numerical Methods for Petroleum Engineers | 3 | 6 | ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above) | | | 3 year UG SMG Petroleum Engineering, 3 year UG SoE Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation) | | | |
| 732 | PETE 302 | Reservoir Engineering I with Laboratory works | 4 | 8 | PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above) | | | 3 year UG SMG Petroleum Engineering, 3 year UG SoE Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation) | | | |
| 733 | PETE 303 | Well Logging and Formation Evaluation | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (C- and above) | | | 3 year UG SMG Petroleum Engineering, 3 year UG SoE Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation) | | | |

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| 734 | PETE 304 | Well Completion and Stimulation | 3 | 6 | PETE 203 Drilling Engineering with Laboratories (5486) (C- and above) | | | 3 year UG SMG Petroleum Engineering, 3 year UG SoE Petroleum Engineering, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation) | | | |
| 735 | PETE 400 | Capstone Design Project I | 3 | 6 | PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above) AND PETE 203 Drilling Engineering with Laboratories (5486) (C- and above) | | | 4 year UG SMG Petroleum Engineering, 4 year UG SoE Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation) | | | |
| 736 | PETE 405 | Enhanced Oil Recovery | 3 | 6 | PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above) | | | 4 year UG SMG Petroleum Engineering, 4 year UG SoE Petroleum Engineering | | | |
| 737 | PETE 409 | Surface Facilities | 3 | 6 | PETE 307 Production Engineering (6146) (C- and above) AND PETE 203 Drilling Engineering with Laboratories (5486) (C- and above) | | | 4 year UG SMG Geology, 4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering, 4 year UG SoE Geology, 4 year UG SoE Mining Engineering, 4 year UG SoE Petroleum Engineering, 5 year UG SMG Petroleum Engineering (pending graduation) | | | |
| 738 | PETE 410 | Introduction to Data Science and Machine Learning | 3 | 6 | MATH 161 Calculus I (118) (C- and above) | | | 4 year UG SoE Petroleum Engineering | | | |
| 739 | PETE 501 | Foundations of Petroleum Engineering | 3 | 6 | | | | 1 year Gr SMG Petroleum Engineering, 1 year Gr SoE Petroleum Engineering | | | |
| 740 | PETE 503 | Fluid Flow Through Porous Media | 3 | 6 | | | | 1 year Gr SMG Petroleum Engineering, 1 year Gr SoE Petroleum Engineering | | | |
| 741 | PETE 504 | Advanced Formation Evaluation | 3 | 6 | | | | 1 year Gr SMG Petroleum Engineering, 1 year Gr SoE Petroleum Engineering | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 742 | PETE 505 | Advanced Drilling Engineering | 3 | 6 | | | | 1 year Gr SMG Petroleum Engineering, 1 year Gr SoE Petroleum Engineering | | | |
| 743 | PETE 509 | Advanced Well Testing and Evaluation | 3 | 6 | | | | 2 year Gr SMG Petroleum Engineering, 2 year Gr SoE Petroleum Engineering | | | |
| 744 | PETE 600 | Thesis I | 9 | 18 | | | | 2 year Gr SMG Petroleum Engineering, 2 year Gr SoE Petroleum Engineering | | | |
| 745 | PETE 601 | Petroleum Data Analytics | 3 | 6 | | | | 1 year Gr SoE Petroleum Engineering | | | |
| 746 | PETE 701 | Advanced Well Engineering | 4 | 8 | | | | 1 year PhD SMG Petroleum Engineering, 1 year PhD SoE Petroleum Engineering | | | |
| 747 | PETE 890-0 | Thesis Research | 0 | 0 | | | | 1 year PhD SMG Petroleum Engineering, 1 year PhD SoE Petroleum Engineering, 2 year PhD SMG Petroleum Engineering, 2 year PhD SoE Petroleum Engineering, 3 year PhD SMG Petroleum Engineering, 3 year PhD SoE Petroleum Engineering, 4 year PhD SMG Petroleum Engineering, 4 year PhD SoE Petroleum Engineering, 5 year PhD SMG Petroleum Engineering (pending graduation), 6 year Gr SoE (pending graduation) Mining Engineering | | | |
| **SMG** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 748 | SMG 100 | Introduction to Natural Resources Extraction | 3 | 6 | | | | 1 year UG SoE Geology, 1 year UG SoE Mining Engineering, 1 year UG SoE Petroleum Engineering | 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 2 year UG SoE Petroleum Engineering, 3 year UG SoE Geology, 3 year UG SoE Mining Engineering, 3 year UG SoE Petroleum Engineering | | |
| 749 | SMG 210 | Strength of Materials | 3 | 6 | SMG 100 Introduction to Natural Resources Extraction (4773) (C- and above) AND MATH 162 Calculus II (170) (C- and above) AND PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C- and above) | | | 2 year UG SMG, 2 year UG SoE Geology, 2 year UG SoE Mining Engineering, 2 year UG SoE Petroleum Engineering, 3 year UG SMG, 3 year UG SoE Geology, 3 year UG SoE Mining Engineering, 3 year UG SoE Petroleum Engineering | | | |
| 750 | SMG 520 | Research Methods | 3 | 6 | | | | 1 year Gr SoE Mining Engineering | | | |
| **School of Engineering** | | | | | | | | | | | |
| 751 | DENG 700 | Thesis Research | 105 | 210 | | | | | | | |
| 752 | DENG 700-0 | Thesis Research | 0 | 0 | | | | | | | |
| **SCAI** | | | | | | | | | | | |
| **Computer Science** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 753 | 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) | 2 year UG SCAI Mathematics, 2 year UG SOM, 2 year UG SSH, 3 year UG SCAI Mathematics, 3 year UG SOM, 3 year UG SSH, 4 year UG SCAI Mathematics, 4 year UG SOM, 4 year UG SSH | 1 year UG SSH Physics, 2 year UG SSH Physics | 2 year UG GSB Economics, 3 year UG GSB Economics, 4 year UG GSB Economics | |
| 754 | CSCI 151 | Programming for Scientists and Engineers | 4 | 8 | | | CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 115 Programming Fundamentals (5257) (D and above) OR ENG 101 Programming for Engineers (4517) (B- and above) | Computer Science, Robotics Engineering, Robotics and Mechatronics | 1 year UG SSH Physics, 2 year UG SSH Physics, Undeclared SEDS | SCAI, SSH, SoE | |
| 755 | CSCI 231 | Computer Systems and Organization | 3 | 6 | CSCI 151 Programming for Scientists and Engineers (192) (C- and above) | | | Computer Science | | | |
| 756 | CSCI 235 | Programming Languages | 4 | 8 | CSCI 152 Performance and Data Structures (489) (C- and above) | | | Computer Science | | | |
| 757 | CSCI 299 | Internship I | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 758 | CSCI 335 | Introduction to Microprocessor Design and Verification | 3 | 6 | CSCI 231 Computer Systems and Organization (194) (B- and above) OR ELCE 202 Digital Logic Design (4992) (B- and above) | | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 759 | CSCI 341 | Database Systems | 3 | 6 | CSCI 152 Performance and Data Structures (489) (C- and above) | | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 760 | CSCI 361 | Software Engineering | 3 | 6 | CSCI 152 Performance and Data Structures (489) (C- and above) | | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 761 | CSCI 390 | Artificial Intelligence | 3 | 6 | CSCI 152 Performance and Data Structures (489) (C- and above) | | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 762 | CSCI 399 | Internship II | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 763 | CSCI 408 | Senior Project I | 3 | 6 | | | | 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 764 | CSCI 423 | Introduction to Parallel Systems and GPU Programming | 3 | 6 | CSCI 332 Operating Systems (490) (C- and above) | | PHYS 421 Parallel Computing (8532) (D and above) | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 765 | CSCI 434 | Information Security | 3 | 6 | | CSCI 333 Computer Networks (1145) (D and above) | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 766 | CSCI 435 | Blockchain and Cryptocurrencies | 3 | 6 | CSCI 270 Algorithms (648) (C- and above) | | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 767 | CSCI 436 | Introduction to Cloud Computing | 3 | 6 | CSCI 333 Computer Networks (1145) (C- and above) | | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 768 | CSCI 437 | Internet of Things: Technologies and Applications | 3 | 6 | | CSCI 333 Computer Networks (1145) (D and above) | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 769 | CSCI 438 | Extended Reality | 3 | 6 | CSCI 235 Programming Languages (638) (C- and above) | | | 3 year UG SCAI Computer Science, 4 year UG SCAI Computer Science, 5 year UG SCAI (pending graduation) Computer Science, 5 year UG SCAI Computer Science | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 770 | CSCI 447 | Machine Learning: Theory and Practice | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above) | | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 771 | CSCI 494 | Deep Learning | 3 | 6 | CSCI 390 Artificial Intelligence (643) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above) | | | 3 year UG SCAI Computer Science, 3 year UG SEDS Computer Science, 4 year UG SCAI Computer Science, 4 year UG SEDS Computer Science, 5 year UG SCAI Computer Science, 5 year UG SEDS Computer Science | | | |
| 772 | CSCI 501 | Software Principles and Practice | 3 | 6 | | | | Computer Science, Robotics | | | |
| 773 | CSCI 511 | Theory of Computation | 3 | 6 | | | | Computer Science, Data Science | | | |
| 774 | CSCI 523 | Parallel Systems and GPU Programming | 3 | 6 | | | | Computer Science, Robotics | Applied Artificial Intelligence and Data Science, Data Science | | |
| 775 | CSCI 535 | Wireless Communication and Networks | 3 | 6 | | | | Computer Science, Data Science | Applied Artificial Intelligence and Data Science, Robotics | | |
| 776 | CSCI 537 | Software Defined Networking | 3 | 6 | | | | Computer Science, Data Science | Applied Artificial Intelligence and Data Science, Robotics | | |
| 777 | CSCI 538 | Internet of Things and Machine Learning on the Edge | 3 | 6 | | | | Applied Artificial Intelligence and Data Science, Computer Science, Data Science | | | |
| 778 | CSCI 575 | Formal Methods and Applications | 3 | 6 | | | | Computer Science, Data Science | | | |
| 779 | CSCI 585 | Computer Vision | 3 | 6 | | | | Applied Artificial Intelligence and Data Science, Computer Science, Data Science | | | |
| 780 | CSCI 592 | Intelligent Systems | 3 | 6 | | | | Applied Artificial Intelligence and Data Science, Computer Science, Data Science | | | |

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| 781 | CSCI 594 | Deep Learning | 3 | 6 | | | | Applied Artificial Intelligence and Data Science, Computer Science, Data Science | | | |
| 782 | CSCI 693 | Thesis Proposal | 3 | 6 | SEDS 591 Research Methods (3184) (C- and above) | | | 2 year Gr SCAI Computer Science, 2 year Gr SEDS Computer Science | | | |
| 783 | CSCI 700 | Thesis Research | 89 | 178 | | | | | | | |
| 784 | CSCI 700-0 | Thesis Research | 0 | 0 | | | | Computer Science | | | |
| 785 | CSCI 701 | Advanced Software Principles and Practice | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 786 | CSCI 711 | Advanced Theory of Computation | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 787 | CSCI 723 | Advanced Parallel Systems and GPU Programming | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 788 | CSCI 735 | Advanced Wireless Communication and Networks | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 789 | CSCI 737 | Advanced Software Defined Networking | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 790 | CSCI 775 | Advanced Formal Methods and Applications | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 791 | CSCI 785 | Advanced Computer Vision | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 792 | CSCI 792 | Advanced Intelligent Systems | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 793 | CSCI 794 | Advanced Deep Learning | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 794 | DS 501 | Fundamentals of Data Science | 3 | 6 | | | | Applied Artificial Intelligence and Data Science, Data Science | | | |
| 795 | DS 502 | Probability and Statistics for Data Science | 3 | 6 | | | | Applied Artificial Intelligence and Data Science, Data Science | Computer Science | | |
| 796 | DS 504 | Data Mining and Decision Support | 3 | 6 | | | | Applied Artificial Intelligence and Data Science | Computer Science, Data Science | | |
| 797 | DS 507 | Database Management Systems | 3 | 6 | | | | Applied Artificial Intelligence and Data Science, Data Science | Computer Science | | |
| 798 | DS 551 | Process and Project Management | 3 | 6 | | | | Applied Artificial Intelligence and Data Science, Data Science | | | |

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| 799 | DS 552 | Data-Driven Innovation | 3 | 6 | | | | 2 year Gr SCAI Data Science, 2 year Gr SEDS Data Science, Applied Artificial Intelligence and Data Science | | | |
| 800 | DS 693 | Thesis Proposal | 3 | 6 | SEDS 591 Research Methods (3184) (C- and above) | | | 2 year Gr SCAI Data Science, 2 year Gr SEDS Data Science | | | |
| 801 | DS 704 | Advanced Data Mining and Decision Support | 3 | 6 | | | | Computer Science | Robotics Engineering | | |
| 802 | SEDS 503 | Laboratory Practicum | 3 | 6 | SEDS 502 Teaching Practicum (2824) (P) | | | Computer Science, Robotics | Data Science | | |
| 803 | SEDS 591 | Research Methods | 3 | 6 | | | | 1 year Gr SCAI Applied Artificial Intelligence and Data Science, 1 year Gr SCAI Computer Science, 1 year Gr SCAI Robotics, 1 year Gr SEDS Robotics | Computer Science, Robotics | Data Science | |
| **Mathematics** | | | | | | | | | | | |
| 804 | MATH 161 | Calculus I | 4 | 8 | | | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Eurasian Business, Geology, Mathematics, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | 2 year UG SSH Undeclared, 2 year UG SoE Undeclared SoE, Economics, SoM | SSH | |
| 805 | MATH 162 | Calculus II | 4 | 8 | MATH 161 Calculus I (118) (C and above) | | | 2 year UG SSH Undeclared, 5 year UG SSH (pending graduation), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Geology, Mathematics, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics | Economics, Undeclared SSH | SSH, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 806 | MATH 251 | Discrete Mathematics | 3 | 6 | MATH 161 Calculus I (118) (C and above) | | | Computer Science, Mathematics, Robotics Engineering | Business Administration (UG), Economics, SSH, SoM | | |
| 807 | MATH 263 | Calculus III | 4 | 8 | MATH 162 Calculus II (170) (C and above) | | | Mathematics, Physics | Business Administration (UG), Computer Science, Economics, Robotics Engineering, SSH, SoM | | |
| 808 | MATH 273 | Linear Algebra with Applications | 4 | 8 | MATH 161 Calculus I (118) (C and above) | MATH 162 Calculus II (170) (C and above) | | Computer Science, Mathematics, Physics, Robotics Engineering, Robotics and Mechatronics | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, SSH | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 809 | MATH 274 | Introduction to Differential Equations | 3 | 6 | MATH 162 Calculus II (170) (C and above) | | | Mathematics, Physics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Robotics Engineering | |
| 810 | 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) | | | 3 year UG SCAI Mathematics, 4 year UG SCAI Mathematics | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 811 | MATH 310 | Applied Statistical Methods | 3 | 6 | MATH 161 Calculus I (118) (C and above) | | MATH 321 Probability (482) (C and above) | Biological Sciences, Mining Engineering, Petroleum Engineering | | Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mathematics, Mechanical and Aerospace Engineering, Physics, Robotics Engineering | |
| 812 | MATH 321 | Probability | 3 | 6 | MATH 162 Calculus II (170) (C and above) | | ECON 211 Economic Statistics (2280) (C- and above) OR PLS 211 Quantitative Methods (221) (C- and above) | Computer Science, Mathematics, Robotics Engineering, Robotics and Mechatronics | Computer Science | Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, SSH, SoM | |

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| 813 | MATH 322 | Mathematical Statistics | 3 | 6 | MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |
| 814 | MATH 323 | Actuarial Mathematics I | 3 | 6 | MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above) OR (MATH 162 Calculus II (170) (C and above) AND MATH 310 Applied Statistical Methods (82) (C and above)) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 815 | MATH 351 | Numerical Methods with Applications | 3 | 6 | MATH 274 Introduction to Differential Equations (484) (C and above) AND MATH 263 Calculus III (81) (C and above) | | ENG 202 Numerical Methods in Engineering (5506) (C and above) | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |
| 816 | MATH 361 | Real Analysis I | 3 | 6 | MATH 263 Calculus III (81) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 817 | MATH 371 | Introduction to Mathematical Biology | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |
| 818 | MATH 407 | Graph Theory | 3 | 6 | (MATH 301 Introduction to Number Theory (613) (C and above) OR MATH 251 Discrete Mathematics (85) (C and above)) AND MATH 273 Linear Algebra with Applications (84) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 819 | MATH 417 | Cryptography | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C and above) AND (MATH 251 Discrete Mathematics (85) (C and above) OR MATH 301 Introduction to Number Theory (613) (C and above) OR MATH 355 Introduction to Proofs (86) (C and above)) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |
| 820 | MATH 424 | Mathematical Finance | 3 | 6 | MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 821 | MATH 425 | Stochastic Processes | 3 | 6 | MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |
| 822 | MATH 446 | Time Series Analysis | 3 | 6 | MATH 322 Mathematical Statistics (1165) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 823 | MATH 449 | Statistical Programming | 3 | 6 | MATH 322 Mathematical Statistics (1165) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |
| 824 | MATH 471 | Nonlinear Differential Equations | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 825 | MATH 477 | Applied Finite Element Methods | 3 | 6 | MATH 351 Numerical Methods with Applications (1166) (C and above) | | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |
| 826 | MATH 480 | Complex Analysis | 3 | 6 | MATH 263 Calculus III (81) (C and above) | | | Mathematics | | Business Administration (UG), SCAI, SEDS, SMG, SSH, SoM | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 827 | MATH 481 | Partial Differential Equations | 3 | 6 | MATH 274 Introduction to Differential Equations (484) (C and above) | MATH 480 Complex Analysis (618) (C and above) | | Mathematics | | Biological Sciences, Business Administration (UG), Chemical and Materials Engineering, Chemistry, Civil and Environmental Engineering, Computer Science, Economics, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, Physics, Robotics Engineering | |
| 828 | MATH 490 | Special Topics in Mathematics I | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 829 | MATH 491 | Special Topics in Mathematics II | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 830 | MATH 492 | Special Topics in Mathematics III | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 831 | MATH 497 | Directed Study in Mathematics I | 3 | 6 | | | | 4 year UG SCAI Mathematics | | | |
| 832 | MATH 498 | Directed Study in Mathematics II | 3 | 6 | | | | Instructor's Permission Required. Registration through Add Course form only! | | | |
| 833 | MATH 510 | Measure Theory and Applications | 4 | 8 | | | | Applied Mathematics | SSH, SoM | | |
| 834 | MATH 519 | Scientific Computing | 4 | 8 | | | | Applied Mathematics | SSH, SoM | | |
| 835 | MATH 540 | Statistical Learning | 4 | 8 | | | | Applied Mathematics | SSH, SoM | | |

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| 836 | MATH 555 | Stochastic Analysis | 4 | 8 | MATH 510 Measure Theory and Applications (5685) (C and above) | | | Applied Mathematics | SSH, SoM | | |
| 837 | MATH 571 | Advanced Nonlinear Differential Equations | 4 | 8 | | | | Applied Mathematics | SSH, SoM | | |
| 838 | MATH 577 | Modeling and Numerical Analysis for Incompressible Fluids | 4 | 8 | MATH 519 Scientific Computing (4685) (B- and above) | | | | | | |
| 839 | MATH 580 | Advanced Complex Analysis | 4 | 8 | | | | Applied Mathematics | SSH, SoM | | |
| 840 | MATH 592 | Research Seminar | 4 | 8 | | | | Applied Mathematics | SSH, SoM | | |
| 841 | MATH 700-0 | Thesis Research | 0 | 0 | | | | 1 year PhD SCAI Mathematics, 2 year PhD SCAI Mathematics, 3 year PhD SCAI Mathematics, 4 year PhD SCAI Mathematics, 5 year PhD SCAI (pending graduation) Mathematics, 6 year PhD SCAI (pending graduation) Mathematics | SSH, SoM | | |
| 842 | MATH 701 | Real Analysis | 4 | 8 | | | | 1 year PhD SCAI Mathematics, 2 year PhD SCAI Mathematics, 3 year PhD SCAI Mathematics, 4 year PhD SCAI Mathematics | SSH, SoM | | |
| 843 | MATH 721 | Nonlinear Differential Equations with Applications | 4 | 8 | | | | 1 year PhD SCAI Mathematics, 2 year PhD SCAI Mathematics, 3 year PhD SCAI Mathematics, 4 year PhD SCAI Mathematics | SSH, SoM | | |
| 844 | MATH 740 | Advanced Statistical Learning | 4 | 8 | | | | 1 year PhD SCAI Mathematics, 2 year PhD SCAI Mathematics, 3 year PhD SCAI Mathematics, 4 year PhD SCAI Mathematics | SSH, SoM | | |
| 845 | MATH 780 | Research Methods and Ethics | 3 | 6 | | | | 1 year PhD SCAI Mathematics, 2 year PhD SCAI Mathematics, 3 year PhD SCAI Mathematics, 4 year PhD SCAI Mathematics | SSH, SoM | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 846 | MATH 791 | Topics in Mathematics | 4 | 8 | | | | 1 year PhD SCAI Mathematics, 2 year PhD SCAI Mathematics, 3 year PhD SCAI Mathematics, 4 year PhD SCAI Mathematics | SSH, SoM | | |
| **Robotics and Mechatronics** | | | | | | | | | | | |
| 847 | ROBT 201 | Mechanics: Statics and Dynamics | 3 | 6 | MATH 162 Calculus II (170) (C- and above) AND (PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C- and above) OR PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above)) | | | Robotics Engineering, Robotics and Mechatronics | Geology, Mining Engineering, Petroleum Engineering, SMG | | |
| 848 | ROBT 203 | Electrical and Electronic Circuits I with Lab | 4 | 8 | MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above) OR (PHYS 141 Physics I for non-majors with Lab (1437) (C- and above) AND PHYS 142 Physics II for non-majors with Lab (1438) (C- and above))) | | | Robotics Engineering, Robotics and Mechatronics | | | |
| 849 | ROBT 205 | Signals and Sensing with Lab | 4 | 8 | MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above)) | | | Robotics Engineering, Robotics and Mechatronics | Computer Science | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 850 | ROBT 301 | Mechanical Design with CAD and Machining Laboratory | 4 | 8 | ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above) | | | Robotics Engineering, Robotics and Mechatronics | | | |
| 851 | ROBT 303 | Linear Control Theory with Lab | 4 | 8 | ROBT 202 System Dynamics and Modeling (68) (C- and above) | | | Robotics Engineering, Robotics and Mechatronics | | | |
| 852 | ROBT 310 | Image Processing | 3 | 6 | MATH 162 Calculus II (170) (C- and above) AND MATH 273 Linear Algebra with Applications (84) (C- and above) | | | Robotics Engineering, Robotics and Mechatronics | 4 year UG SCAI Computer Science, 4 year UG SCAI Mathematics | | |
| 853 | ROBT 402 | Robotic/Mechatronic System Design | 3 | 6 | ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above) AND ROBT 206 Microcontrollers with Lab (476) (C- and above) | | | 4 year UG SCAI Robotics Engineering, 4 year UG SEDS Robotics Engineering | Robotics Engineering, Robotics and Mechatronics | | |
| 854 | ROBT 403 | Robotics II: Control, Modeling and Learning with Laboratory | 4 | 8 | ROBT 303 Linear Control Theory with Lab (623) (C- and above) AND ROBT 312 Robotics I: Kinematics and Dynamics (5263) (C- and above) | | | Robotics Engineering, Robotics and Mechatronics | | | |
| 855 | ROBT 407 | Machine Learning with Applications | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C- and above) AND MATH 321 Probability (482) (C- and above) AND CSCI 152 Performance and Data Structures (489) (C- and above) | | | Robotics Engineering, Robotics and Mechatronics | 4 year UG SCAI Computer Science, 4 year UG SCAI Mathematics | | |
| 856 | ROBT 414 | Human-Robot Interaction | 3 | 6 | CSCI 152 Performance and Data Structures (489) (C- and above) | | | Robotics Engineering, Robotics and Mechatronics | Computer Science | | |
| 857 | ROBT 491 | Capstone Project I | 3 | 6 | ROBT 391 Research methods (7418) (C- and above) | | | 4 year UG SCAI Robotics Engineering, 4 year UG SEDS Robotics Engineering | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 858 | ROBT 501 | Advanced Robot Kinematics | 3 | 6 | | | | Robotics | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering | | |
| 859 | ROBT 503 | System Dynamics 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, Mechanical and Aerospace Engineering | | |

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| 860 | ROBT 611 | Intelligent Robot Manipulation | 3 | 6 | ROBT 501 Advanced Robot Kinematics (2263) (C- and above) | | | Computer Science, Robotics | Biomedical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Data Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering | | |
| 861 | 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, Mechanical and Aerospace Engineering | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 862 | ROBT 615 | Optimal Control and Estimation | 3 | 6 | ROBT 503 System Dynamics 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, Mechanical and Aerospace Engineering | | |
| 863 | ROBT 691 | Thesis Proposal | 6 | 12 | | | | Robotics | | | |
| 864 | ROBT 700 | Thesis Research | 89 | 178 | | | | Robotics Engineering | | | |
| 865 | ROBT 700-0 | Thesis Research | 0 | 0 | | | | Robotics Engineering | | | |
| 866 | ROBT 701 | Advanced Robot Kinematics | 3 | 6 | | | | Robotics Engineering | Science, Engineering and Technology | | |
| 867 | ROBT 703 | Advanced Optimal Control and Estimation | 3 | 6 | | | | Robotics Engineering | Science, Engineering and Technology | | |
| 868 | ROBT 709 | Advanced Dynamic Systems and Control | 3 | 6 | | | | Robotics Engineering | Science, Engineering and Technology | | |
| **DI** | | | | | | | | | | | |
| **DI** | | | | | | | | | | | |
| 869 | DI 701 | Research Methods Fundamentals | 4 | 8 | | | | GSB, GSE, GSPP, SCAI, SSH, SoE, SoM | | | |