Mathematics

MATH 442  *Intro Partial Diff Equations*  credit: 3 OR 4 hours.

Introduces partial differential equations, emphasizing the wave, diffusion and potential (Laplace) equations. Focuses on understanding the physical meaning and mathematical properties of solutions of partial differential equations. Includes fundamental solutions and transform methods for problems on the line, as well as separation of variables using orthogonal series for problems in regions with boundary. Covers convergence of Fourier series in detail. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: One of MATH 284, MATH 285, MATH 286, MATH 441.

<table>
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<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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<td>59619</td>
<td>Lecture-Discussion</td>
<td>B13</td>
<td>09:00 AM - 09:50 AM</td>
<td>MWF</td>
<td>147 - Altgeld Hall</td>
<td>Xu, S</td>
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<td>59620</td>
<td>Lecture-Discussion</td>
<td>B14</td>
<td>09:00 AM - 09:50 AM</td>
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<td>12:00 PM - 12:50 PM</td>
<td>MWF</td>
<td>343 - Altgeld Hall</td>
<td>Xu, S</td>
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</table>

Credit Hours: 3 hours
This course is restricted to Engineering Mechanics and Mathematics majors initially, but the restriction will be removed during business hours on April 21, 2016.

Credit Hours: 4 hours
Instructor Approval Required
Restricted to Graduate - Urbana-Champaign.
Instructor approval forms available in 313 Altgeld Hall beginning on the first day of Fall semester.

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