Instructor:

Dr. Rakhim Aitbayev, Weir 236, (575) 835-5463, aitbayev@nmt.edu
Office hours: TR 8:30–9:30 A.M., F 1:30-3:30 P.M.

Class time and place:
TR 12:35–1:50 P.M., Weir 129

Course catalog description:
Math 438, Partial Differential Equations, 3 cr, 3 cl hrs.
Prerequisite: Math 336 passed with grade C− or better.
Classification of classical partial differential equations of mathematical physics, boundary conditions, uniqueness theorems, first and second order equations, characteristics, boundary value problems, Green’s functions, maximum principle.

Textbook:

Course webpage:
http://www.nmt.edu/~aitbayev/math438/

Homework:
Homework assignments will be posted on the course webpage. Homework problems require individual work and detailed proofs. Late homeworks are accepted only until the next class day with 50% score reduction.

Tests:
There will be two take-home tests and no final exam. An individual work is required on all graded assignments.

Final score composition:
Homeworks: 60%
Tests: 40%

Final grade scale:

<table>
<thead>
<tr>
<th>Score (%)</th>
<th>0–60</th>
<th>60–66</th>
<th>66–69</th>
<th>69–72</th>
<th>72–76</th>
<th>76–79</th>
<th>79–82</th>
<th>82–86</th>
<th>86–89</th>
<th>89–92</th>
<th>92–100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>F</td>
<td>D</td>
<td>D+</td>
<td>C−</td>
<td>C</td>
<td>C+</td>
<td>B−</td>
<td>B</td>
<td>B+</td>
<td>A−</td>
<td>A</td>
</tr>
</tbody>
</table>
Academic honesty policy:

Students are required to understand and follow the NMT Academic Honesty Policy (see the NMT Course Catalog).

Auditing: Auditing students should report their auditing status to the instructor immediately. Attendance of 90% of class meetings is required for obtaining the SA grade.

Course outline: (subject to change)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
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<td>2</td>
<td>First order PDEs</td>
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<tr>
<td>3</td>
<td>Classification of equations and characteristics</td>
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<td>4</td>
<td>Initial and boundary value problems on bounded regions</td>
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<td>5</td>
<td>Integral transforms</td>
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<td>6</td>
<td>Integral relations</td>
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<td>7</td>
<td>Green’s functions</td>
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Important dates:

- Jan. 18, Tue. Classes begin
- Mar. 14–18 Spring break
- Apr. 22, Fri. Academic holiday
- May 6, Fri. Classes end