**Class Schedule - Fall 2019**

**Materials Science and Engineering**

**MSE 498  Special Topics  credit: 1 TO 4 hours.**

Subject offerings of new and developing areas of knowledge in materials science and engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

<table>
<thead>
<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>72231</td>
<td>Lecture-Discussion</td>
<td>NPG</td>
<td>02:00 PM - 03:20 PM</td>
<td>TR</td>
<td>305 - Materials Science &amp; Eng Bld</td>
<td>Perry, N</td>
</tr>
</tbody>
</table>

Credit Hours: 4 hours  
Solid State Ionics  
Restricted to Graduate - Urbana-Champaign.  
Solid state ionic materials applied in energy conversion, energy storage, catalysis, sensing, responsive coatings, neuromorphic computing, and memory. Underlying point defect behavior, i.e., transport and reactions, through equilibrium thermodynamics, chemical kinetics, and irreversible thermodynamics. Practical solid state electrochemistry techniques and case studies.

| 32445 | Lecture-Discussion  | NPU     | 02:00 PM - 03:20 PM | TR   | 305 - Materials Science & Eng Bld | Perry, N   |

Credit Hours: 3 hours  
Solid State Ionics  
Restricted to Undergrad - Urbana-Champaign.  
Solid state ionic materials applied in energy conversion, energy storage, catalysis, sensing, responsive coatings, neuromorphic computing, and memory. Underlying point defect behavior, i.e., transport and reactions, through equilibrium thermodynamics, chemical kinetics, and irreversible thermodynamics. Practical solid state electrochemistry techniques and case studies.