

## Course Requirements and Registration Priorities (Undergraduate), Fall 2020

| #                         | Abbr      | Title  | Cr(US) | Cr(ECTS) | PreRequisite | CoRequisite | AntiRequisite | 1st priority registration                    | 2nd priority registration     | 3rd priority registration | 4th priority registration |
|---------------------------|-----------|--|--------|----------|--------------|-------------|---------------|--|-------------------------------|---------------------------|---------------------------|
| <b>GSB</b>                |           |  |        |          |              |             |               |  |                               |                           |                           |
| <b>GSB</b>                |           |  |        |          |              |             |               |  |                               |                           |                           |
| 1                         | BUS 101   | Core Course in Business                                      | 3      | 6        |              |             |               | 3 year UG SEDS, 3 year UG SMG, 3 year UG SSH | 4 year UG SEDS, 4 year UG SSH | SEDS, SMG, SSH, SoM       |                           |
| <b>Other</b>              |           |  |        |          |              |             |               |  |                               |                           |                           |
| <b>Other</b>              |           |  |        |          |              |             |               |  |                               |                           |                           |
| 2                         | TEST 001  | TEST   | 3      | 6        |              |             |               |  |                               |                           |                           |
| <b>SoM</b>                |           |  |        |          |              |             |               |  |                               |                           |                           |
| <b>Medical Sciences</b>   |           |  |        |          |              |             |               |  |                               |                           |                           |
| 3                         | NUSM 101  | Introduction to Medicine                                     | 2      | 4        |              |             |               | Medical Sciences                             | Biological Sciences           |                           |                           |
| <b>Nursing</b>            |           |  |        |          |              |             |               |  |                               |                           |                           |
| 4                         | NUR 103L  | Microbiology for Nurses with Lab                             | 4      | 8        |              |             |               | Nursing                                      |                               |                           |                           |
| 5                         | NUR 112   | Introduction to Professional Nursing                         | 2      | 4        |              |             |               | Nursing                                      |                               |                           |                           |
| 6                         | NUR 121   | Introduction to Basic Statistics for Evidence-Based Practice | 3      | 6        |              |             |               | Nursing                                      |                               |                           |                           |
| 7                         | NUR 201   | Pathophysiologic Foundations of Nursing Care                 | 3      | 6        |              |             |               | Nursing                                      |                               |                           |                           |
| 8                         | NUR 203   | Pharmacology and Therapeutics                                | 3      | 6        |              |             |               | Nursing                                      |                               |                           |                           |
| 9                         | NUR 211   | Foundations of Nursing Practice I                            | 3      | 6        |              |             |               | Nursing                                      |                               |                           |                           |
| 10                        | NUR 301   | Nutrition for Clinical Practice                              | 3      | 6        |              |             |               | Applied Nursing, Nursing (two year program)  |                               |                           |                           |
| 11                        | NUR 302   | Physical Assessment Across the Lifespan                      | 4      | 8        |              |             |               | Applied Nursing, Nursing (two year program)  |                               |                           |                           |
| 12                        | NUR 303   | Nursing Care of Older Adults                                 | 4      | 8        |              |             |               | Applied Nursing, Nursing (two year program)  |                               |                           |                           |
| 13                        | NUR 304   | Introduction to Basic Statistics for Evidence Based Practice | 3      | 6        |              |             |               | Applied Nursing, Nursing (two year program)  |                               |                           |                           |
| 14                        | NUR 401   | Education: Principles and Practice for Teaching in Nursing   | 4      | 8        |              |             |               | Applied Nursing, Nursing (two year program)  |                               |                           |                           |
| 15                        | NUR 403   | Data Analytics for Quality Improvement in Healthcare         | 3      | 6        |              |             |               | Applied Nursing, Nursing (two year program)  |                               |                           |                           |
| 16                        | NUR 404   | Community and Home Health Nursing                            | 4      | 8        |              |             |               | Applied Nursing, Nursing (two year program)  |                               |                           |                           |
| 17                        | NUR 406.1 | Medical-Surgical Nursing: Complex Surgical Management        | 4      | 8        |              |             |               | Applied Nursing, Nursing (two year program)  |                               |                           |                           |
| <b>SMG</b>                |           |  |        |          |              |             |               |  |                               |                           |                           |
| <b>Mining Engineering</b> |           |  |        |          |              |             |               |  |                               |                           |                           |
| 18                        | MINE 301  | Mine Surveying and Geographic Information Systems            | 3      | 6        |              |             |               | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH |                               |                           |                           |

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| 19                                      | MINE 302 | Geomechanics                                  | 3 | 6 |  |  |  | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH  |  |  |  |
| 20                                      | MINE 304 | Resource Estimation                           | 3 | 6 |  |  |  | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH  |  |  |  |
| 21                                      | MINE 405 | Mine Ventilation                              | 3 | 6 |  |  |  | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH  |  |  |  |
| <b>Petroleum Engineering</b>            |          |   |   |   |  |  |  |   |  |  |  |
| 22                                      | PETE 201 | Fluid Mechanics and Thermodynamics            | 3 | 6 | MATH 161 Calculus I (118) (D and above) OR CHEM 101 General Chemistry I (113) (D and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG | Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS |  |  |
| 23                                      | PETE 301 | Numerical Methods for Petroleum Engineers     | 3 | 6 | ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above) |  |  | 5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG | Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS |  |  |
| 24                                      | PETE 302 | Reservoir Engineering I with Laboratory works | 4 | 8 | PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG | Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS |  |  |
| 25                                      | PETE 303 | Well Logging and Formation Evaluation         | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (C- and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG | Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS |  |  |
| 26                                      | PETE 304 | Well Completion and Stimulation               | 3 | 6 | PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG | Chemical and Materials Engineering, Civil and Environmental Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS |  |  |
| <b>School of Mining and Geosciences</b> |          |   |   |   |  |  |  |   |  |  |  |
| 27                                      | GEOL 201 | Mineralogy                                    | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (C- and above)   |  |  | 2 year UG SMG, 5 year UG SEDS, 5 year UG SSH  |  |  |  |
| 28                                      | GEOL 202 | Geologic Maps and Cross-Sections              | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)   |  |  | 2 year UG SMG, 5 year UG SEDS, 5 year UG SSH  |  |  |  |
| 29                                      | GEOL 206 | Field Geology 1                               | 3 | 6 | GEOL 202 Geologic Maps and Cross-Sections (5123) (C- and above)  |  |  | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH  |  |  |  |

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|---------------------------|----------|--|---|---|---|--|---|--|---|---------------------|--|
| 30                        | GEOL 301 | Igneous and metamorphic petrology      | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)  |  |   | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH   |   |                     |  |
| 31                        | GEOL 302 | Thermodynamics and Geochemistry        | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)  |  |   | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH   |   |                     |  |
| 32                        | GEOL 303 | Structural Geology and Tectonics       | 3 | 6 | (GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)) AND GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)   |  |   | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH   |   |                     |  |
| 33                        | GEOL 304 | Geophysics                             | 3 | 6 | GEOL 204 Sedimentology and stratigraphy (5475) (D and above)  |  |   | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH   |   |                     |  |
| 34                        | GEOL 305 | Geology of ore deposits                | 3 | 6 | GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above) OR GEOL 201 Mineralogy (5122) (D and above)  |  |   | 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH   |   |                     |  |
| <b>SSH</b>                |          |  |   |   |   |  |   |  |   |                     |  |
| <b>Biological Science</b> |          |  |   |   |   |  |   |  |   |                     |  |
| 35                        | BIOL 101 | Biology for non-Science majors         | 3 | 6 |   |  | BIOL 110 Modern Biology I (1070) (C- and above) | 5 year UG SEDS, 5 year UG SSH, Anthropology, Economics, History, Nursing, Political Science and International Relations, SEDS, SMG, Sociology, Undeclared SSH, World Languages, Literatures and Cultures |   |                     |  |
| 36                        | BIOL 105 | General Biology                        | 3 | 6 |   |  |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics                                   | SEDS, SMG, SSH, SoM |  |
| 37                        | BIOL 110 | Modern Biology I                       | 3 | 6 |   |  |   | 1 year UG SOM Medical Sciences, 2 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH, Chemistry  | Computer Science, Mathematics, Physics, Robotics and Mechatronics | SEDS, SMG, SSH, SoM |  |
| 38                        | BIOL 120 | Modern Biology II                      | 3 | 6 | BIOL 110 Modern Biology I (1070) (C and above)  |  |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Undeclared SSH  | Mathematics, Physics  | SEDS, SMG, SSH, SoM |  |
| 39                        | BIOL 230 | Human Anatomy and Physiology I         | 4 | 8 | BIOL 110 Modern Biology I (107) (C and above) OR BIOL 110 Modern Biology I (1070) (C and above)   |  |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Undeclared SSH   | Chemistry, Mathematics, Physics                                   | SEDS, SMG, SSH, SoM |  |
| 40                        | BIOL 301 | Molecular Cell Biology                 | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above)   |  |   | 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH   | Biological Sciences   | SEDS, SMG, SSH, SoM |  |
| 41                        | BIOL 305 | Introduction to Microbiology           | 3 | 6 | (BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 120L Modern Biology II Laboratory (5443) (C and above)) OR BIOL 120 Modern Biology II (1195) (C and above)  |  |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics                                   | SEDS, SMG, SSH, SoM |  |
| 42                        | BIOL 310 | Immunology                             | 3 | 6 | BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 301 Molecular Cell Biology (5809) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above) |  |   | 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH   | Biological Sciences   | SEDS, SMG, SSH, SoM |  |
| 43                        | BIOL 320 | Developmental Biology                  | 3 | 6 | BIOL 230 Human Anatomy and Physiology I (72) (C and above) OR BIOL 230 Human Anatomy and Physiology I (6217) (C and above)  |  |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics                                   | SEDS, SMG, SSH, SoM |  |
| 44                        | BIOL 321 | Bioethics                              | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above)   |  |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics                                   | SEDS, SMG, SSH, SoM |  |
| 45                        | BIOL 333 | Environmental Biology                  | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above)   |  |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics                                   | SEDS, SMG, SSH, SoM |  |
| 46                        | BIOL 340 | Introduction to Applied Bioinformatics | 4 | 8 | (BIOL 120 Modern Biology II (1195) (C and above) OR (BIOL 120 Modern Biology II (1195) (C and above) AND BIOL 120L Modern Biology II Laboratory (5443) (C and above))) AND MATH 310 Applied Statistical Methods (82) (C and above)                            |  |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics                                   | SEDS, SMG, SSH, SoM |  |

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| 47               | BIOL 341 | Biochemistry I                            | 3 | 6 | CHEM 211 Organic Chemistry I (154) (C and above)  |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics  | SEDS, SMG, SSH, SoM |  |
| 48               | BIOL 355 | Critical Research Reasoning               | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above)   |  | 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH   | Biological Sciences  | SEDS, SMG, SSH, SoM |  |
| 49               | BIOL 370 | Genetics                                  | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above)   |  | 4 year UG SSH Biological Sciences, 5 year UG SEDS, 5 year UG SSH   | Biological Sciences  | SEDS, SMG, SSH, SoM |  |
| 50               | BIOL 380 | Biology of Behavior                       | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above)   |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics  | SEDS, SMG, SSH, SoM |  |
| 51               | BIOL 385 | Cell signaling: principles and mechanisms | 3 | 6 | BIOL 120 Modern Biology II (1195) (C and above)   |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics  | SEDS, SMG, SSH, SoM |  |
| 52               | BIOL 392 | Directed Study in Biology                 | 3 | 6 |   |  | Instructor's Permission Required. Registration through Add Course form only!   |  |                     |  |
| 53               | BIOL 425 | Biomedical Research Methods               | 3 | 6 | BIOL 110 Modern Biology I (1070) (C and above) AND (BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR (BIOL 301 Molecular Cell Biology (5809) (C and above) AND BIOL 301L Molecular Cell Biology Laboratory (5678) (C and above))) AND (BIOL 341 Biochemistry I (2002) (C and above) OR CHEM 341 Biochemistry I (1058) (C and above)) |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics  | SEDS, SMG, SSH, SoM |  |
| 54               | BIOL 452 | Biology of Cancer                         | 3 | 6 | BIOL 231 Human Anatomy and Physiology II (479) (C and above) OR BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 331 Human Anatomy and Physiology II (6218) (C and above) OR BIOL 301 Molecular Cell Biology (5809) (C and above)   |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics  | SEDS, SMG, SSH, SoM |  |
| 55               | BIOL 455 | Biotechnology                             | 3 | 6 | BIOL 301 Molecular Biology of Cell with Lab (1197) (C- and above) OR (BIOL 301 Molecular Cell Biology (5809) (C- and above) AND BIOL 301L Molecular Cell Biology Laboratory (5678) (C- and above))  |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics  | SEDS, SMG, SSH, SoM |  |
| 56               | BIOL 460 | Human Parasitology                        | 3 | 6 | BIOL 305 Introduction to Microbiology with Lab (1642) (C and above) OR BIOL 305 Introduction to Microbiology (5789) (C and above)   |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | Chemistry, Mathematics, Physics  | SEDS, SMG, SSH, SoM |  |
| 57               | BIOL 490 | Honors Thesis Research                    | 0 | 0 | BIOL 355 Critical Research Reasoning (1000) (B and above)   |  | Instructor's Permission Required. Registration through Add Course form only!   |  |                     |  |
| <b>Chemistry</b> |          |   |   |   |   |  |  |  |                     |  |
| 58               | CHEM 090 | Chemistry for Non-Science majors          | 3 | 6 |   |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH, World Languages, Literatures and Cultures |  |                     |  |
| 59               | CHEM 091 | Survey of Physical Science                | 3 | 6 |   |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Economics, History, Nursing, Political Science and International Relations, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH, World Languages, Literatures and Cultures |  |                     |  |
| 60               | CHEM 101 | General Chemistry I                       | 3 | 6 |   |  | 1 year UG SMG, 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Medical Sciences   | Computer Science, Mathematics, Physics, Robotics and Mechatronics, SMG | SEDS, SSH, SoM      |  |
| 61               | CHEM 102 | General Chemistry II                      | 3 | 6 | CHEM 101 General Chemistry I (113) (C and above)  |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Undeclared SSH  | Computer Science, Mathematics, Physics, Robotics and Mechatronics, SMG | SEDS, SSH, SoM      |  |
| 62               | CHEM 211 | Organic Chemistry I                       | 3 | 6 | CHEM 102 General Chemistry II (232) (C and above)   |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Undeclared SSH  | SEDS, SMG, SSH, SoM  |                     |  |

|                                      |           |   |   |   |   |  |  |  |                     |   |  |
|--------------------------------------|-----------|---|---|---|---|--|--|--|---------------------|---|--|
| 63                                   | CHEM 211L | Organic Chemistry I Lab                 | 1 | 2 | CHEM 101L General Chemistry I lab (179) (C and above)   | CHEM 211 Organic Chemistry I (154) (C and above)           |  | 2 year UG SSH, 3 year UG SSH, 4 year UG SSH  |                     |   |  |
| 64                                   | CHEM 220  | Quantitative Chemical Analysis          | 3 | 6 | CHEM 102 General Chemistry II (232) (C and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Chemistry, Undeclared SSH   | Biological Sciences | SEDS, SMG, SSH, SoM   |  |
| 65                                   | CHEM 250  | Descriptive Inorganic Chemistry         | 3 | 6 | CHEM 101 General Chemistry I (113) (C and above)  |  |  |  |                     |   |  |
| 66                                   | CHEM 331  | Physical Chemistry I                    | 3 | 6 | CHEM 220 Quantitative Chemical Analysis (555) (C and above) AND PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Chemistry   | Biological Sciences | SEDS, SMG, SSH, SoM   |  |
| 67                                   | CHEM 341  | Biochemistry I                          | 3 | 6 | CHEM 211 Organic Chemistry I (154) (C and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Chemistry   | Biological Sciences | SEDS, SMG, SSH, SoM   |  |
| 68                                   | CHEM 350  | Advanced Inorganic Chemistry            | 3 | 6 | CHEM 212 Organic Chemistry II (443) (C and above) AND CHEM 212L Organic Chemistry II Lab (444) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Chemistry   | Biological Sciences | SEDS, SMG, SSH, SoM   |  |
| 69                                   | CHEM 350L | Advanced Inorganic Chemistry Laboratory | 1 | 2 | CHEM 212 Organic Chemistry II (443) (C and above) AND CHEM 212L Organic Chemistry II Lab (444) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)   | CHEM 350 Advanced Inorganic Chemistry (1905) (C and above) |  | 4 year UG SSH  |                     |   |  |
| 70                                   | CHEM 400  | Chemistry Seminar                       | 3 | 6 | CHEM 380 Research Methods (636) (C and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Chemistry   | Biological Sciences | SEDS, SMG, SSH, SoM   |  |
| 71                                   | CHEM 410  | Structural Spectroscopy                 | 4 | 8 | CHEM 212 Organic Chemistry II (443) (C and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Chemistry   | Biological Sciences | SEDS, SMG, SSH, SoM   |  |
| 72                                   | CHEM 431  | Computational Chemistry                 | 3 | 6 | CHEM 332 Physical Chemistry II (1056) (C and above) AND (CSCI 111 Web Programming and Problem Solving (110) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above)) |  |  | 5 year UG SEDS, 5 year UG SSH, Chemistry   | Biological Sciences | SEDS, SMG, SSH, SoM   |  |
| 73                                   | CHEM 490  | Nanochemistry                           | 3 | 6 | CHEM 331 Physical Chemistry I (634) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Chemistry   | Biological Sciences | SEDS, SMG, SSH, SoM   |  |
| <b>Communication and Composition</b> |           |   |   |   |   |  |  |  |                     |   |  |
| 74                                   | WCS 101   | Communication and Society               | 3 | 6 |   |  |  | 1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |   |  |
| 75                                   | WCS 150   | Rhetoric and Composition                | 3 | 6 |   |  |  | 1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH, 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |   |  |
| 76                                   | WCS 200   | Introduction to Public Speaking         | 3 | 6 | WCS 150 Rhetoric and Composition (2183) (C- and above)  |  |  | 2 year UG SSH, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH  |                     | 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 3 year UG SEDS, 3 year UG SMG |  |
| 77                                   | WCS 210   | Technical and Professional Writing      | 3 | 6 | WCS 150 Rhetoric and Composition (2183) (C- and above)  |  |  | 2 year UG SEDS, 2 year UG SMG, 3 year UG SEDS, 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH  |                     | SEDS, SMG, SSH, SoM   |  |
| 78                                   | WCS 220   | Science Writing                         | 3 | 6 | WCS 150 Rhetoric and Composition (2183) (C- and above)  |  |  | 2 year UG SOM, 2 year UG SSH, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH   |                     | SEDS, SMG, SSH, SoM   |  |

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|---|-----------------|--|---|---|---|--|---|---|---------------------|--|
| 79  | WCS 230         | Say What you Mean: Clarity, Precision, and Style in Academic Writing     | 3 | 6 | WCS 150 Rhetoric and Composition (2183) (C- and above)  |  | 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 5 year UG SEDS, 5 year UG SSH  | 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH | SEDS, SMG, SSH, SoM |  |
| 80  | WCS 240         | Writing for Digital Media  | 3 | 6 | WCS 150 Rhetoric and Composition (2183) (C- and above)  |  | 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 5 year UG SEDS, 5 year UG SSH  | 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH | SEDS, SMG, SSH, SoM |  |
| 81  | WCS 250         | Advanced Rhetoric and Composition  | 3 | 6 | WCS 150 Rhetoric and Composition (2183) (C- and above)  |  | 2 year UG SEDS, 2 year UG SMG, 2 year UG SOM, 2 year UG SSH, 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH |   | SEDS, SMG, SSH, SoM |  |
| 82  | WCS 390         | Writing Fellows I - Composition and Collaboration in Theory and Practice | 3 | 6 | WCS 150 Rhetoric and Composition (2183) (B and above) AND (WCS 210 Technical and Professional Writing (4881) (B+ and above) OR WCS 220 Science Writing (5686) (B+ and above) OR WCS 230 Say What you Mean: Clarity, Precision, and Style in Academic Writing (3026) (B+ and above) OR WCS 240 Writing for Digital Media (4421) (B+ and above) OR WCS 250 Advanced Rhetoric and Composition (3027) (B+ and above)) |  | 3 year UG SEDS, 3 year UG SMG, 3 year UG SOM, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH  | 4 year UG SEDS, 4 year UG SMG, 4 year UG SOM, 4 year UG SSH |                     |  |
| 83  | WCS 391         | Writing Fellows II - Practicum in Composition & Collaboration            | 3 | 6 | WCS 390 Writing Fellows I - Composition and Collaboration in Theory and Practice (1969) (B and above)   |  | Instructor's Permission Required. Registration through Add Course form only!  |   |                     |  |
| 84  | WCS 392         | Writing Fellows III - Research & Practice in Writing & Peer Mentorship   | 3 | 6 | WCS 391 Writing Fellows II - Practicum in Composition & Collaboration (3425) (B and above)  |  | Instructor's Permission Required. Registration through Add Course form only!  |   |                     |  |
| <b>Communication and Composition, Languages, Literature and Linguistics</b> |                 |  |   |   |   |  |   |   |                     |  |
| 85  | WCS 260/WLL 235 | Creative Writing: Introduction to Fiction Writing I                      | 3 | 6 | WCS 150 Rhetoric and Composition (2183) (C- and above)  |  | 2 year UG SSH, 3 year UG SSH, 5 year UG SEDS, 5 year UG SSH   | SSH   | SEDS, SMG           |  |
| <b>Economics</b>  |                 |  |   |   |   |  |   |   |                     |  |
| 86  | ECON 101        | Introduction to Microeconomics   | 3 | 6 |   |  | 5 year UG SEDS, 5 year UG SSH, Undeclared SSH   | 1 year UG SSH Mathematics, 2 year UG SSH Mathematics        | 2 year UG SSH       |  |
| 87  | ECON 102        | Introduction to Macroeconomics   | 3 | 6 |   |  | 5 year UG SEDS, 5 year UG SSH, Undeclared SSH   | 1 year UG SSH Mathematics, 2 year UG SSH Mathematics        | 2 year UG SSH       |  |
| 88  | ECON 201        | Intermediate Microeconomics  | 3 | 6 | ECON 101 Introduction to Microeconomics (379) (B- and above) AND (MATH 161 Calculus I (118) (B- and above) OR MATH 162 Calculus II (170) (B- and above))  |  | 5 year UG SEDS, 5 year UG SSH, Economics  | 2 year UG SSH Undeclared, Mathematics                       | SEDS, SMG, SSH, SoM |  |
| 89  | ECON 202        | Intermediate Macroeconomics  | 3 | 6 | ECON 102 Introduction to Macroeconomics (503) (B- and above) AND (MATH 161 Calculus I (118) (B- and above) OR MATH 162 Calculus II (170) (B- and above))  |  | 5 year UG SEDS, 5 year UG SSH, Economics  | 2 year UG SSH Undeclared, Mathematics                       | SEDS, SMG, SSH, SoM |  |
| 90  | ECON 211        | Economic Statistics  | 3 | 6 | ECON 101 Introduction to Microeconomics (379) (C and above) OR ECON 102 Introduction to Macroeconomics (503) (C and above)  |  | 5 year UG SEDS, 5 year UG SSH, Economics  | 2 year UG SSH Undeclared                                    | SEDS, SMG, SSH, SoM |  |
| 91  | ECON 301        | Econometrics I   | 3 | 6 | ECON 211 Economic Statistics (2280) (C- and above) OR (MATH 321 Probability (482) (C- and above) AND (MATH 322 Mathematical Statistics (1165) (C- and above) OR MATH 310 Applied Statistical Methods (82) (C- and above))   |  | 5 year UG SEDS, 5 year UG SSH, Economics  |   | SEDS, SMG, SSH, SoM |  |
| 92  | ECON 325        | International Trade  | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above)   |  | 3 year UG SSH Economics, 5 year UG SEDS, 5 year UG SSH  | Economics   | SEDS, SMG, SSH, SoM |  |
| 93  | ECON 333        | Political Economy  | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above)   |  | 3 year UG SSH Economics, 5 year UG SEDS, 5 year UG SSH  | Economics   | SEDS, SMG, SSH, SoM |  |
| 94  | ECON 345        | The Economics of Family  | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above)   |  | 3 year UG SSH Economics, 5 year UG SEDS, 5 year UG SSH  | Economics   | SEDS, SMG, SSH, SoM |  |

|  |          |   |   |   |  |  |  |   |   |                     |
|--|----------|---|---|---|--|--|--|---|---|---------------------|
| 95   | ECON 399 | Independent Study in Economics  | 3 | 6 |  |  |  | Instructor's Permission Required.<br>Registration through Add Course form only!   |   |                     |
| 96   | ECON 403 | Introduction to Contract Theory and Auctions  | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above) |  |  | 5 year UG SEDS, 5 year UG SSH, Economics  |   | SEDS, SMG, SSH, SoM |
| 97   | ECON 405 | Behavioral and Experimental Economics   | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above) |  |  | 5 year UG SEDS, 5 year UG SSH, Economics  |   | SEDS, SMG, SSH, SoM |
| 98   | ECON 413 | Econometrics II Time Series   | 3 | 6 | ECON 301 Econometrics I (664) (C- and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Economics  |   | SEDS, SMG, SSH, SoM |
| 99   | ECON 415 | Industrial Organization   | 3 | 6 | ECON 301 Econometrics I (664) (C- and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Economics  |   | SEDS, SMG, SSH, SoM |
| 100  | ECON 417 | Development Economics   | 3 | 6 | ECON 301 Econometrics I (664) (C- and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Economics  |   | SEDS, SMG, SSH, SoM |
| 101  | ECON 428 | Wages and the Labor Market  | 3 | 6 | ECON 201 Intermediate Microeconomics (133) (C- and above) AND ECON 301 Econometrics I (664) (C- and above) |  |  | 5 year UG SEDS, 5 year UG SSH, Economics  |   | SEDS, SMG, SSH, SoM |
| <b>History, Philosophy and Religious Studies</b> |          |   |   |   |  |  |  |   |   |                     |
| 102  | HST 100  | History of Kazakhstan   | 3 | 6 |  |  |  | 4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SSH | 1 year UG SEDS, 1 year UG SMG, 1 year UG SOM, 1 year UG SSH | SEDS, SMG, SSH, SoM |
| 103  | HST 104  | Central Asian History II (1700 - 1991)  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, History, Undeclared SEDS, Undeclared SMG, Undeclared SSH   | SEDS, SMG, SSH, SoM   |                     |
| 104  | HST 124  | Introduction to the History of Medicine   | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, History, Undeclared SEDS, Undeclared SMG, Undeclared SSH   | SEDS, SMG, SSH, SoM   |                     |
| 105  | HST 125  | History of Magic  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, History, Undeclared SEDS, Undeclared SMG, Undeclared SSH   | SEDS, SMG, SSH, SoM   |                     |
| 106  | HST 131  | European History I (to 1700)  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, History, Undeclared SEDS, Undeclared SMG, Undeclared SSH   | SEDS, SMG, SSH, SoM   |                     |
| 107  | HST 236  | Eurasian revolutions, 1905-1949   | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SSH  | SEDS, SMG, SoM  |                     |
| 108  | HST 239  | Modernizing the Periphery: Nationalism, Communism, and Empire in Central Europe, 1890-Present | 3 | 6 | Subject "HST" BETWEEN 100 and 199  |  |  | 5 year UG SEDS, 5 year UG SSH, SSH  | SEDS, SMG, SoM  |                     |
| 109  | HST 241  | History of Sexuality  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SSH  | SEDS, SMG, SoM  |                     |
| 110  | HST 435  | Stalinist Central Asia  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SSH  | SEDS, SMG, SoM  |                     |
| 111  | HST 498  | Directed Reading  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, History  |   |                     |
| 112  | PHIL 101 | Introduction to Philosophy  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM  |   |                     |
| 113  | PHIL 124 | Knowledge and Reality   | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM  |   |                     |
| 114  | PHIL 141 | Critical Thinking   | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM  |   |                     |

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|---|------------------|--|---|---|---|---|--|--|---|---------------------|--|
| 115   | PHIL 210         | Ethics   | 3 | 6 |   |   |  | 3 year UG SEDS Chemical Engineering, 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SEDS Civil Engineering, 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Electrical and Electronic Engineering, 3 year UG SEDS Mechanical Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SMG, 5 year UG SEDS, 5 year UG SSH | 2 year UG SEDS Chemical Engineering, 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Civil Engineering, 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Electronic Engineering, 2 year UG SEDS Mechanical Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SMG | SEDS, SMG, SSH, SoM |  |
| 116   | PHIL 215         | Bioethics  | 3 | 6 |   |   |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |   |                     |  |
| 117   | PHIL 223         | Philosophy of Science  | 3 | 6 |   |   |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |   |                     |  |
| <b>History, Philosophy and Religious Studies, History, Philosophy and Religious Studies</b> |                  |  |   |   |   |   |  |  |   |                     |  |
| 118   | PHIL 266/HST 266 | Sunzi's Art of War and Unorthodox Military Strategy in Ancient China | 3 | 6 |   |   |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |   |                     |  |
| 119   | PHIL 267/REL 267 | Chinese Roots of Martial Arts  | 3 | 6 |   |   |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |   |                     |  |
| 120   | REL 110/HST 110  | Introduction to World Religions                                      | 3 | 6 |   |   |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |   |                     |  |
| <b>History, Philosophy and Religious Studies, Kazakh Language and Turkic Studies</b>        |                  |  |   |   |   |   |  |  |   |                     |  |
| 121   | HST 271/TUR 271  | History of the Ottoman Empire  | 3 | 6 | HST 100 History of Kazakhstan (172) (C- and above)                            |   |  | 5 year UG SEDS, 5 year UG SSH, SSH   | SEDS, SMG, SoM  |                     |  |
| 122   | HST 454/TUR 454  | Turkestan in the Nineteenth Century                                  | 3 | 6 |   |   |  | 5 year UG SEDS, 5 year UG SSH, SSH   | SEDS, SMG, SoM  |                     |  |
| <b>History, Philosophy and Religious Studies, Sociology and Anthropology</b>                |                  |  |   |   |   |   |  |  |   |                     |  |
| 123   | ANT 313/REL 332  | Islam and Politics in Eurasia  | 3 | 6 |   |   |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |   |                     |  |
| 124   | HST 223/ANT 287  | Cannibalism and Civilization   | 3 | 6 |   |   |  | 5 year UG SEDS, 5 year UG SSH, SSH   | SEDS, SMG, SoM  |                     |  |
| <b>Kazakh Language and Turkic Studies</b>   |                  |  |   |   |   |   |  |  |   |                     |  |
| 125   | KAZ 001          | Kazakh Language Placement Test                                       | 0 | 0 |   |   |  |  |   |                     |  |
| 126   | KAZ 201          | Academic Kazakh I  | 3 | 6 | KAZ 150 Basic Kazakh (1215) (C- and above) OR KLL "[B1.2] Intermediate"       |   |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH   | SEDS, SMG, SSH, SoM   |                     |  |
| 127   | KAZ 202          | Academic Kazakh II   | 3 | 6 | KAZ 201 Academic Kazakh I (4561) (C- and above) OR KLL "[B2.2] Upper-Interm." |   |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH   | SEDS, SMG, SSH, SoM   |                     |  |
| 128   | KAZ 211          | Academic Speaking in Kazakh  | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced"     | KAZ 212 Academic Writing in Kazakh (703) (C- and above) |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH   | SEDS, SMG, SSH, SoM   |                     |  |



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|-----|---------|--|---|---|---|--|--|--|---------------------|--|--|
| 129 | KAZ 212 | Academic Writing in Kazakh                               | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  | KAZ 211 Academic Speaking in Kazakh (702) (C- and above) | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 130 | KAZ 226 | Kazakh for Medical School                                | 3 | 6 | KLL "[B1.2] Intermediate"   |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 131 | KAZ 313 | Kazakh for Business                                      | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 132 | KAZ 349 | Kazakh Mythology   | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 133 | KAZ 351 | Kazakh Short Stories                                     | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 134 | KAZ 356 | Kazakh Music History                                     | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 135 | KAZ 357 | Literature of Alash                                      | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 136 | KAZ 363 | Language and Globalization                               | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 137 | KAZ 364 | Kazakh for Civil Service                                 | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 138 | KAZ 365 | Abai's World   | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 139 | KAZ 366 | Kazakh Language for Engineers                            | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 140 | KAZ 368 | Onomastics: History and Function of Names                | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 141 | KAZ 371 | Contemporary Kazakh Literature                           | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 142 | KAZ 373 | Kazakh Terminology                                       | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 143 | KAZ 374 | Kazakh Diplomacy   | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 144 | KAZ 375 | Cultural Studies and Kazakh Culture                      | 3 | 6 | KAZ 202 Academic Kazakh II (4562) (C- and above) OR KLL "[C1.1] Advanced" |  |  | 1 year UG SMG, 1 year UG SOM, 4 year UG SEDS, 4 year UG SSH, 5 year UG SEDS, 5 year UG SSH | SEDS, SMG, SSH, SoM |  |  |
| 145 | KFL 101 | Elementary Kazakh as a Foreign Language I                | 4 | 8 |   |  |  | Instructor's Permission Required. Registration through Add Course form only!               |                     |  |  |
| 146 | TUR 100 | Languages, Cultures, and Communities of the Turkic World | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |                     |  |  |
| 147 | TUR 230 | Literatures of Central Asia                              | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |                     |  |  |
| 148 | TUR 231 | Istanbul in Literature and Culture                       | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM   |                     |  |  |

**Languages, Literature and Linguistics**

|     |          |  |   |   |   |  |   |  |                     |
|-----|----------|--|---|---|---|--|---|--|---------------------|
| 149 | CHN 102  | Beginning Mandarin II                      | 4 | 8 | CHN 101 Beginning Mandarin I (1384) (C and above)   |  | 2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH | 2 year UG SSH, 3 year UG SSH, Undeclared SSH | SEDS, SMG, SSH, SoM |
| 150 | CHN 201  | Intermediate Mandarin I                    | 4 | 8 | CHN 102 Beginning Mandarin II (1844) (C and above)  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH, Undeclared SSH | SEDS, SMG, SSH, SoM |
| 151 | FRE 101  | Beginning French I                         | 4 | 8 |   |  | 2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH | Undeclared SSH                               | SEDS, SMG, SSH, SoM |
| 152 | FRE 102  | Beginning French II                        | 4 | 8 | FRE 101 Beginning French I (246) (C- and above)   |  | 2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH | 2 year UG SSH, 3 year UG SSH, Undeclared SSH | SEDS, SMG, SSH, SoM |
| 153 | KOR 101  | Beginning Korean I                         | 4 | 8 |   |  | 2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH | 2 year UG SSH, 3 year UG SSH, Undeclared SSH | SEDS, SMG, SSH, SoM |
| 154 | KOR 102  | Beginning Korean II                        | 4 | 8 | KOR 101 Beginning Korean I (4672) (C- and above)  |  | 2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH | 2 year UG SSH, 3 year UG SSH, Undeclared SSH | SEDS, SMG, SSH, SoM |
| 155 | KOR 201  | Intermediate Korean I                      | 4 | 8 | KOR 102 Beginning Korean II (4791) (C- and above)   |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | Undeclared SSH                               | SEDS, SMG, SSH, SoM |
| 156 | LING 131 | Introduction to Linguistics                | 3 | 6 |   |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | Undeclared SSH                               | SEDS, SMG, SSH, SoM |
| 157 | LING 273 | Survey of Research Methods in Linguistics  | 3 | 6 | LING 131 Introduction to Linguistics (1394) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH                 | SEDS, SMG, SSH, SoM |
| 158 | LING 277 | Language Diversity and Language Universals | 3 | 6 | LING 131 Introduction to Linguistics (1394) (C and above)   |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH                 | SEDS, SMG, SSH, SoM |
| 159 | LING 278 | Sounds of the World's Languages            | 3 | 6 |   |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH                 | SEDS, SMG, SSH, SoM |
| 160 | LING 372 | Discourse Analysis                         | 3 | 6 | Subject "LLL" BETWEEN 100 and 199 OR Subject "WLL" BETWEEN 100 and 199 OR WLL 171/ANT 175 Introduction to Linguistic Anthropology (4417) (C- and above) OR Subject "LING" BETWEEN 100 and 199 OR Subject "LING" BETWEEN 100 and 199   |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH                 | SEDS, SMG, SSH, SoM |
| 161 | LING 373 | Advanced Topics in Linguistics             | 3 | 6 | LING 131 Introduction to Linguistics (1394) (C- and above)  |  | Instructor's Permission Required. Registration through Add Course form only!  |  |                     |
| 162 | LING 470 | Multilingualism and Language Contact       | 3 | 6 | LING 131 Introduction to Linguistics (1394) (C- and above) OR LING 270 Languages of Eurasia (2485) (C- and above) OR ANT 277/WLL 271 Language and Society (1027) (C- and above) OR LING 272 Language and the Mind (1847) (C- and above) OR LING 273 Survey of Research Methods in Linguistics (2158) (C- and above) OR LING 274 Introduction to Applied Linguistics (2486) (C- and above) OR LING 275 Second Language Acquisition Theory and Research I (4473) (C- and above) |  | 3 year UG SSH World Languages, Literatures and Cultures, 4 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH | 3 year UG SSH, 4 year UG SSH                 | SEDS, SMG, SSH, SoM |
| 163 | SPA 101  | Beginning Spanish I                        | 4 | 8 |   |  | 2 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH  | Undeclared SSH                               | SSH                 |
| 164 | SPA 201  | Intermediate Spanish I                     | 4 | 8 | SPA 102 Beginning Spanish II (1128) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | Undeclared SSH                               | SEDS, SMG, SSH, SoM |
| 165 | SPA 314  | Advanced Spanish Grammar and Composition   | 3 | 6 | SPA 202 Intermediate Spanish II (1842) (C- and above)   |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | SSH  | SEDS, SMG, SoM      |

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|-----|---------|---|---|---|---|--|--|---|------------------------------|-----|--|
| 166 | WLL 110 | Introduction to Literary Studies                      | 3 | 6 |   |  |  | 2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH | Undeclared SSH               | SSH |  |
| 167 | WLL 201 | World Literature I                                    | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH | SSH |  |
| 168 | WLL 209 | Introduction to Translation Studies                   | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH | SSH |  |
| 169 | WLL 219 | Myth and Adaptation                                   | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH | SSH |  |
| 170 | WLL 240 | Introduction to the Novel                             | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH | SSH |  |
| 171 | WLL 246 | Survey of Contemporary Russian Literature and Culture | 3 | 6 | Subject "WLL" BETWEEN 100 and 199 OR WCS 150 Rhetoric and Composition (2183) (C- and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH | SSH |  |
| 172 | WLL 257 | Fan Culture in the Age of Convergence                 | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH | SSH |  |
| 173 | WLL 315 | Shakespeare   | 3 | 6 | WLL 201 World Literature I (686) (C- and above) OR WLL 211 World Literature II: from the 18th to the 20th century (492) (C- and above) OR WLL 212 Introduction to Poetry (2167) (C- and above) OR WLL 240 Introduction to the Novel (687) (C- and above) OR WLL 241 Survey of Folk Tales (466) (C- and above) OR WLL 244 Survey of Nineteenth-Century Russian Literature (1395) (C- and above) OR WLL 349 Terrible Perfection: Women in 19th-Century Russian Literature (2488) (C- and above) OR WLL 246 Survey of Contemporary Russian Literature and Culture (3604) (C- and above) OR WLL 254/SPA 254 Superstition, Magical Realism, and Horror in Hispanic Culture (1851) (C- and above) |  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures  | 2 year UG SSH, 3 year UG SSH | SSH |  |

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|---|-----------------|---|---|---|---|--|--|--|------------------------------|-----|--|
| 174   | WLL 349         | Terrible Perfection: Women in 19th-Century Russian Literature | 3 | 6 | WLL 101 Introduction to Critical Issues in the Humanities and Social Sciences (234) (C and above) OR WLL 102 /PHIL 102 Language, Experience, Culture (2481) (C and above) OR WLL 110 Introduction to Literary Studies (244) (C and above) OR WLL 111 Introduction to Theatre (2160) (C and above) OR WLL 121 Introduction to Cultural Studies (243) (C and above) OR WLL 155 Introduction to the Comic Book (3046) (C and above) OR WLL 171/ANT 175 Introduction to Linguistic Anthropology (4417) (C and above) OR WLL 201 World Literature I (686) (C and above) OR WLL 209 Introduction to Translation Studies (2178) (C and above) OR WLL 210 Migrants, Nomads and Exiles (217) (C and above) OR WLL 211 World Literature II: from the 18th to the 20th century (492) (C and above) OR WLL 212 Introduction to Poetry (2167) (C and above) OR WLL 213/SPA 211 Introduction to the Hispanic World (1030) (C and above) OR WLL 218 Renaissance in Italy and Beyond (6573) (C and above) OR WLL 219 Myth and Adaptation (2489) (C and above) OR WLL 220 Ancient World Literature (to 1650) (218) (C and above) OR WLL 221 Creative Writing/Theatre (245) (C and above) OR WLL 222 Acting: Praxis, Theory and History (3336) (C and above) OR WLL 231 Beginning and Intermediate Playwriting (1625) (C and above) OR WLL 240 Introduction to the Novel (687) (C and above) OR WLL 241 Survey of Folk Tales (466) (C and above) OR WLL 243 Western Theatre, Literature and History From Ancient Greece to 1800 (1082) (C and above) OR WLL 244 Survey of Nineteenth-Century Russian Literature (1395) (C and above) OR WLL 246 Survey of Contemporary Russian Literature and Culture (3604) (C and above) OR WLL 247 Survey of East Asian Literature (1382) (C and above) OR WLL 248 Survey of Soviet Literature and Culture (3842) (C and above) OR WLL 250 From Page to Screen (472) (C and above) OR WLL 251 Hong Kong Cinema (3337) (C and above) OR WLL 253 Western Theatre Literature and History: 1800-Present (1396) (C and above) OR WLL 254/SPA 254 Superstition, Magical Realism, and Horror in Hispanic Culture (1851) (C and above) OR WLL 255 The Comic Book in Japan and America (1849) (C and above) OR WLL 257 Fan Culture in the Age of Convergence (2487) (C and above) OR WLL 291 Theatre Practicum (2168) (C and above) |  |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures | 2 year UG SSH, 3 year UG SSH | SSH |  |
| 175   | WLL 498         | Languages, Linguistics, and Literatures Capstone I            | 3 | 6 |   |  | 4 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH |  |                              |     |  |
| <b>Languages, Literature and Linguistics, Languages, Literature and Linguistics</b> |                 |   |   |   |   |  |  |  |                              |     |  |
| 176   | SPA 351/WLL 351 | Literature and Film of the Postcolonial World                 | 3 | 6 | Subject "WLL" BETWEEN 200 and 299   |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures               | SSH  | SEDS, SMG, SoM               |     |  |
| 177   | WLL 213/SPA 211 | Introduction to the Hispanic World                            | 3 | 6 |   |  | 5 year UG SEDS, 5 year UG SSH, World Languages, Literatures and Cultures               | Undeclared SSH   | SEDS, SMG, SSH, SoM          |     |  |
| <b>Languages, Literature and Linguistics, Sociology and Anthropology</b>            |                 |   |   |   |   |  |  |  |                              |     |  |

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| 178                | ANT 385/WLL 385 | Postcolonial Theory and its Applications in Eurasia | 3 | 6 | ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above) OR SOC 101 Introduction to Sociology (508) (C- and above) OR WLL 121 Introduction to Cultural Studies (243) (C- and above) OR WLL 102 /PHIL 102 Language, Experience, Culture (2481) (C- and above) |   | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, World Languages, Literatures and Cultures  | SSH  |                     |  |
| 179                | WLL 171/ANT 175 | Introduction to Linguistic Anthropology             | 3 | 6 |   | ANT 277/WLL 271 Language and Society (1027) (C- and above)  | 2 year UG SSH World Languages, Literatures and Cultures, 3 year UG SSH World Languages, Literatures and Cultures, 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | Undeclared SSH   | SSH                 |  |
| <b>Mathematics</b> |                 |   |   |   |   |   |  |  |                     |  |
| 180                | MATH 161        | Calculus I  | 4 | 8 |   |   | 1 year UG SEDS, 1 year UG SMG, 1 year UG SSH Biological Sciences, 1 year UG SSH Chemistry, 1 year UG SSH Mathematics, 1 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH | Biological Sciences, Chemistry, Mathematics, Physics, SEDS, SMG              | SSH, SoM            |  |
| 181                | MATH 162        | Calculus II   | 4 | 8 | MATH 161 Calculus I (118) (C and above)   |   | 2 year UG SSH Chemistry, 5 year UG SEDS, 5 year UG SSH, Undeclared SSH   | Chemistry, Mathematics, Physics, SEDS, SMG                                   | SSH, SoM            |  |
| 182                | MATH 251        | Discrete Mathematics                                | 3 | 6 | MATH 161 Calculus I (118) (C and above)   |   | 2 year UG SEDS Computer Science, 2 year UG SSH Mathematics, 5 year UG SEDS, 5 year UG SSH, Undeclared SSH  | Computer Science, Mathematics  | SEDS, SMG, SSH, SoM |  |
| 183                | MATH 263        | Calculus III  | 4 | 8 | MATH 162 Calculus II (170) (C and above)  |   | 2 year UG SSH Mathematics, 2 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH, Undeclared SSH  | Mathematics, Physics   | SEDS, SMG, SSH, SoM |  |
| 184                | MATH 273        | Linear Algebra with Applications                    | 4 | 8 | MATH 161 Calculus I (118) (C and above)   | MATH 162 Calculus II (170) (C and above)  | 2 year UG SEDS Computer Science, 2 year UG SEDS Robotics and Mechatronics, 2 year UG SSH Mathematics, 2 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH, Undeclared SSH | Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics | SEDS, SMG, SSH, SoM |  |
| 185                | MATH 274        | Introduction to Differential Equations              | 3 | 6 | MATH 162 Calculus II (170) (C and above)  |   | 3 year UG SSH Chemistry, 5 year UG SEDS, 5 year UG SSH, Physics  | Chemistry, Mathematics, Robotics and Mechatronics                            | SEDS, SMG, SSH, SoM |  |
| 186                | MATH 302        | Abstract Algebra I                                  | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics   | SEDS, SMG, SSH, SoM  |                     |  |
| 187                | MATH 310        | Applied Statistical Methods                         | 3 | 6 | MATH 161 Calculus I (118) (C and above)   | MATH 321 Probability (482) (C and above)  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences   | SEDS, SMG, SSH, SoM  |                     |  |
| 188                | MATH 321        | Probability   | 3 | 6 | MATH 162 Calculus II (170) (C and above)  | ECON 211 Economic Statistics (2280) (C- and above) OR PLS 211 Quantitative Methods (221) (C- and above) | 5 year UG SEDS, 5 year UG SSH, Computer Science, Mathematics, Robotics and Mechatronics  | SEDS, SMG, SSH, SoM  |                     |  |
| 189                | MATH 322        | Mathematical Statistics                             | 3 | 6 | MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics   | SEDS, SMG, SSH, SoM  |                     |  |
| 190                | MATH 323        | Actuarial Mathematics I                             | 3 | 6 | MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above) OR (MATH 162 Calculus II (170) (C and above) AND MATH 310 Applied Statistical Methods (82) (C and above))   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics   | SEDS, SMG, SSH, SoM  |                     |  |
| 191                | MATH 351        | Numerical Methods with Applications                 | 3 | 6 | MATH 274 Introduction to Differential Equations (484) (C and above) AND MATH 263 Calculus III (81) (C and above)  | ENG 202 Numerical Methods in Engineering (5506) (C and above)   | 5 year UG SEDS, 5 year UG SSH, Mathematics   | SEDS, SMG, SSH, SoM  |                     |  |

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|----------------|----------|--|---|---|--|---|---|--|---------------------|---------------------|--|
| 192            | MATH 361 | Real Analysis I  | 3 | 6 | MATH 263 Calculus III (81) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)  |   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics                                   | SEDS, SMG, SSH, SoM |                     |  |
| 193            | MATH 411 | Linear Programming                                     | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 263 Calculus III (81) (C and above)  |   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics                                   | SEDS, SMG, SSH, SoM |                     |  |
| 194            | MATH 425 | Stochastic Processes                                   | 3 | 6 | MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)  |   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics                                   | SEDS, SMG, SSH, SoM |                     |  |
| 195            | MATH 449 | Statistical Programming                                | 3 | 6 | MATH 322 Mathematical Statistics (1165) (C and above)  |   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics                                   | SEDS, SMG, SSH, SoM |                     |  |
| 196            | MATH 471 | Nonlinear Differential Equations                       | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above)   |   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics                                   | SEDS, SMG, SSH, SoM |                     |  |
| 197            | MATH 480 | Complex Analysis                                       | 3 | 6 | MATH 263 Calculus III (81) (C and above)   |   |   | 5 year UG SEDS, 5 year UG SSH, Mathematics                                   | SEDS, SMG, SSH, SoM |                     |  |
| 198            | MATH 481 | Partial Differential Equations                         | 3 | 6 | MATH 274 Introduction to Differential Equations (484) (C and above)  | MATH 480 Complex Analysis (618) (C and above) |   | 5 year UG SEDS, 5 year UG SSH, Mathematics                                   | SEDS, SMG, SSH, SoM |                     |  |
| 199            | MATH 490 | Special Topics in Mathematics I                        | 3 | 6 |  |   |   | Instructor's Permission Required. Registration through Add Course form only! |                     |                     |  |
| 200            | MATH 498 | Directed Study in Mathematics II                       | 3 | 6 |  |   |   | Instructor's Permission Required. Registration through Add Course form only! |                     |                     |  |
| <b>Physics</b> |          |  |   |   |  |   |   |  |                     |                     |  |
| 201            | PHYS 161 | Physics I for Scientists and Engineers with Laboratory | 4 | 8 |  | MATH 161 Calculus I (118) (C and above)       | PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above) | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM                           |                     |                     |  |
| 202            | PHYS 201 | Introductory Astronomy I                               | 3 | 6 |  |   |   | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG, SSH, SoM                           |                     |                     |  |
| 203            | PHYS 221 | Classical Mechanics I                                  | 3 | 6 | (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above)) AND MATH 273 Linear Algebra with Applications (84) (C- and above)  |   |   | 5 year UG SEDS, 5 year UG SSH, Physics, Undeclared SSH                       |                     | SEDS, SMG, SSH, SoM |  |
| 204            | PHYS 261 | Modern Physics with laboratory                         | 4 | 8 | MATH 162 Calculus II (170) (C- and above) AND (PHYS 152 Introductory Physics II with Lab (1176) (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above)) |   |   | 5 year UG SEDS, 5 year UG SSH, Physics, Undeclared SSH                       | SEDS, SMG, SSH, SoM |                     |  |
| 205            | PHYS 291 | Introduction to Quantum Technologies                   | 3 | 6 |  |   |   | 5 year UG SEDS, 5 year UG SSH, Physics                                       | SEDS, SMG, SSH, SoM |                     |  |
| 206            | PHYS 315 | Mathematical Methods of Physics                        | 3 | 6 | (PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)) AND MATH 274 Introduction to Differential Equations (484) (C- and above)   |   |   | 5 year UG SEDS, 5 year UG SSH, Physics                                       | SEDS, SMG, SSH, SoM |                     |  |

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| 207  | PHYS 361 | Classical Electrodynamics I   | 3 | 6 |  | PHYS 315 Mathematical Methods of Physics (653) (D and above) OR PHYS 411 Advanced Mathematical Physics (3142) (D and above)  |  | 5 year UG SEDS, 5 year UG SSH, Physics  | SEDS, SMG, SSH, SoM                                  |                     |  |
| 208  | PHYS 395 | Research Methods  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, Physics  | SEDS, SMG, SSH, SoM                                  |                     |  |
| 209  | PHYS 452 | Quantum Mechanics II  | 3 | 6 |  | PHYS 451 Quantum Mechanics I (1415) (C- and above)   |  | 5 year UG SEDS, 5 year UG SSH, Physics  | SEDS, SMG, SSH, SoM                                  |                     |  |
| 210  | PHYS 473 | Introduction to Solid State Physics                                   | 4 | 8 |  | PHYS 261 Modern Physics with laboratory (125) (C- and above) OR CHEM 331 Physical Chemistry I (634) (C- and above) OR MAE 301 Engineering Thermodynamics (5927) (C- and above) OR CHME 201 Chemical Engineering Thermodynamics (5007) (C- and above) OR ELCE 204 Solid State Devices (5508) (C- and above) |  | 5 year UG SEDS, 5 year UG SSH, Physics  | SEDS, SMG, SSH, SoM                                  |                     |  |
| 211  | PHYS 491 | Directed Study of Advanced Physics Topics                             | 3 | 6 |  |  |  | Instructor's Permission Required.<br>Registration through Add Course form only! |  |                     |  |
| 212  | PHYS 498 | Honors Thesis Research  | 0 | 0 |  |  |  | 4 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH                            |  |                     |  |
| <b>Political Science and International Relations</b> |          |   |   |   |  |  |  |   |  |                     |  |
| 213  | PLS 100  | Introduction to the Politics of Central Asia                          | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SSH  | SEDS, SMG, SoM                                       |                     |  |
| 214  | PLS 101  | Introduction to Political Science                                     | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG  | Biological Sciences, Chemistry, Mathematics, Physics | SSH                 |  |
| 215  | PLS 102  | The Political Challenges of Technologies and Science: An Introduction | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, SEDS, SMG  | Biological Sciences, Chemistry, Mathematics, Physics | SSH                 |  |
| 216  | PLS 120  | Introduction to Political Theory                                      | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations    | Undeclared SEDS, Undeclared SMG, Undeclared SSH      | SEDS, SMG, SSH, SoM |  |
| 217  | PLS 140  | Introduction to Comparative Politics                                  | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations    | Undeclared SEDS, Undeclared SMG, Undeclared SSH      | SEDS, SMG, SSH, SoM |  |
| 218  | PLS 150  | Introduction to International Relations                               | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations    | Undeclared SEDS, Undeclared SMG, Undeclared SSH      | SEDS, SMG, SSH, SoM |  |
| 219  | PLS 210  | Political Science Research Methods                                    | 3 | 6 |  |  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations    | SEDS, SMG, SSH, SoM                                  |                     |  |
| 220  | PLS 211  | Quantitative Methods  | 3 | 6 |  |  | ECON 211 Economic Statistics (2280) (C- and above) | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations    | SEDS, SMG, SSH, SoM                                  |                     |  |
| 221  | PLS 312  | Public Opinion and Elections  | 3 | 6 |  | PLS 211 Quantitative Methods (221) (C- and above) OR ECON 211 Economic Statistics (2280) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations    | SEDS, SMG, SSH, SoM                                  |                     |  |
| 222  | PLS 338  | U.S. Government and Politics  | 3 | 6 |  | (PLS 140 Introduction to Comparative Politics (223) (C- and above) OR PLS 101 Introduction to Political Science (513) (C- and above)) AND PLS 210 Political Science Research Methods (129) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations    | SEDS, SMG, SSH, SoM                                  |                     |  |
| 223  | PLS 341  | Politics of Development   | 3 | 6 |  | PLS 210 Political Science Research Methods (129) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations    | SEDS, SMG, SSH, SoM                                  |                     |  |

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| 224                               | PLS 351 | International Political Economy                                 | 3 | 6 | PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above) |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations                            | SEDS, SMG, SSH, SoM |                     |  |
| 225                               | PLS 361 | Memory Politics in East Asia                                    | 3 | 6 |  |  | 5 year UG SEDS, 5 year UG SSH, SSH  | SEDS, SMG, SoM      |                     |  |
| 226                               | PLS 392 | Politics of China   | 3 | 6 | PLS 210 Political Science Research Methods (129) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations                            | SEDS, SMG, SSH, SoM |                     |  |
| 227                               | 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.<br>Registration through Add Course form only!                         |                     |                     |  |
| 228                               | PLS 412 | Scientific Research in International Relations                  | 3 | 6 | PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above) AND PLS 211 Quantitative Methods (221) (C- and above) |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations                            | SEDS, SMG, SSH, SoM |                     |  |
| 229                               | PLS 415 | Maximum Likelihood Models                                       | 3 | 6 | PLS 210 Political Science Research Methods (129) (C- and above) OR PLS 211 Quantitative Methods (221) (C- and above)   |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations                            | SEDS, SMG, SSH, SoM |                     |  |
| 230                               | PLS 422 | Just War Theory   | 3 | 6 | PLS 120 Introduction to Political Theory (512) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations                            | SEDS, SMG, SSH, SoM |                     |  |
| 231                               | PLS 448 | Comparative Electoral System                                    | 3 | 6 | PLS 140 Introduction to Comparative Politics (223) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations                            | SEDS, SMG, SSH, SoM |                     |  |
| 232                               | PLS 449 | Politics and Governance of the Gulf                             | 3 | 6 | PLS 140 Introduction to Comparative Politics (223) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)  |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations                            | SEDS, SMG, SSH, SoM |                     |  |
| 233                               | PLS 458 | International Organization                                      | 3 | 6 | PLS 150 Introduction to International Relations (511) (C- and above) AND PLS 210 Political Science Research Methods (129) (C- and above)   |  | 5 year UG SEDS, 5 year UG SSH, Political Science and International Relations                            | SEDS, SMG, SSH, SoM |                     |  |
| 234                               | 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.<br>Registration through Add Course form only!                         |                     |                     |  |
| <b>SSH</b>                        |         |   |   |   |  |  |   |                     |                     |  |
| 235                               | SSH 301 | School of Sciences and Humanities Internship: Second Experience | 3 | 6 |  |  | Instructor's Permission Required.<br>Registration through Add Course form only!                         |                     |                     |  |
| <b>Sociology and Anthropology</b> |         |   |   |   |  |  |   |                     |                     |  |
| 236                               | ANT 140 | World Prehistory  | 3 | 6 |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH | 2 year UG SSH       | SEDS, SMG, SSH, SoM |  |
| 237                               | ANT 262 | Monkey business: Primate Society and Behavior                   | 3 | 6 |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH | 2 year UG SSH       | SEDS, SMG, SSH, SoM |  |
| 238                               | ANT 280 | Introduction to Medical Anthropology                            | 3 | 6 |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH | 2 year UG SSH       | SEDS, SMG, SSH, SoM |  |
| 239                               | ANT 333 | Anthropology of Space   | 3 | 6 |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology  | SSH                 | SEDS, SMG, SoM      |  |
| 240                               | ANT 399 | Special Topics in Anthropology                                  | 3 | 6 |  |  | Instructor's Permission Required.<br>Registration through Add Course form only!                         |                     |                     |  |
| 241                               | ANT 400 | Research Assistance in Anthropology                             | 1 | 2 |  |  | Instructor's Permission Required.<br>Registration through Add Course form only!                         |                     |                     |  |
| 242                               | ANT 421 | Sport and Construction of Identity                              | 3 | 6 |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology  | SSH                 | SEDS, SMG, SoM      |  |
| 243                               | ANT 498 | Capstone Seminar I  | 3 | 6 |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology   |                     |                     |  |



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| 244   | SOC 101         | Introduction to Sociology                                 | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, SoM, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH | 2 year UG SSH, 3 year UG SSH Biological Sciences               | SEDS, SMG, SSH      |  |
| 245   | SOC 201         | Social Science Research Methods                           | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | 2 year UG SSH, Undeclared SEDS, Undeclared SMG, Undeclared SSH | SEDS, SMG, SSH, SoM |  |
| 246   | SOC 203         | Quantitative Methods in Sociology                         | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | SSH  | SEDS, SMG, SoM      |  |
| 247   | SOC 213         | Work and Society  | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | SSH  | SEDS, SMG, SoM      |  |
| 248   | SOC 215         | Sociology of Race and Ethnicity                           | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | SSH  | SEDS, SMG, SoM      |  |
| 249   | SOC 221         | International Migration                                   | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | SSH  | SEDS, SMG, SoM      |  |
| 250   | SOC 225         | Environment and Society                                   | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | SSH  | SEDS, SMG, SoM      |  |
| 251   | SOC 301         | Classical Sociological Theory                             | 3 | 6 | SOC 101 Introduction to Sociology (508) (C- and above) OR SOC 115 Global Social Problems (1032) (C- and above) OR ANT 110 Introduction to Sociocultural Anthropology (501) (C- and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | SSH  | SEDS, SMG, SoM      |  |
| 252   | SOC 317         | Economy and Society                                       | 3 | 6 | SOC 101 Introduction to Sociology (508) (C- and above) OR Subject "SOC" BETWEEN 200 and 299 OR Subject "SOC" BETWEEN 200 and 299 OR ECON 102 Introduction to Macroeconomics (503) (C- and above) OR PLS 120 Introduction to Political Theory (512) (C- and above) OR PLS 150 Introduction to International Relations (511) (C- and above) |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology   | SSH  | SEDS, SMG, SoM      |  |
| 253   | SOC 322         | Digital Media Research Methods                            | 3 | 6 | SOC 201 Social Science Research Methods (1341) (C- and above) OR SOC 203 Quantitative Methods in Sociology (1377) (C- and above) OR ECON 211 Economic Statistics (2280) (C- and above) OR PLS 210 Political Science Research Methods (129) (C- and above)   |  |  |  |  |                     |  |
| 254   | SOC 400         | Research Assistance in Sociology                          | 1 | 2 |   |  |  | Instructor's Permission Required. Registration through Add Course form only!                                 |  |                     |  |
| 255   | SOC 498         | Capstone Seminar Part I                                   | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Sociology   |  |                     |  |
| <b>Sociology and Anthropology, Sociology and Anthropology</b> |                 |   |   |   |   |  |  |  |  |                     |  |
| 256   | ANT 281/SOC 281 | Health, Illness and Society                               | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Anthropology, Sociology, Undeclared SEDS, Undeclared SMG, Undeclared SSH      | 2 year UG SSH  | SEDS, SMG, SSH, SoM |  |
| <b>SEDS</b>   |                 |   |   |   |   |  |  |  |  |                     |  |
| <b>Chemical and Materials Engineering</b>                     |                 |   |   |   |   |  |  |  |  |                     |  |
| 257   | CHME 200        | Basic Principles and Calculations in Chemical Engineering | 3 | 6 |   |  |  | 2 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH                             | Chemical Engineering, Chemical and Materials Engineering       |                     |  |
| 258   | CHME 201        | Chemical Engineering Thermodynamics                       | 3 | 6 |   |  |  | 2 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH                             | Chemical Engineering, Chemical and Materials Engineering       |                     |  |
| 259   | CHME 222        | Inorganic and Analytical Chemistry                        | 3 | 6 |   |  |  | 2 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH                             | Chemical Engineering, Chemical and Materials Engineering       |                     |  |
| 260   | CHME 300        | Heat and Mass Transfer                                    | 3 | 6 |   |  |  | 3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH                             | Chemical Engineering, Chemical and Materials Engineering       |                     |  |
| 261   | CHME 301        | Applied Mathematics for Process Design                    | 3 | 6 |   |  |  | 3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH                             | Chemical Engineering, Chemical and Materials Engineering       |                     |  |

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| 262  | CHME 302 | Instrumental Methods of Analysis for Engineers       | 3 | 6 |  |  |  | 3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH  | Chemical Engineering, Chemical and Materials Engineering   |  |  |
| 263  | CHME 350 | Soft Matter, Foods and Colloids                      | 3 | 6 |  |  |  | 3 year UG SEDS Chemical Engineering, 3 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH | Chemical and Materials Engineering   |  |  |
| 264  | CHME 351 | Environment and Development                          | 3 | 6 |  |  |  | 3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH  | Chemical Engineering, Chemical and Materials Engineering   |  |  |
| 265  | CHME 461 | Powder technology                                    | 3 | 6 |  |  |  | 3 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH  | Chemical Engineering, Chemical and Materials Engineering   |  |  |
| 266  | ECHE 418 | Capstone project 1                                   | 3 | 6 | ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)  |  |  | Registration by School Admin only.  |  |  |  |
| 267  | ECHE 419 | Advanced Process Simulation                          | 3 | 6 | ECHE 323 Computational methods in Chemical Engineering-I (1272) (D and above)  |  |  | 4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH   | Chemical and Materials Engineering   |  |  |
| 268  | ECHE 478 | Electrochemical Engineering and Corrosion Protection | 3 | 6 | ECHE 222 Chemistry I (731) (D and above)   |  |  | 4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH   | Chemical and Materials Engineering   |  |  |
| 269  | ECHE 484 | Multiphase Systems                                   | 3 | 6 | ECHE 319 Chemical Engineering Thermodynamics (1218) (D and above) AND ECHE 270 Transport Phenomena-I (735) (D and above) |  |  | 4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH   | Chemical and Materials Engineering   |  |  |
| 270  | ECHE 486 | Chemical Process Safety                              | 3 | 6 |  |  |  | Registration by School Admin only.  |  |  |  |
| 271  | ECHE 488 | Atmospheric Chemistry and Physics                    | 3 | 6 |  |  |  | 4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS, 5 year UG SSH   | Chemical and Materials Engineering   |  |  |
| <b>Civil and Environmental Engineering</b> |          |  |   |   |  |  |  |   |  |  |  |
| 272  | CEE 200  | Structural Mechanics I                               | 3 | 6 |  |  |  | 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SMG Mining Engineering, 2 year UG SMG Petroleum Engineering, 5 year UG SEDS, 5 year UG SSH | Civil Engineering, Civil and Environmental Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering |  |  |
| 273  | CEE 201  | Environmental Chemistry                              | 3 | 6 |  |  |  | 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH  | Civil Engineering, Civil and Environmental Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering |  |  |
| 274  | CEE 204  | Civil Engineering CAD and Surveying                  | 3 | 6 |  |  |  | 2 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH   | Civil Engineering, Civil and Environmental Engineering   |  |  |
| 275  | CEE 300  | Structural Design - Concrete                         | 3 | 6 | CEE 203 Structural Analysis (5500) (D and above)   |  |  | 3 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH   | Civil Engineering, Civil and Environmental Engineering   |  |  |
| 276  | CEE 302  | Geotechnical Engineering                             | 3 | 6 |  |  |  | 3 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH   | Civil Engineering, Civil and Environmental Engineering   |  |  |
| 277  | CEE 306  | Civil Engineering Materials                          | 3 | 6 | ENG 102 Engineering Materials I (4708) (D and above)   |  |  | 3 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH   | Civil Engineering, Civil and Environmental Engineering   |  |  |
| 278  | CEE 351  | Application of Geomatics in Civil Engineering        | 3 | 6 | CEE 204 Civil Engineering CAD and Surveying (5002) (D and above) OR ECE 215 Surveying (3153) (D and above)               |  |  | 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH   | Civil Engineering, Civil and Environmental Engineering   |  |  |

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| 279                     | CEE 454  | Foundation Engineering                            | 3 | 6 | ECE 306 Geotechnical Design (1043) (D and above) OR CEE 303 Geotechnical Design (6158) (D and above)  |  | 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH | Civil Engineering, Civil and Environmental Engineering   |     |  |
| 280                     | ECE 303  | Construction Management and Practice              | 3 | 6 | BENG 148 Engineering Practice (1073) (D and above)  |  | Registration by School Admin only.  |  |     |  |
| 281                     | ECE 401  | Capstone Project 1                                | 3 | 6 |   |  | Registration by School Admin only.  |  |     |  |
| 282                     | ECE 416  | Highway Engineering                               | 3 | 6 | ECE 302 Civil Engineering Materials (1040) (D and above)  |  | Registration by School Admin only.  |  |     |  |
| 283                     | ECE 421  | Behaviour and Design of Structural System         | 3 | 6 | (ECE 318 Structural Design - Concrete (3709) (D and above) OR ECE 314 Structural Engineering Applications I (1042) (D and above)) AND (ECE 319 Structural Design - Steel (4038) (D and above) OR ECE 315 Structural Engineering Applications II (1041) (D and above)) |  | 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH | Civil Engineering, Civil and Environmental Engineering   |     |  |
| 284                     | ECE 423  | Structure and Properties of Concrete Materials    | 3 | 6 |   |  | 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH | Civil Engineering, Civil and Environmental Engineering   |     |  |
| 285                     | ECE 481  | Individual Research Projects in Civil Engineering | 3 | 6 |   |  | 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH | Civil Engineering, Civil and Environmental Engineering   |     |  |
| 286                     | ECE 482  | Solid and Hazardous Waste Management              | 3 | 6 | ECE 405 Environmental Engineering (1265) (C- and above)   |  | 4 year UG SEDS Civil Engineering, 4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS, 5 year UG SSH | Civil Engineering, Civil and Environmental Engineering   |     |  |
| <b>Computer Science</b> |          |   |   |   |   |  |   |  |     |  |
| 287                     | CSCI 111 | Web Programming and Problem Solving               | 3 | 6 |   | CSCI 101 Introduction to Computational Sciences (147) (D and above) OR CSCI 115 Programming Fundamentals (5257) (D and above) OR CSCI 151 Programming for Scientists and Engineers (192) (D and above) OR ENG 101 Programming for Engineers (4517) (D and above)           | 5 year UG SEDS, 5 year UG SSH, SSH  | Chemical Engineering, Chemical and Materials Engineering, Civil Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering, Mechanical Engineering, Mechanical and Aerospace Engineering, Robotics and Mechatronics, Undeclared SEDS |     |  |
| 288                     | CSCI 115 | Programming Fundamentals                          | 4 | 8 |   | CSCI 101 Introduction to Computational Sciences (147) (D and above) OR CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 151 Programming for Scientists and Engineers (192) (D and above) OR ENG 101 Programming for Engineers (4517) (D and above) | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry   | Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH   | SSH |  |

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|-----|-----------|--|---|----|---|---|---|---|-----|--|
| 289 | CSCI 151  | Programming for Scientists and Engineers | 4 | 8  |   | CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 115 Programming Fundamentals (5257) (D and above) OR ENG 101 Programming for Engineers (4517) (B- and above) | 1 year UG SEDS Computer Science, 1 year UG SEDS Robotics and Mechatronics, 1 year UG SSH Mathematics, 1 year UG SSH Physics, 5 year UG SEDS, 5 year UG SSH, Undeclared SEDS       | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SSH | SSH |  |
| 290 | CSCI 231  | Computer Systems and Organization        | 3 | 6  | CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR ENG 100 Introduction to Engineering (4518) (B- and above) |   | 2 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH  | Computer Science  |     |  |
| 291 | CSCI 235  | Programming Languages                    | 4 | 8  | CSCI 152 Performance and Data Structures (489) (C- and above)   |   | 2 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH  | Computer Science  |     |  |
| 292 | CSCI 262  | Software Project Management              | 3 | 6  | CSCI 152 Performance and Data Structures (489) (C- and above)   |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH | SEDS, SSH   |     |  |
| 293 | CSCI 299  | Internship I                             | 3 | 6  |   |   |   |   |     |  |
| 294 | CSCI 341  | Database Systems                         | 3 | 6  | CSCI 152 Performance and Data Structures (489) (C- and above)   |   | 3 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH  | Computer Science  |     |  |
| 295 | CSCI 355  | Compiler Construction                    | 3 | 6  | CSCI 235 Programming Languages (638) (C and above) AND CSCI 272 Formal Languages (4689) (C and above)                               |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH | SSH   |     |  |
| 296 | CSCI 361  | Software Engineering                     | 3 | 6  | CSCI 152 Performance and Data Structures (489) (C- and above)   |   | 3 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH  | Computer Science  |     |  |
| 297 | CSCI 371  | Algorithmic Problem Solving              | 3 | 6  | CSCI 270 Algorithms (648) (B and above)   |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH | SSH   |     |  |
| 298 | CSCI 390  | Artificial Intelligence                  | 3 | 6  | CSCI 152 Performance and Data Structures (489) (C- and above)   |   | 3 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH  | Computer Science  |     |  |
| 299 | CSCI 398  | Directed Study                           | 3 | 6  |   |   | Instructor's Permission Required. Registration through Add Course form only!  |   |     |  |
| 300 | CSCI 399  | Internship II                            | 3 | 6  |   |   | Instructor's Permission Required. Registration through Add Course form only!  |   |     |  |
| 301 | CSCI 399F | Internship II - F                        | 6 | 12 |   |   | Instructor's Permission Required. Registration through Add Course form only!  |   |     |  |
| 302 | CSCI 408  | Senior Project I                         | 3 | 6  |   |   | 4 year UG SEDS Computer Science, 5 year UG SEDS, 5 year UG SSH  |   |     |  |
| 303 | CSCI 434  | Information Security                     | 3 | 6  |   | CSCI 333 Computer Networks (1145) (D and above)   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH | SSH   |     |  |
| 304 | CSCI 490  | Brain Computer Interface                 | 3 | 6  | MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above)                           |   | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH | SEDS, SSH   |     |  |

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| 305   | CSCI 494 | Deep Learning                                       | 3 | 6 | CSCI 390 Artificial Intelligence (643) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Robotics and Mechatronics, Undeclared SEDS, Undeclared SMG, Undeclared SSH | SSH                                  |  |  |
| <b>Electrical and Computer Engineering</b>  |          |   |   |   |   |  |  |   |                                      |  |  |
| 306   | EEE 437  | Capstone Project 1                                  | 3 | 6 |   |  |  | Registration by School Admin only.  |                                      |  |  |
| 307   | EEE 448  | Power Transmission and Distribution plants          | 3 | 6 |   |  |  | 4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 308   | EEE 450  | RF and Microwave Circuit Design                     | 3 | 6 |   |  |  | 4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 309   | EEE 451  | High Voltage Engineering                            | 3 | 6 |   |  |  | 4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 310   | EEE 452  | Power Systems Protection                            | 3 | 6 |   |  |  | 4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 311   | EEE 490  | Introduction to Big Data                            | 3 | 6 |   |  |  | 4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 312   | EEE 493  | Industry 4.0  | 3 | 6 |   |  |  | Registration by School Admin only.  |                                      |  |  |
| 313   | EEE 494  | Modern Characterizations for Semiconductor Industry | 3 | 6 |   |  |  | 4 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 314   | ELCE 200 | Introduction to Electrical Circuits                 | 3 | 6 | MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)   |  |  | 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 315   | ELCE 202 | Digital Logic Design                                | 3 | 6 | MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) AND ENG 101 Programming for Engineers (4517) (C- and above) |  |  | 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 316   | ELCE 203 | Signals and Systems                                 | 3 | 6 | MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)   |  |  | 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 317   | ELCE 301 | Electronic Circuits                                 | 3 | 6 | ELCE 201 Circuit Theory (5507) (C- and above)   |  |  | 3 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 318   | ELCE 304 | Computer Networks                                   | 3 | 6 | ENG 101 Programming for Engineers (4517) (C- and above)   |  |  | 3 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 319   | ELCE 306 | Linear Control Theory                               | 3 | 6 | ELCE 203 Signals and Systems (4993) (C- and above)  |  |  | 3 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| 320   | ELCE 307 | Digital Signal Processing                           | 3 | 6 | ELCE 203 Signals and Systems (4993) (C- and above)  |  |  | 3 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS, 5 year UG SSH   | Electrical and Computer Engineering  |  |  |
| <b>Mechanical and Aerospace Engineering</b> |          |   |   |   |   |  |  |   |                                      |  |  |
| 321   | EME 358  | Heat Transfer                                       | 3 | 6 | BENG 226 Engineering Thermodynamics (1553) (D and above) AND EME 275 Fluid Mechanics I (1988) (D and above)   |  |  | Instructor's Permission Required. Registration through Add Course form only!  |                                      |  |  |
| 322   | EME 377  | Mechanical Systems Design                           | 3 | 6 | EME 361 Machine Design (1051) (D and above)   |  |  | 5 year UG SEDS  |                                      |  |  |
| 323   | EME 410  | Aerodynamics  | 3 | 6 | EME 357 Fluid Mechanics II (1280) (D and above)   |  |  | Registration by School Admin only.  |                                      |  |  |
| 324   | EME 413  | Computer Aided Geometric Design                     | 3 | 6 | EME 253 Computer Aided Engineering (1050) (C- and above)  |  |  | 4 year UG SEDS Mechanical Engineering, 5 year UG SEDS, 5 year UG SSH  | Mechanical and Aerospace Engineering |  |  |

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|-----|---------|---|---|---|---|--|--|---|--|--|--|--|
| 325 | EME 451 | Capstone Project 1  | 3 | 6 |   |  |  | Registration by School Admin only.  |  |  |  |  |
| 326 | EME 467 | Vehicle Propulsion Systems  | 3 | 6 |   |  |  | 4 year UG SEDS Mechanical Engineering, 5 year UG SEDS, 5 year UG SSH  | Mechanical and Aerospace Engineering   |  |  |  |
| 327 | EME 490 | Multiphase Systems  | 3 | 6 | EME 275 Fluid Mechanics I (1988) (C- and above) |  |  | 4 year UG SEDS Mechanical Engineering, 5 year UG SEDS, 5 year UG SSH  | Mechanical and Aerospace Engineering   |  |  |  |
| 328 | ENG 100 | Introduction to Engineering   | 3 | 6 |   |  |  | 1 year UG SEDS Chemical and Materials Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering, 1 year UG SMG, 5 year UG SEDS, 5 year UG SSH, Undeclared SEDS | Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Geology, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering         |  |  |  |
| 329 | ENG 101 | Programming for Engineers   | 3 | 6 |   |  | CSCI 151 Programming for Scientists and Engineers (192) (F) OR CSCI 111 Web Programming and Problem Solving (110) (F) OR CSCI 115 Programming Fundamentals (5257) (F) OR CSCI 152 Performance and Data Structures (489) (F) OR CSCI 408 Senior Project I (1481) (F) OR CSCI 409 Senior Project II (1483) (F) | 1 year UG SEDS Chemical and Materials Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH, Undeclared SEDS                | Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering   |  |  |  |
| 330 | ENG 200 | Engineering Mathematics III (Differential Equations and Linear Algebra) | 3 | 6 | MATH 162 Calculus II (170) (C and above)        |  |  | 5 year UG SEDS, 5 year UG SSH   | 2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering | Chemical Engineering, Chemical and Materials Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Electrical and Electronic Engineering, Geology, Mechanical Engineering, Mechanical and Aerospace Engineering, Mining Engineering, Petroleum Engineering, SMG, Undeclared SMG |  |  |
| 331 | MAE 201 | Computer Aided Design   | 3 | 6 |   |  |  | 2 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH  | Mechanical Engineering, Mechanical and Aerospace Engineering   |  |  |  |

|                                  |          |   |   |   |   |  |  |  |   |  |  |
|----------------------------------|----------|---|---|---|---|--|--|--|---|--|--|
| 332                              | MAE 206  | Engineering Dynamics I                            | 3 | 6 |   |  |  | Instructor's Permission Required. Registration through Add Course form only!   |   |  |  |
| 333                              | MAE 300  | Fluid Mechanics I                                 | 3 | 6 | PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (D and above)   |  |  | 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH | Civil and Environmental Engineering, Mechanical and Aerospace Engineering   |  |  |
| 334                              | MAE 301  | Engineering Thermodynamics                        | 3 | 6 |   |  |  | 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH   | Mechanical and Aerospace Engineering  |  |  |
| 335                              | MAE 302  | Machine Elements Design                           | 3 | 6 | MAE 205 Material and Manufacturing I (5534) (D and above)   |  |  | 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH   | Mechanical and Aerospace Engineering  |  |  |
| 336                              | MAE 303  | Control Systems                                   | 3 | 6 |   |  |  | 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS, 5 year UG SSH   | Mechanical and Aerospace Engineering  |  |  |
| 337                              | MAE 457  | Feasibility Analysis of Clean Energy Technologies | 3 | 6 |   |  |  | 4 year UG SEDS Mechanical Engineering, 5 year UG SEDS, 5 year UG SSH   | Mechanical and Aerospace Engineering  |  |  |
| <b>Robotics and Mechatronics</b> |          |   |   |   |   |  |  |  |   |  |  |
| 338                              | ROBT 201 | Mechanics: Statics and Dynamics                   | 3 | 6 | MATH 162 Calculus II (170) (C- and above) AND (PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C- and above) OR PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above))   |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics, SMG  | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |
| 339                              | ROBT 203 | Electrical and Electronic Circuits I with Lab     | 4 | 8 | MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above) OR (PHYS 141 Physics I for non-majors with Lab (1437) (C- and above) AND PHYS 142 Physics II for non-majors with Lab (1438) (C- and above))) |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics   | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |
| 340                              | ROBT 205 | Signals and Sensing with Lab                      | 4 | 8 | MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above))   |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics   | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |
| 341                              | ROBT 301 | Mechanical Design I with CAD Laboratory           | 4 | 8 | ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above)   |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics   | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |
| 342                              | ROBT 303 | Linear Control Theory with Lab                    | 4 | 8 | ROBT 202 System Dynamics and Modeling (68) (C- and above) AND MATH 274 Introduction to Differential Equations (484) (C- and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics   | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |
| 343                              | ROBT 307 | Power Electronics                                 | 3 | 6 | ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics   | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |
| 344                              | ROBT 308 | Industrial Automation                             | 3 | 6 |   |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics   | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |

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|-----|----------|---|---|---|--|--|--|--|---|--|--|
| 345 | ROBT 403 | Robotics II: Control, Modeling and Learning with Laboratory | 4 | 8 | ROBT 303 Linear Control Theory with Lab (623) (C and above) AND ROBT 312 Robotics I: Kinematics and Dynamics (5263) (C and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |
| 346 | ROBT 407 | Statistical Methods and Machine Learning                    | 3 | 6 | MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above) AND CSCI 152 Performance and Data Structures (489) (C and above) |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |
| 347 | ROBT 414 | Human-Robot Interaction                                     | 3 | 6 | CSCI 152 Performance and Data Structures (489) (C- and above)  |  |  | 5 year UG SEDS, 5 year UG SSH, Robotics and Mechatronics | Biological Sciences, Chemistry, Computer Science, Mathematics, Physics, Undeclared SEDS, Undeclared SMG, Undeclared SSH |  |  |