Pre-Approved IMSE PhD Electives (as of October, 2018)

E35 ESE 531 Nano and Micro Photonics
E35 ESE 532 Introduction to Nano-Photonic Devices
E35 ESE 536 Introduction to Quantum Optics
E37 MEMS 463 Nanotechnology Concepts and Applications
E37 MEMS 4101 Manufacturing Processes
E37 MEMS 5102 Materials Selection in Design
E37 MEMS 5506 Experimental Methods in Solid Mechanics
E37 MEMS 5507 Fatigue and Fracture Analysis
E37 MEMS 5560 Interfaces and Attachments in Natural and Engineered Structures
E37 MEMS 5601 Mechanical Behavior of Materials
E37 MEMS 5602 Non-metallics
E37 MEMS 5603 Materials Characterization Techniques I
E37 MEMS 5604 Materials Characterization Techniques II
E37 MEMS 5605 Mechanical Behavior of Composites
E37 MEMS 5606 Soft Nanomaterials
E37 MEMS 5607 Introduction to Polymer Blends and Composites
E37 MEMS 5608 Introduction to Polymer Science and Engineering
E37 MEMS 5612 Atomistic Modeling of Materials
E37 MEMS 5612 Biomaterials Processing
E37 MEMS 5801 Micro-Electro-Mechanical Systems I
E44 EECE 502 Advanced Thermodynamics in EECE
E44 EECE 504 Aerosol Science and Technology
E44 EECE 505 Aquatic Chemistry
E44 EECE 534 Environmental Nanochemistry
E44 EECE 574 Electrochemical Engineering
E44 EECE 576 Chemical Kinetics and Catalysis
E62 BME 461 Protein Structure and Dynamics
E62 BME 523 Biomaterials Science
E62 BME 4904 Interfaces and Attachments in Natural and Engineered Structures
E62 BME 5231 Biomaterials Science: Polymer Physics
L07 Chem 426 Inorganic Electrochemistry and Photochemistry
L07 Chem 452 Synthetic Polymer Chemistry
L07 Chem 465 Solid-State and Materials Chemistry
L07 Chem 542 Special Topics in Inorganic Chemistry: The Chemistry of Energy Storage
L07 Chem 543 Physical Properties of Quantum Nanostructures
L07 Chem 562 Statistical Thermodynamics
L07 Chem 571 Quantum Chemistry
L07 Chem 578 Nuclear Magnetic Resonance Spectroscopy
L07 Chem 5721 Quantum Chemistry in Practice
L19 EPSc 511 MINERALS IN AQUEOUS ENVIRONMENTS
L19 EPSc 567 Planetary Materials
L19 EPSc 569 THERMODYNAMICS AND PHASE EQUILIBRIA.
L19 EPSc 580 Deformation of Planetary Materials
L31 Physics 463 Statistical Mechanics and Thermodynamics
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>L31 Physics</td>
<td>472     Solid State Physics</td>
</tr>
<tr>
<td>L31 Physics</td>
<td>529     Statistical Mechanics</td>
</tr>
<tr>
<td>L31 Physics</td>
<td>537     Thermodynamics &amp; Kinetics of Materials</td>
</tr>
<tr>
<td>L31 Physics</td>
<td>539     Structure and Diffraction in Materials</td>
</tr>
<tr>
<td>L31 Physics</td>
<td>549     Solid State Physics I</td>
</tr>
<tr>
<td>L31 Physics</td>
<td>550     Solid State Physics II</td>
</tr>
<tr>
<td>L31 Physics</td>
<td>565     Magnetism and Superconductivity: Basics and Applications</td>
</tr>
</tbody>
</table>