**Algebra**

Spring 2019

MATH-UA.0343-003

<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Liming PANG</th>
<th>Time:</th>
<th>Mon. Wed. 12:30 – 13:45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email:</td>
<td><a href="mailto:liming@cims.nyu.edu">liming@cims.nyu.edu</a></td>
<td>Classroom:</td>
<td>CIWW 317</td>
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Course Web Page: [https://cims.nyu.edu/~liming/Algebra/2019.html](https://cims.nyu.edu/~liming/Algebra/2019.html)

Office Hours: Tuesday 10:00 – 12:00


Other References:

Teaching Assistant: Rodion Déev (rodion@cims.nyu.edu)

Recitation: Friday 12:30 – 13:45 at CIWW 517

Grading Policy: Homework (20%), Quiz 1 (5%), Quiz 2 (5%), Midterm (30%), Final (40%).

Exam Schedule:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
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<tr>
<td>Quiz 1</td>
<td>Mar 01 2019</td>
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<td>Midterm</td>
<td>Mar 29 2019</td>
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<td>Quiz 2</td>
<td>Apr 26 2019</td>
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<td>Final Exam</td>
<td>TBA</td>
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Class Policy:

- Homework will be released each Thursday or Friday, and due on the following Friday during recitation. Late homework or emailed version shall NOT be accepted.

- You may discuss with your classmates about homework, but you should organize and write your solutions by yourself. Copying others’ homework is violation of university academic integrity policy.

- We will not be able to accommodate out-of-sequence exams for purposes of more convenient travel, including already purchased tickets. Please note again the date of the exams and plan your travel accordingly.

- Exams will be close book. Books, paper or electronic material, calculator or electronic devices are prohibited during exams.
Tentative Course Outline:

01/28: Elementary Set Theory
01/30: Groups and Subgroups
02/04: Additive Integer Group and Its Subgroup
02/06: Cyclic Groups and Cyclic Subgroups
02/11: Homomorphisms, Conjugations and Normal Subgroups
02/13: Isomorphisms and Automorphisms
02/20: Equivalence Relations
02/25: Cosets and Lagrange Theorems
02/27: Quotient Groups
03/04: Congruence of Integers
03/06: First Isomorphism Theorem
03/11: Direct Product of Groups
03/13: Midterm Review
03/25: Symmetric Groups
03/27: Symmetric Groups
04/01: Isometries of Euclidean Spaces
04/03: Isometries of the Plane
04/08: Group Operation
04/10: Group Operation
04/15: Counting Formula and Class Equation
04/17: Sylow Theorems
04/22: Sylow Theorems
04/29: Classification of Groups
05/01: Rings and Integers
05/06: Ideals and Ring Homomorphisms
05/08: Quotient Rings and Integral Domain
05/13: Final Review