|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Course Number and Title* | *Credits* | *Completed* | *In Progress* | *Future* |
| Required Core Courses |  |  |  |  |
| MSE 605 Crystallography and Crystal Chemistry | 4 |  |  |  |
| MSE 608 Solid State Thermodynamics | 4 |  |  |  |
| MSE 618 Phase Transformations and Kinetics | 4 |  |  |  |
| Required Core Emphasis Course Choose at least three credits from the following, or alternative Core Emphasis Course(s) approved by the graduate program coordinator: MSE 510 Electrical, Optical, and Dielectric Materials MSE 512 Mechanical Behavior of Materials I \*PHYS 515 Solid State Physics | 3 |  |  |  |
| Required Characterization Course Choose at least three credits from the following, or alternative Characterization Course(s) approved by the graduate program coordinator: CHEM 522 Spectroscopy CHEM 540 Spectrometric Identification CHEM 560 Introduction to NMR Spectroscopy MSE 521 Introduction to Electron Microscopy MSE 522 Advanced Transmission Electron Microscopy MSE 525 Surface Analysis \*PHYS 523 Physical Methods of Materials Characterization | 3 |  |  |  |
| Required Processing Course Choose at least three credits from the following, or alternative Processing Course(s) approved by the graduate program coordinator: ECE 540 Intro to Integrated Circuit Processing ECE 540L Intro to Integrated Circuit Processing Lab ECE 541 Advanced Topics in Silicon Technology ECE 542 Photolithography ECE 543 Introduction to MEMS MSE 540 Advanced Processing MSE 542 Ceramic Processing MSE 545 Nanoscale Processing | 3 |  |  |  |
| Required Experiential Learning Courses At least two credits must be filled by MSE 651 or MSE 650. Remaining credits can be fulfilled by one or more of the following: GCOLL 514 Field Experience in College Teaching GCOLL 512 Internship in College Teaching GCOLL 513 Practicum in College Teaching MSE 590 Practicum/Internship MSE 650 Teaching Experience MSE 651 Graduate Teaching Assistant Experience | 4 |  |  |  |
| Other Graduate Courses Additional elective courses in Materials Science and Engineering or related fields as approved by the supervisory committee and by the coordinator of the Materials Science and Engineering Doctoral program. | 9 |  |  |  |
| MSE 601 Graduate Student Orientation | 1 |  |  |  |
| MSE 691 Doctoral Comprehensive Examination | 1 |  |  |  |
| MSE 693 Dissertation | 30 |  |  |  |
| Total | 66 |  |  |  |
| \*Recommended Course |  |  |  |  |