

Course Requirements and Registration Priorities
School of Engineering and Digital Sciences (Graduate: PhD), Fall 2019

| # | Abbr | Title | Cr(US) | Cr(ECTS) | PreRequisite | CoRequisite | AntiRequisite | 1st priority registration | 2nd priority registration | 3rd priority registration | 4th priority registration |
|---|-----------|--|--------|----------|--------------|-------------|---------------|---|--|--|---------------------------|
| SEDS | | | | | | | | | | | |
| Chemical and Materials Engineering | | | | | | | | | | | |
| 1 | DCHME 700 | Thesis Research | 0 | 0 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 2 | DCHME 755 | Integrated Computational Materials Engineering | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 3 | DCHME 761 | Advanced Chemical Reaction Engineering | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 4 | DCHME 762 | Advanced Materials Processing | 4 | 8 | | | | Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| Civil Engineering | | | | | | | | | | | |
| 5 | DCEE 700 | Thesis Research | 0 | 0 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |

| | | | | | | | | | | | |
|--|--------------|---|---|---|--|--|--|---|---|--|--|
| 6 | DCEE 750 | Finite Element Methods | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Public Policy | |
| 7 | DCEE 753 | Structural Evaluation and Rehabilitation | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Public Policy | |
| 8 | DCEE 756 | Environmental Modeling Development | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology | | |
| 9 | DCEE 757 | Advanced Environmental Chemistry | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Public Policy | |
| Computer Science | | | | | | | | | | | |
| 10 | CSCI 700 | Thesis Research | 0 | 0 | | | | | | | |
| 11 | CSCI 725 | Advanced Quantum Computing | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | SEDS | SSH | |
| 12 | CSCI 745 | Advanced Big Data Analytics | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | SEDS | SSH | |
| 13 | CSCI 794 | Advanced Deep Learning | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | SEDS | SSH | |
| Electrical and Computer Engineering | | | | | | | | | | | |
| 14 | DELCE 700 | Thesis Research | 0 | 0 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |

| | | | | | | | | | | | |
|---|--------------|--|---|---|--|--|--|---|--|--|--|
| 15 | DELCE 750 | Advanced Biomedical Imaging Devices and Technologies | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 16 | DELCE 752 | Optical Wireless Communications | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 17 | DELCE 753 | Stochastic Processes | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 18 | DELCE 754 | Optimal and Robust Control | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 19 | DELCE 755 | Advanced Electromagnetics | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| Mechanical and Aerospace Engineering | | | | | | | | | | | |
| 20 | DMAE 700 | Thesis Research | 0 | 0 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |

| | | | | | | | | | | | |
|----------------------------------|----------|---|---|---|--|---|--|---|--|--|--|
| 21 | DMAE 701 | Advanced Applied Mathematics | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 22 | DMAE 765 | Advanced Manufacturing Processes and Strategies | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | 2 year PhD SEDS Science, Engineering and Technology, 3 year PhD SEDS Science, Engineering and Technology, 4 year PhD SEDS Science, Engineering and Technology, 5 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| Robotics and Mechatronics | | | | | | | | | | | |
| 23 | ROBT 700 | Thesis Research | 0 | 0 | | | | | | | |
| 24 | ROBT 701 | Advanced Robot Manipulation and Mobility | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | SEDS | | |
| 25 | ROBT 703 | Advanced Optimal Control and Planning | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | SEDS | | |
| 26 | ROBT 709 | Advanced Robot Dynamics and Control | 4 | 8 | | | | 1 year PhD SEDS Science, Engineering and Technology | SEDS | | |
| School of Engineering | | | | | | | | | | | |
| 27 | DENG 782 | Research Methods and Ethics | 3 | 6 | | | | 1 year PhD SEDS Science, Engineering and Technology | Education, Eurasian Studies, Public Policy, Science, Engineering and Technology | | |
| 28 | DENG 783 | Statistics | 3 | 6 | | | | 1 year PhD SEDS Science, Engineering and Technology | Science, Engineering and Technology | Education, Eurasian Studies, Public Policy | |
| 29 | DENG 784 | Doctoral Proposal I | 0 | 6 | | | | Science, Engineering and Technology | | | |
| 30 | DENG 785 | PhD proposal oral defence | 0 | 0 | | | | Science, Engineering and Technology | | | |
| 31 | DENG 787 | Doctoral Proposal II | 3 | 6 | DENG 784 Doctoral Proposal I (1774) (C- and above) | DENG 785 PhD proposal oral defence (2604) (D and above) | | Science, Engineering and Technology | | | |
| 32 | DENG 789 | Doctoral Seminar I | 3 | 6 | DENG 785 PhD proposal oral defence (2604) (C- and above) | | | Science, Engineering and Technology | | | |

| | | | | | | | | | | | |
|----|----------|----------------------------------|----|----|--|--|--|-------------------------------------|--|--|--|
| 33 | DENG 790 | Doctoral Seminar II | 3 | 6 | DENG 789 Doctoral Seminar I (4598) (C- and above) | | | Science, Engineering and Technology | | | |
| 34 | DENG 791 | Doctoral Seminar III | 3 | 6 | DENG 790 Doctoral Seminar II (4599) (C- and above) | | | Science, Engineering and Technology | | | |
| 35 | DENG 794 | Dissertation Research | 12 | 24 | DENG 785 PhD proposal oral defence (2604) (C- and above) | | | Science, Engineering and Technology | | | |
| 36 | DENG 795 | Research at Host University | 6 | 12 | DENG 785 PhD proposal oral defence (2604) (C- and above) | | | Science, Engineering and Technology | | | |
| 37 | DENG 796 | Thesis Completion | 0 | 0 | | | | Science, Engineering and Technology | | | |
| 38 | DENG 797 | Oral Defence of PhD Dissertation | 0 | 0 | DENG 785 PhD proposal oral defence (2604) (C- and above) AND DENG 789 Doctoral Seminar I (4598) (C- and above) AND DENG 790 Doctoral Seminar II (4599) (C- and above) | | | Science, Engineering and Technology | | | |