Class Schedule - Spring 2017

Theoretical and Applied Mechanics

TAM 598  **Advanced Special Topics**  credit: 1 TO 4 hours.

Subject offerings of new and developing areas of knowledge in theoretical and applied mechanics intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary to a maximum of 12 hours.

<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>65824</td>
<td>Lecture-Discussion</td>
<td>SH</td>
<td>01:00 PM - 02:50 PM</td>
<td>TR</td>
<td>225A - Talbot Laboratory</td>
<td>Hilgenfeldt, S Wang, Y</td>
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</tbody>
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Credit Hours: 4 hours  
Soft Solids  
Restricted to Graduate - Urbana-Champaign.

This course focuses on the physical principles and quantitative methods of describing the mechanical behavior of soft materials, particularly those of biological relevance (polymer networks, lipids, cell membranes). It has strong mathematics components, including an introduction to both variational calculus and differential geometry. Students will learn rigorous treatment of biological/soft matter topics relevant in current research, such as network and membrane mechanics, adhesion, and entropic effects. Practical exercises in numerical simulation are integrated into the course.