

**Course Requirements and Registration Priorities
School of Engineering, Fall 2017**

| # | Abbr | Title | Cr(US) | Cr(ECTS) | PreRequisite | CoRequisite | AntiRequisite | 1st priority registration | 2nd priority registration | 3rd priority registration | 4th priority registration |
|-----------------------------|----------|--|--------|----------|---|---|---------------|---------------------------|---------------------------|---------------------------|---------------------------|
| SEng | | | | | | | | | | | |
| Chemical Engineering | | | | | | | | | | | |
| 1 | ECHE 126 | Introduction to Chemical Engineering | 3 | 6 | | | | | | | |
| 2 | ECHE 222 | Chemistry I | 3 | 6 | | | | | | | |
| 3 | ECHE 319 | Chemical Engineering Thermodynamics | 3 | 6 | | | | | | | |
| 4 | ECHE 333 | Separation Processes-I | 3 | 6 | ECHE 319 Chemical Engineering Thermodynamics (D and above) | | | | | | |
| 5 | ECHE 369 | Transport Phenomena-II | 3 | 6 | | | | | | | |
| 6 | ECHE 385 | Research Practice | 3 | 6 | | | | | | | |
| 7 | ECHE 418 | Capstone project 1 | 3 | 6 | ECHE 323 Computational methods in Chemical Engineering-I (D and above) | | | | | | |
| 8 | ECHE 419 | Advanced Process Simulation | 3 | 6 | ECHE 323 Computational methods in Chemical Engineering-I (D and above) | ECHE 482 Computational Methods in Chemical Engineering-II (D and above) | | | | | |
| 9 | ECHE 481 | Chemical Reaction Engineering | 3 | 6 | ECHE 126 Introduction to Chemical Engineering (D and above) AND BENG 124 Engineering Mathematics I (D and above) AND BENG 225 Engineering Mathematics II (D and above) | | | | | | |
| 10 | ECHE 482 | Computational Methods in Chemical Engineering-II | 3 | 6 | ECHE 319 Chemical Engineering Thermodynamics (D and above) AND ECHE 333 Separation Processes-I (D and above) AND ECHE 383 Separation Processes II (D and above) AND ECHE 481 Chemical Reaction Engineering (D and above) AND ECHE 323 Computational methods in Chemical Engineering-I (D and above) | | | | | | |

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| 11 | ECHE 484 | Multi-Phase Flows | 3 | 6 | ECHE 319 Chemical Engineering Thermodynamics (D and above) AND ECHE 270 Transport Phenomena-I (D and above) | | | | | | |
| 12 | MCHE 600 | MSc Thesis in Chemical Engineering | 15 | 30 | | | | | | | |
| 13 | MCHE 613 | Physical Chemistry of Oil & Gas | 1.5 | 3 | | | | | | | |
| 14 | MCHE 614 | Applied Chemical Engineering Thermodynamics | 1.5 | 3 | | | | | | | |
| 15 | MCHE 615 | Advanced Unit Operations | 1.5 | 3 | | | | | | | |
| 16 | MCHE 616 | Advanced Chemical Reactor Engineering | 1.5 | 3 | ECHE 481 Chemical Reaction Engineering (D and above) | | | | | | |
| 17 | MCHE 618 | Plant Economics and Planning | 1.5 | 3 | | | | | | | |
| 18 | MCHE 619 | Safety Engineering and Loss Prevention | 1.5 | 3 | | | | | | | |
| Civil Engineering | | | | | | | | | | | |
| 19 | ECE 215 | Surveying | 3 | 6 | | | | | | | |
| 20 | ECE 216 | Civil Engineering CAD | 3 | 6 | | | | | | | |
| 21 | ECE 217 | Structural Analysis I | 3 | 6 | BENG 117 Engineering Mechanics (D and above) | | | | | | |
| 22 | ECE 302 | Civil Engineering Materials | 3 | 6 | BENG 221 Engineering Materials (D and above) | | | | | | |
| 23 | ECE 307 | Engineering Geology and Rock Mechanics | 3 | 6 | | | | | | | |
| 24 | ECE 318 | Structural Design - Concrete | 3 | 6 | ECE 479 Structural Analysis II (C- and above) | | | | | | |
| 25 | ECE 401 | Capstone Project 1 | 3 | 6 | | | | | | | |
| 26 | ECE 404 | Construction Technologies and Processes | 3 | 6 | BENG 148 Engineering Practice (D and above) AND ECE 302 Civil Engineering Materials (D and above) | | | | | | |
| 27 | ECE 405 | Environmental Engineering | 3 | 6 | ECE 473 Environmental Systems (D and above) OR ECE 218 Environmental Chemistry (D and above) | | | | | | |
| 28 | ECE 416 | Highway Engineering | 3 | 6 | ECE 302 Civil Engineering Materials (D and above) | | | | | | |
| 29 | ECE 473 | Environmental Systems | 3 | 6 | | | | | | | |
| 30 | EMEM 507 | Project Management | 3 | 6 | | | | | | | |
| 31 | EMEM 523 | Supply Chain Management | 3 | 6 | | | | | | | |

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| 32 | EMEM 527 | Globalization and Engineering | 3 | 6 | | | | | | |
| 33 | EMEM 533 | Engineering Management and Engineering Economy | 3 | 6 | | | | | | |
| 34 | EMEM 537 | Engineering Decision Tools | 3 | 6 | | | | | | |
| 35 | EMEM 538 | Knowledge and Innovation Management | 3 | 6 | | | | | | |
| 36 | EMEM 539 | Big Data and Information Management | 3 | 6 | | | | | | |
| 37 | EMEM 542 | Production and Service Operations Management | 3 | 6 | | | | | | |
| 38 | MCE 600 | MSc Thesis in Civil Engineering | 15 | 30 | | | | | | |
| 39 | MCE 601 | Sustainable Development | 3 | 6 | | | | | | |
| 40 | MCE 604 | Advanced Project Management | 3 | 6 | | | | | | |
| 41 | MCE 606 | Environmental Impacts and Assessments | 3 | 6 | | | | | | |
| 42 | MSC 615 | Advanced statistics and probability | 3 | 6 | BENG 228 Engineering Mathematics III (D and above) | | | | | |
| 43 | MSC 616 | Research Methods | 3 | 6 | | | | | | |
| Electrical and Electronic Engineering | | | | | | | | | | |
| 44 | EEE 212 | Signals and Systems | 3 | 6 | BENG 225 Engineering Mathematics II (D and above) | | | | | |
| 45 | EEE 238 | Digital Signal and Image Processing | 3 | 6 | | | | | | |
| 46 | EEE 250 | Microelectronic Devices and Circuits | 3 | 6 | BENG 114 Introduction to Electrical Systems (D and above) | | | | | |
| 47 | EEE 251 | Electronic Engineering Design Principles | 3 | 6 | BENG 114 Introduction to Electrical Systems (D and above) | | | | | |
| 48 | EEE 342 | Electromagnetics | 3 | 6 | | | | | | |
| 49 | EEE 345 | Power Electronics | 3 | 6 | | | | | | |
| 50 | EEE 382 | Antennas and Propagation | 3 | 6 | | | | | | |
| 51 | EEE 384 | Digital integrated circuits design | 3 | 6 | EEE 250 Microelectronic Devices and Circuits (C- and above) | | | | | |
| 52 | EEE 435 | Digital Communications | 3 | 6 | | | | | | |
| 53 | EEE 437 | Capstone Project 1 | 3 | 6 | | | | | | |
| 54 | EEE 448 | Power Transmission and Distribution plants | 3 | 6 | | | | | | |
| 55 | EEE 450 | RF and Microwave Circuit Design | 3 | 6 | | | | | | |
| 56 | EEE 451 | High Voltage Engineering | 3 | 6 | | | | | | |
| 57 | EEE 452 | Power Systems Protection | 3 | 6 | | | | | | |

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| 58 | EEE 482 | Mobile Communications | 3 | 6 | EEE 239 Communication systems (C- and above) | | | | | | |
| 59 | MEE 600 | MSc Thesis in Electrical and Electronics Engineering | 15 | 30 | | | | | | | |
| 60 | MEE 607 | Statistical Signal Processing | 3 | 6 | | | | | | | |
| 61 | MEE 608 | Special Topics in Circuits Theory | 3 | 6 | | | | | | | |
| 62 | MEE 622 | Modern Control Theory | 3 | 6 | | | | | | | |
| 63 | MEE 623 | Random Processes | 3 | 6 | | | | | | | |
| Mechanical Engineering | | | | | | | | | | | |
| 64 | EME 253 | Computer Aided Engineering | 3 | 6 | | | | | | | |
| 65 | EME 254 | Mechanics of Materials | 3 | 6 | | | | | | | |
| 66 | EME 262 | Machine Dynamics I | 3 | 6 | | | | | | | |
| 67 | EME 354 | Advanced Control Systems | 3 | 6 | BENG 219 Control Systems (D and above) | | | | | | |
| 68 | EME 358 | Heat Transfer | 3 | 6 | | | | | | | |
| 69 | EME 361 | Machine Design | 3 | 6 | | | | | | | |
| 70 | EME 410 | Aerodynamics | 3 | 6 | EME 357 Fluid Mechanics 2 (D and above) | | | | | | |
| 71 | EME 412 | Heating, Ventilating, and Air Conditioning | 3 | 6 | | | | | | | |
| 72 | EME 413 | Computer Aided Geometric Design | 3 | 6 | EME 253 Computer Aided Engineering (C- and above) | | | | | | |
| 73 | EME 451 | Capstone project 1 | 3 | 6 | | | | | | | |
| 74 | EME 456 | Feasibility Analysis of Clean Energy Technologies | 3 | 6 | | | | | | | |
| 75 | EME 463 | Machine Dynamics II | 3 | 6 | | | | | | | |
| 76 | EME 467 | Vehicle Propulsion Systems | 3 | 6 | | EME 456 Feasibility Analysis of Clean Energy Technologies (C- and above) | | | | | |
| 77 | EME 486 | Oscillations of mechanical systems | 3 | 6 | | | | | | | |
| 78 | MME 600 | MSc Thesis in Mechanical Engineering | 15 | 30 | | | | | | | |
| 79 | MME 604 | Engineering Mathematics | 3 | 6 | | | | | | | |
| 80 | MME 605 | Numerical Techniques for Engineers | 3 | 6 | | | | | | | |
| 81 | MME 606 | Advanced control systems | 3 | 6 | | | | | | | |
| School of Engineering | | | | | | | | | | | |
| 82 | BENG 117 | Engineering Mechanics | 3 | 6 | | | | | | | |
| 83 | BENG 124 | Engineering Mathematics I | 3 | 6 | | | | | | | |
| 84 | BENG 145 | Occupal & Environment Health and Safety | 3 | 6 | | | | | | | |

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| 85 | BENG 146 | Programming for Engineers | 3 | 6 | | | | | | | |
| 86 | BENG 215 | Sensors and Actuators | 3 | 6 | | | | | | | |
| 87 | BENG 221 | Engineering Materials | 3 | 6 | | | | | | | |
| 88 | BENG 228 | Engineering Mathematics III | 3 | 6 | BENG 124 Engineering Mathematics I (D and above) AND BENG 225 Engineering Mathematics II (D and above) | | | | | | |
| 89 | BENG 405 | Project Management | 3 | 6 | | | | | | | |
| 90 | DENG 782 | Personal and Professional Skills Development | 0 | 3 | | | | | | | |
| 91 | DENG 783 | Statistics | 1.5 | 3 | | | | | | | |