# Mathematics

**MATH 553  Partial Differential Equations**  credit: 4 hours.

Basic introduction to the study of partial differential equations; topics include: the Cauchy problem, power-series methods, characteristics, classification, canonical forms, well-posed problems, Riemann's method for hyperbolic equations, the Goursat problem, the wave equation, Sturm-Liouville problems and separation of variables, Fourier series, the heat equation, integral transforms, Laplace's equation, harmonic functions, potential theory, the Dirichlet and Neumann problems, and Green's functions. Prerequisite: Consent of instructor.

<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>39528</td>
<td>Lecture-Discussion</td>
<td>M1</td>
<td>09:30 AM - 10:50 AM</td>
<td>TR</td>
<td>143 - Altgeld Hall</td>
<td>Kirr, E</td>
</tr>
</tbody>
</table>