

**Course Requirements and Registration Priorities  
School of Science and Technology, Fall 2016**

| #                         | Abbr     | Title                                 | Cr(US) | Cr(ECTS) | PreRequisite   | CoRequisite | AntiRequisite   | 1st priority registration | 2nd priority registration | 3rd priority registration | 4th priority registration |
|---------------------------|----------|---------------------------------------|--------|----------|--|-------------|---|---------------------------|---------------------------|---------------------------|---------------------------|
| <b>SST</b>                |          |                                       |        |          |  |             |   |                           |                           |                           |                           |
| <b>Biological Science</b> |          |                                       |        |          |  |             |   |                           |                           |                           |                           |
| 1                         | BIOL 101 | Biology for non-Science majors        | 3      | 6        |  |             |   |                           |                           |                           |                           |
| 2                         | BIOL 110 | Modern Biology I with Lab             | 4      | 8        |  |             | BIOL 110 Modern Biology I (C- and above)<br>OR BIOL 110 Modern Biology I Lab (C- and above) | 1 year SST                | SST                       | SHSS                      |                           |
| 3                         | BIOL 210 | Introduction to Microbiology with Lab | 4      | 8        | ((BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above)) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND (BIOL 120 Modern Biology II with Lab (C- and above) OR (BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above))) |             |   | Biological Sciences       | SST                       | SHSS                      |                           |
| 4                         | BIOL 230 | Human Anatomy and Physiology I        | 4      | 8        | ((BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above)) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND ((BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above)) OR BIOL 120 Modern Biology II with Lab (C- and above)) |             |   | Biological Sciences       | SST                       | SHSS                      |                           |

|   |          |   |   |   |   |  |  |                     |     |      |  |
|---|----------|---|---|---|---|--|--|---------------------|-----|------|--|
| 5 | BIOL 320 | Developmental Biology with Lab          | 4 | 8 | ((BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above)) OR PREM 110 Pre-med Biology I with lab (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above)) AND (BIOL 120 Modern Biology II with Lab (C- and above) OR (BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above))) AND ((BIOL 220 Molecular Biology of Cell (C- and above) AND BIOL 220 Molecular Biology of Cell Lab (C- and above)) OR BIOL 220 Molecular Biology of Cell with Lab (C- and above) OR BIOL 231 Human Anatomy and Physiology II (C- and above)) |  |  | Biological Sciences | SST | SHSS |  |
| 6 | BIOL 330 | Introduction to Immunology              | 3 | 6 | (BIOL 110 Modern Biology I (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND (BIOL 120 Modern Biology II (C- and above) OR BIOL 120 Modern Biology II with Lab (C- and above)) AND ((BIOL 220 Molecular Biology of Cell (C- and above) OR BIOL 220 Molecular Biology of Cell with Lab (C- and above)) OR BIOL 210 Introduction to Microbiology (C- and above) OR BIOL 231 Human Anatomy and Physiology II (C- and above))  |  |  | Biological Sciences | SST | SHSS |  |
| 7 | BIOL 340 | Introduction to Bioinformatics with Lab | 4 | 8 | ((BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above)) OR PREM 110 Pre-med Biology I with lab (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above)) AND (BIOL 120 Modern Biology II with Lab (C- and above) OR (BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above))) AND ((BIOL 220 Molecular Biology of Cell (C- and above) AND BIOL 220 Molecular Biology of Cell Lab (C- and above)) OR BIOL 220 Molecular Biology of Cell with Lab (C- and above) OR BIOL 231 Human Anatomy and Physiology II (C- and above)) |  |  | Biological Sciences | SST | SHSS |  |

|                  |          |   |   |    |  |  |  |                       |     |      |  |
|------------------|----------|---|---|----|--|--|--|-----------------------|-----|------|--|
| 8                | BIOL 352 | Biology of Cancer                           | 3 | 6  | (BIOL 110 Modern Biology I (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND (BIOL 120 Modern Biology II (C- and above) OR BIOL 120 Modern Biology II with Lab (C- and above)) AND (BIOL 220 Molecular Biology of Cell (C- and above) OR BIOL 220 Molecular Biology of Cell with Lab (C- and above) OR BIOL 231 Human Anatomy and Physiology II (C- and above)) |  |  | Biological Sciences   | SST | SHSS |  |
| 9                | BIOL 355 | Jr. Research Seminar                        | 3 | 6  | (BIOL 120 Modern Biology II with Lab (C- and above) OR (BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above))) AND (BIOL 231 Human Anatomy and Physiology II (C- and above) OR BIOL 220 Molecular Biology of Cell with Lab (C- and above) OR (BIOL 220 Molecular Biology of Cell (C- and above) AND BIOL 220 Molecular Biology of Cell Lab (C- and above)))   |  |  | Biological Sciences   | SST | SHSS |  |
| 10               | BIOL 399 | Biology Internship - 2B                     | 3 | 6  |  |  |  | Through Add form only |     |      |  |
| 11               | BIOL 455 | Biotechnology                               | 3 | 6  | BIOL 220 Molecular Biology of Cell with Lab (C- and above)   |  |  | Biological Sciences   | SST | SHSS |  |
| 12               | BIOL 470 | Advanced Cell Biology                       | 3 | 6  | BIOL 220 Molecular Biology of Cell with Lab (C- and above) AND BIOL 341 Biochemistry I (C- and above)  |  |  | Biological Sciences   | SST | SHSS |  |
| 13               | BIOL 490 | Senior Honors Thesis                        | 4 | 8  |  |  |  | Through Add form only |     |      |  |
| 14               | BIOL 501 | Fundamentals of Biological Sciences         | 3 | 6  |  |  |  | Through Add form only |     |      |  |
| 15               | BIOL 511 | Critical Appraisal of Scientific Literature | 3 | 6  |  |  |  | Through Add form only |     |      |  |
| 16               | BIOL 520 | Statistical Methods in Research             | 3 | 6  |  |  |  | Through Add form only |     |      |  |
| 17               | BIOL 600 | Graduate Seminar Series                     | 3 | 6  |  |  |  | Through Add form only |     |      |  |
| 18               | BIOL 670 | Gene Therapy                                | 3 | 6  |  |  |  | Through Add form only |     |      |  |
| 19               | BIOL 690 | Research Thesis I                           | 6 | 12 |  |  |  | Through Add form only |     |      |  |
| <b>Chemistry</b> |          |   |   |    |  |  |  |                       |     |      |  |
| 20               | CHEM 090 | Chemistry for Non-Science majors            | 3 | 6  |  |  |  | Through Add form only |     |      |  |

|    |           |   |   |   |   |   |  |                       |     |      |  |
|----|-----------|---|---|---|---|---|--|-----------------------|-----|------|--|
| 21 | CHEM 091  | Survey of Physical Science              | 3 | 6 |   |   |  | Through Add form only |     |      |  |
| 22 | CHEM 101  | General Chemistry I                     | 3 | 6 |   |   |  | 1 year SST            | SST | SHSS |  |
| 23 | CHEM 101L | General Chemistry I lab                 | 1 | 2 |   | CHEM 101 General Chemistry I (C and above)  |  | 1 year SST            | SST | SHSS |  |
| 24 | CHEM 102  | General Chemistry II                    | 3 | 6 | CHEM 101 General Chemistry I (C and above)  |   |  | Chemistry             | SST | SHSS |  |
| 25 | CHEM 102L | General Chemistry II lab                | 1 | 2 | CHEM 101L General Chemistry I lab (C and above)   | CHEM 102 General Chemistry II (C and above)   |  | Chemistry             | SST | SHSS |  |
| 26 | CHEM 189c | Independent Study                       | 3 | 6 |   |   |  | Chemistry             | SST | SHSS |  |
| 27 | CHEM 211  | Organic Chemistry I                     | 3 | 6 | CHEM 102 General Chemistry II (C and above)   |   |  | Chemistry             | SST | SHSS |  |
| 28 | CHEM 211L | Organic Chemistry I Lab                 | 2 | 4 | CHEM 102L General Chemistry II lab (C and above)  | CHEM 211 Organic Chemistry I (C and above)  |  | Chemistry             | SST | SHSS |  |
| 29 | CHEM 212  | Organic Chemistry II                    | 3 | 6 | CHEM 211 Organic Chemistry I (C and above) OR CHEM 191 Chemistry I for Engineers (C and above)  |   |  | Chemistry             | SST | SHSS |  |
| 30 | CHEM 212L | Organic Chemistry II Lab                | 2 | 4 | CHEM 211L Organic Chemistry I Lab (C and above)   | CHEM 212 Organic Chemistry II (C and above) OR CHEM 292 Organic Chemistry for Biologists II (C and above) |  | Chemistry             | SST | SHSS |  |
| 31 | CHEM 220  | Quantitative Chemical Analysis with lab | 4 | 8 | CHEM 102 General Chemistry II (C and above) AND CHEM 102L General Chemistry II lab (C and above)  |   |  | Chemistry             | SST | SHSS |  |
| 32 | CHEM 331  | Physical Chemistry I                    | 3 | 6 | CHEM 220 Quantitative Chemical Analysis with lab (C and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (C and above) |   |  | Chemistry             | SST | SHSS |  |
| 33 | CHEM 331L | Physical Chemistry Lab                  | 1 | 2 |   | CHEM 331 Physical Chemistry I (C and above)   |  | Chemistry             | SST | SHSS |  |
| 34 | CHEM 350  | Descriptive Inorganic Chemistry         | 3 | 6 | CHEM 102 General Chemistry II (C and above)   |   |  | Chemistry             | SST | SHSS |  |

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|-------------------------|----------|--|---|---|---|--|--|---|------------|------|------|--|
| 35                      | CHEM 410 | Structural Spectroscopy                              | 4 | 8 | CHEM 212 Organic Chemistry II (C and above)   |  |  | Chemistry   | SST        | SHSS |      |  |
| 36                      | CHEM 431 | Computational Chemistry                              | 3 | 6 | CHEM 332 Physical Chemistry II (C and above) AND (CSCI 111 Web Programming & Problem Solving (C- and above) OR CSCI 150 Fundamentals of Programming (C- and above) OR CSCI 151 Programming for Scientists and Engineers (C- and above)) |  |  | SST   |            |      |      |  |
| 37                      | CHEM 450 | Advanced Inorganic Chemistry                         | 4 | 8 | CHEM 212 Organic Chemistry II (C and above) AND CHEM 212L Organic Chemistry II Lab (C and above) AND CHEM 350 Descriptive Inorganic Chemistry (C and above)   |  |  | Chemistry   | SST        | SHSS |      |  |
| 38                      | CHEM 490 | Nanochemistry  | 3 | 6 | CHEM 331 Physical Chemistry I (C and above) AND CHEM 350 Descriptive Inorganic Chemistry (C and above)  |  |  | Chemistry   | SST        | SHSS |      |  |
| <b>Computer Science</b> |          |  |   |   |   |  |  |   |            |      |      |  |
| 39                      | CSCI 151 | Programming for Scientists and Engineers             | 4 | 8 |   |  |  | ROBT 102 Programming for robotics and physics (C- and above) OR CSCI 150 Fundamentals of Programming (C- and above) | 1 year SST | SST  | SHSS |  |
| 40                      | CSCI 231 | Computer Systems and Organization                    | 3 | 6 | CSCI 152 Performance and Data Structures (C- and above)   |  |  | Computer Science  | SST        | SHSS |      |  |
| 41                      | CSCI 241 | Database Systems                                     | 3 | 6 | CSCI 152 Performance and Data Structures (C- and above)   |  |  | Computer Science  | SST        | SHSS |      |  |
| 42                      | CSCI 262 | Software Project Management                          | 3 | 6 | CSCI 152 Performance and Data Structures (C- and above)   |  |  | Computer Science  | SST        | SHSS |      |  |
| 43                      | CSCI 281 | Human-Computer Interaction                           | 3 | 6 | CSCI 152 Performance and Data Structures (C- and above)   |  |  | Computer Science  | SST        | SHSS |      |  |
| 44                      | CSCI 325 | Introduction to Parallel Systems and GPU Programming | 3 | 6 | CSCI 232 Operating Systems (C- and above)   |  |  | Computer Science  | SST        | SHSS |      |  |
| 45                      | CSCI 330 | Mobile Computing                                     | 3 | 6 | CSCI 232 Operating Systems (C- and above)   |  |  | Computer Science  | SST        | SHSS |      |  |
| 46                      | CSCI 361 | Software Engineering                                 | 3 | 6 | CSCI 152 Performance and Data Structures (C- and above)   |  |  | Computer Science  | SST        | SHSS |      |  |
| 47                      | CSCI 390 | Artificial Intelligence                              | 3 | 6 | CSCI 152 Performance and Data Structures (C- and above)   |  |  | Computer Science  | SST        | SHSS |      |  |
| 48                      | CSCI 398 | Directed Study                                       | 3 | 6 |   |  |  | Computer Science  | SST        | SHSS |      |  |
| 49                      | CSCI 408 | Senior Project I                                     | 3 | 6 |   |  |  | CS major only   |            |      |      |  |

|                    |             |   |   |   |  |   |  |   |                      |      |  |
|--------------------|-------------|---|---|---|--|---|--|---|----------------------|------|--|
| 50                 | CSCI 434    | Information Security                      | 3 | 6 |  | CSCI 233<br>Computer<br>Networks (D<br>and above) |  | Computer Science  | SST                  | SHSS |  |
| 51                 | CSCI 471    | Complexity and<br>Computability           | 3 | 6 | MATH 251 Discrete Mathematics (C-<br>and above)  |   |  | Computer Science  | SST                  | SHSS |  |
| 52                 | CSCI 501    | Software Principles and<br>Practice       | 3 | 6 |  |   |  | Computer Science  | SST                  | SHSS |  |
| 53                 | CSCI 512    | Information Theory                        | 3 | 6 |  |   |  | Computer Science  | SST                  | SHSS |  |
| 54                 | CSCI 525    | Quantum Computing                         | 3 | 6 |  |   |  | Computer Science  | SST                  | SHSS |  |
| 55                 | CSCI 531    | Distributed Systems                       | 3 | 6 |  |   |  | Computer Science  | SST                  | SHSS |  |
| 56                 | CSCI 545    | Big Data Analytics                        | 3 | 6 |  |   |  | Computer Science  | SST                  | SHSS |  |
| <b>Mathematics</b> |             |   |   |   |  |   |  |   |                      |      |  |
| 57                 | MATH<br>109 | Mathematical Discovery                    | 3 | 6 |  |   |  | SHSS  | SST                  |      |  |
| 58                 | MATH<br>161 | Calculus I                                | 4 | 8 |  |   |  | 1 year SST  | SST                  | SHSS |  |
| 59                 | MATH<br>162 | Calculus II                               | 4 | 8 | MATH 161 Calculus I (C and above)  |   |  | 3 year SHSS, 4<br>year SHSS, SST  | SHSS                 |      |  |
| 60                 | MATH<br>251 | Discrete Mathematics                      | 3 | 6 | MATH 160 Pre-Calculus (C- and<br>above) OR MATH 161 Calculus I (C-<br>and above) OR MATH 162 Calculus II<br>(C- and above) OR Test "ALEKS"<br>BETWEEN 75 and 100 OR CPS<br>"MATH" BETWEEN 60 and 100 |   |  | Computer Science,<br>Physics, Robotics<br>and Mechatronics,<br>Undeclared | Mathematics,<br>SHSS |      |  |
| 61                 | MATH<br>263 | Calculus III                              | 4 | 8 | MATH 162 Calculus II (C- and above)  |   |  | 4 year SHSS, SST  | SHSS                 |      |  |
| 62                 | MATH<br>273 | Linear Algebra with<br>Applications       | 4 | 8 | MATH 161 Calculus I (C and above)  | MATH 162<br>Calculus II (D<br>and above)          |  | 4 year SHSS, SST  | SHSS                 |      |  |
| 63                 | MATH<br>274 | Introduction to<br>Differential Equations | 3 | 6 | (MATH 162 Calculus II (C- and above)<br>OR MATH 263 Calculus III (C- and<br>above)) AND MATH 273 Linear<br>Algebra with Applications (C- and<br>above)   |   |  | 4 year SHSS, SST  | SHSS                 |      |  |
| 64                 | MATH<br>301 | Introduction to Number<br>Theory          | 3 | 6 | MATH 273 Linear Algebra with<br>Applications (C- and above) AND<br>MATH 162 Calculus II (C- and above)   |   |  | Mathematics   | SHSS, SST            |      |  |

|    |          |                                     |   |   |   |  |  |   |                   |  |  |
|----|----------|-------------------------------------|---|---|---|--|--|---|-------------------|--|--|
| 65 | MATH 310 | Applied Statistical Methods         | 3 | 6 | MATH 161 Calculus I (C- and above)  |  | SOC 203 Quantitative Methods in Sociology (C- and above) OR PLS 211 Quantitative Methods in Political Science (C- and above) | 2 year SST Biological Sciences, 2 year SST Computer Science, 3 year SST Biological Sciences, 3 year SST Computer Science, 4 year SST Biological Sciences, 4 year SST Computer Science | Mathematics, SHSS |  |  |
| 66 | MATH 321 | Probability                         | 3 | 6 | MATH 162 Calculus II (C- and above) OR MATH 263 Calculus III (C- and above)   |  | ECON 211 Economic Statistics (C- and above) OR PLS 211 Quantitative Methods in Political Science (C- and above)              | 4 year SHSS, Computer Science, Mathematics  | SHSS, SST         |  |  |
| 67 | MATH 351 | Numerical Methods with Applications | 3 | 6 | MATH 274 Introduction to Differential Equations (C- and above) AND MATH 263 Calculus III (C- and above)   |  |  | Mathematics   | SHSS, SST         |  |  |
| 68 | MATH 355 | Introduction to Proofs              | 3 | 6 | MATH 162 Calculus II (C- and above) AND MATH 273 Linear Algebra with Applications (C- and above)  |  |  | Mathematics   | SHSS, SST         |  |  |
| 69 | MATH 361 | Real Analysis I                     | 3 | 6 | MATH 263 Calculus III (C- and above)  |  |  | Mathematics   | SHSS, SST         |  |  |
| 70 | MATH 399 | Internship                          | 3 | 6 |   |  |  | Mathematics   | SHSS, SST         |  |  |
| 71 | MATH 402 | Abstract Algebra I                  | 3 | 6 | MATH 273 Linear Algebra with Applications (C- and above)  |  |  | Mathematics   | SHSS, SST         |  |  |
| 72 | MATH 411 | Linear Programming                  | 3 | 6 | MATH 273 Linear Algebra with Applications (C- and above) AND MATH 263 Calculus III (C- and above)   |  |  | Mathematics   | SHSS, SST         |  |  |
| 73 | MATH 425 | Stochastic Processes                | 3 | 6 | MATH 321 Probability (C- and above)   |  |  | Mathematics   | SHSS, SST         |  |  |
| 74 | MATH 440 | Regression Analysis                 | 3 | 6 | MATH 273 Linear Algebra with Applications (C- and above) AND (MATH 310 Applied Statistical Methods (C- and above) OR MATH 322 Mathematical Statistics (C- and above)) |  |  | Mathematics   | SHSS, SST         |  |  |
| 75 | MATH 449 | Statistical Programming             | 3 | 6 | MATH 322 Mathematical Statistics (C- and above)   |  |  | Mathematics   | SHSS, SST         |  |  |

|                |          |  |   |   |  |  |  |             |           |      |  |
|----------------|----------|--|---|---|--|--|--|-------------|-----------|------|--|
| 76             | MATH 471 | Nonlinear Differential Equations                       | 3 | 6 | MATH 273 Linear Algebra with Applications (C- and above) AND MATH 274 Introduction to Differential Equations (C- and above)  |  |  | Mathematics | SHSS, SST |      |  |
| 77             | MATH 480 | Complex Analysis                                       | 3 | 6 | MATH 263 Calculus III (C- and above)   |  |  | Mathematics | SHSS, SST |      |  |
| 78             | MATH 481 | Partial Differential Equations                         | 3 | 6 |  | MATH 274 Introduction to Differential Equations (C- and above) AND MATH 480 Complex Analysis (C- and above)    |  | Mathematics | SST       | SHSS |  |
| <b>Physics</b> |          |  |   |   |  |  |  |             |           |      |  |
| 79             | PHYS 161 | Physics I for Scientists and Engineers with Laboratory | 4 | 8 |  | MATH 161 Calculus I (D and above) OR MATH 162 Calculus II (D and above)  | PHYS 171 Physics I for Physics Majors with Laboratory (C- and above) | 1 year SST  | SST       | SHSS |  |
| 80             | PHYS 201 | Introductory Astronomy I                               | 3 | 6 | MATH 162 Calculus II (C- and above)  |  |  | Physics     | SHSS, SST |      |  |
| 81             | PHYS 221 | Classical Mechanics I                                  | 3 | 6 | PHYS 172 Physics II for Physics Majors with Laboratory (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above)   | MATH 263 Calculus III (D and above) AND MATH 274 Introduction to Differential Equations (D and above)          |  | Physics     | SHSS, SST |      |  |
| 82             | PHYS 261 | Modern Physics with laboratory                         | 4 | 8 | MATH 162 Calculus II (C- and above) AND (PHYS 152 Introductory Physics II with Lab (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above)) |  |  | Physics     | SHSS, SST |      |  |
| 83             | PHYS 361 | Classical Electrodynamics I                            | 3 | 6 | (PHYS 172 Physics II for Physics Majors with Laboratory (C- and above) OR PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above)) AND MATH 274 Introduction to Differential Equations (C- and above)                                  | PHYS 315 Mathematical Methods of Physics (D and above) OR PHYS 411 Advanced Mathematical Physics (D and above) |  | Physics     | SHSS, SST |      |  |



|                                  |          |   |   |   |  |  |                           |           |      |  |
|----------------------------------|----------|---|---|---|--|--|---------------------------|-----------|------|--|
| 84                               | PHYS 411 | Advanced Mathematical Physics             | 3 | 6 | MATH 274 Introduction to Differential Equations (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above)   |  | Physics                   | SST       | SHSS |  |
| 85                               | PHYS 452 | Quantum Mechanics II                      | 3 | 6 | PHYS 451 Quantum Mechanics I (C- and above)  |  | Physics                   | SHSS, SST |      |  |
| 86                               | PHYS 465 | Advanced Experimental Physics             | 3 | 6 |  |  | Physics                   | SHSS, SST |      |  |
| 87                               | PHYS 473 | Introduction to Solid State Physics       | 3 | 6 | PHYS 280 Thermodynamics and Statistical Physics (C- and above) AND PHYS 451 Quantum Mechanics I (C- and above)   |  | Physics                   | SHSS, SST |      |  |
| 88                               | PHYS 491 | Directed Study of Advanced Physics Topics | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 89                               | PHYS 505 | Classical Mechanics                       | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 90                               | PHYS 511 | Computational Modeling and Simulation     | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 91                               | PHYS 515 | Classical Electrodynamics                 | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 92                               | PHYS 530 | Solid State Physics                       | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 93                               | PHYS 545 | Advanced Instrumentation Methods          | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 94                               | PHYS 550 | Advanced Mathematical Physics             | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 95                               | SST 501  | Teaching and Learning                     | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 96                               | SST 503  | Laboratory Practicum                      | 3 | 6 | SST 501 Teaching and Learning (C- and above) AND SST 502 Teaching Practicum (C- and above)   |  | Through Add form only     |           |      |  |
| 97                               | SST 591  | Research Methods                          | 3 | 6 |  |  | Through Add form only     |           |      |  |
| 98                               | SST 693  | Thesis Proposal                           | 3 | 6 | SST 591 Research Methods (C- and above)  |  | Through Add form only     |           |      |  |
| <b>Robotics and Mechatronics</b> |          |   |   |   |  |  |                           |           |      |  |
| 99                               | ROBT 201 | Mechanics: Statics and Dynamics           | 3 | 6 | MATH 162 Calculus II (C- and above) AND (PHYS 161 Physics I for Scientists and Engineers with Laboratory (C- and above) OR PHYS 171 Physics I for Physics Majors with Laboratory (C- and above)) |  | Robotics and Mechatronics | SST       | SHSS |  |

|     |          |   |   |   |  |  |                           |     |      |  |
|-----|----------|---|---|---|--|--|---------------------------|-----|------|--|
| 100 | ROBT 203 | Electrical and Electronic Circuits I with Lab | 4 | 8 | MATH 162 Calculus II (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above) OR (PHYS 141 Physics I for non-majors with Lab (C- and above) AND PHYS 142 Physics II for non-majors with Lab (C- and above))) |  | Robotics and Mechatronics | SST | SHSS |  |
| 101 | ROBT 205 | Signals and Sensing with Lab                  | 4 | 8 | MATH 162 Calculus II (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above))   |  | Robotics and Mechatronics | SST | SHSS |  |
| 102 | ROBT 301 | Mechanical Design I                           | 3 | 6 | ROBT 103 Computer Aided Drawing (C- and above) AND ROBT 201 Mechanics: Statics and Dynamics (C- and above)   |  | Robotics and Mechatronics | SST | SHSS |  |
| 103 | ROBT 303 | Linear Control Theory with Lab                | 4 | 8 | ROBT 202 System Dynamics and Modeling (C- and above) AND MATH 274 Introduction to Differential Equations (C- and above)  |  | Robotics and Mechatronics | SST | SHSS |  |
| 104 | ROBT 305 | Embedded Systems                              | 3 | 6 | ROBT 206 Microcontrollers with Lab (C- and above)  |  | Robotics and Mechatronics | SST | SHSS |  |
| 105 | ROBT 307 | Power Electronics                             | 3 | 6 | ROBT 204 Electrical and Electronic Circuits II with Lab (C- and above)   |  | Robotics and Mechatronics | SST | SHSS |  |
| 106 | ROBT 401 | Robot Dynamics and Control                    | 3 | 6 | ROBT 303 Linear Control Theory with Lab (C- and above)   |  | Robotics and Mechatronics | SST | SHSS |  |
| 107 | ROBT 407 | Statistical Methods and Machine Learning      | 3 | 6 | MATH 273 Linear Algebra with Applications (C- and above)   |  | Robotics and Mechatronics | SST | SHSS |  |
| 108 | ROBT 501 | Robot Manipulation and Mobility               | 3 | 6 |  |  | Robotics and Mechatronics | SST | SHSS |  |
| 109 | ROBT 503 | Dynamic Systems and Control                   | 3 | 6 |  |  | Robotics and Mechatronics | SST | SHSS |  |
| 110 | ROBT 605 | Robotic Motion Planning                       | 3 | 6 | ROBT 501 Robot Manipulation and Mobility (C- and above) AND CSCI 501 Software Principles and Practice (C- and above)   |  | Robotics and Mechatronics | SST | SHSS |  |
| 111 | ROBT 611 | Industrial Robotics                           | 3 | 6 | ROBT 501 Robot Manipulation and Mobility (C- and above) AND CSCI 501 Software Principles and Practice (C- and above)   |  | Robotics and Mechatronics | SST | SHSS |  |