Syllabus:

This is an introductory course in Abstract Harmonic Analysis. Students enrolling in this course should be familiar with our MATH 516. Topics to be covered will include:

1. **Locally Compact Groups**: Haar measure, convolutions, group and measure algebras.
2. **Locally Compact abelian groups**: Pontryagin Duality Theorem.
3. **Basic Representation theory**: Positive definite functions on locally compact groups, Gelfan-Raikov existence theorem for irreducible unitary representations.
4. **Fourier and Fourier Stieltjes algebras of a locally compact group**

Additional topics may be taken dependent on the interest and background of the students enrolled.
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<thead>
<tr>
<th>Course No.:</th>
<th>Math 642</th>
<th>Core Course: No</th>
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<tbody>
<tr>
<td>Course Title:</td>
<td>Abstract Harmonic Analysis</td>
<td>Term: Fall 2016</td>
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**Grading:** Students will be graded on the basis of lecture presentations, final project and pre-presentation.