Physics

PHYS 199  Undergraduate Open Seminar  credit: 0 TO 5 hours.
Approved for letter and S/U grading. May be repeated.

<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>10145</td>
<td>Independent Study</td>
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<td>ARRANGED -</td>
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Independent Study
Instructor Approval Required
INDEPENDENT STUDY. To register for independent study under PHYS 199, use the PHYS 199 CRN (available from the departmental undergraduate records office) specific to the instructor with whom you have arranged to work. (You cannot register under the general CRN 10145.)

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<tbody>
<tr>
<td>67244</td>
<td>Lecture</td>
<td>OWL</td>
<td>04:00 PM - 05:50 PM</td>
<td>R</td>
<td>276 - Loomis Laboratory</td>
<td>Gollin, G</td>
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</tbody>
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Credit Hours: 1 hours
You will learn to do remarkable things. By the end of the first week you will calculate the trajectory of a relativistic starship and confirm an insight of Ramanujan, the "Man Who Knew Infinity." A week after that you will generate diagrams of spacetime curvature around black holes. You will determine the slingshot trajectory for a tour of the gas giants and calculate pi using simulated toothpicks. There will be chaos, and fractal geometry, and pattern recognition in noisy environments. You will learn that a Python is not just a snake, nor a Spyder just an arachnid. And you will be pioneers: you are going to help us change the way we teach undergraduate physics at the University of Illinois.