Physics

PHYS 402  **Light**  credit: 0 TO 4 hours.
Wave kinematics; geometrical optics: basic concepts, ray-tracing and matrix formalism, Gaussian imaging by thick lenses, stops, apertures, and intensity relations; interference; interference spectroscopy and coherence; diffraction: Fresnel-Kirchhoff formulation, Fraunhofer case, Fresnel case, and holography; polarized light. Lectures, laboratory, and problems. 4 undergraduate hours. 3 or 4 graduate hours (3 hours without lab). Prerequisite: MATH 285; PHYS 102 (includes PHYS 101) or PHYS 214 (includes PHYS 211 and PHYS 212).

<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>
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<tbody>
<tr>
<td>33052</td>
<td>Lecture</td>
<td>AA</td>
<td>11:00 AM - 12:20 PM</td>
<td>MW</td>
<td>136 - Loomis Laborary</td>
<td>Flynn, C</td>
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<tr>
<td>47625</td>
<td>Lecture</td>
<td>BB</td>
<td>11:00 AM - 12:20 PM</td>
<td>MW</td>
<td>136 - Loomis Laborary</td>
<td>Flynn, C</td>
</tr>
<tr>
<td>32781</td>
<td>Laboratory</td>
<td>BL1</td>
<td>09:00 AM - 11:50 AM</td>
<td>T</td>
<td>6106 - Engineering Sciences Building</td>
<td>Rajaram, S</td>
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<tr>
<td>32782</td>
<td>Laboratory</td>
<td>BL2</td>
<td>02:00 PM - 04:50 PM</td>
<td>W</td>
<td>6106 - Engineering Sciences Building</td>
<td>Rajaram, S</td>
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Credit Hours: 3 hours
Restricted to Graduate - Urbana-Champaign.
Graduate students (only) may enroll in the AA lecture (and no laboratory) for 3 hours credit.

Credit Hours: 4 hours
Undergraduate and graduate students may enroll in the BB lecture and in one of the laboratory (BL) sections for 4 hours credit.