Instructor:
Douglas Cenzer
cenzer@ufl.edu
(352) 294-2350
Office Hours: M 8 W 4 F 3 or by appointment, Little Hall 310

Course Description
MHF 4102: Basic axioms and concepts of set theory. Students present proofs. Credit will be given for, at most, MHF 4102 or MHG 5107. 3 credits
MHF 5107: Basic axioms and concepts of set theory, axiom of choice, Zorn's lemma, Schroder-Bernstein theorem, cardinal numbers, ordinal numbers, and the continuum hypothesis. 3 credits

Course Pre-Requisites / Co-Requisites
MHF 4102: MAS 4105 with a minimum grade of C.

Course Objectives
Students who successfully complete the course will be able to understand and apply the basic axioms and concepts of set theory. They will be able to read, write and present theorems and proofs in higher mathematics.

Required Textbooks and Software
- Set Theory, notes developed by the instructor.
- D. Cenzer, J. Larson, C. Porter, J. Zapletal
- Forthcoming

Course Schedule (Tentative)
Week 1, August 21-23: Review of Sets and Logic/ Chapter 2
Week 2, August 26-30: Axioms of Set Theory/ Chapter 3.1—3.5
Week 3, September 4-6: Axioms of Set Theory/ Chapter 3.6—3.8
Week 4, September 9-13: Natural Numbers and Countable Sets/ Chapter 4.1—4.2
Week 5, September 16-20: Natural Numbers and Countable Sets/ Chapter 4.3
Week 6, September 23-27: Natural Numbers and Countable Sets/ Chapter 4.4—4.5
Week 7, Sept. 30—Oct. 2: Ordinal Numbers and the Transfinite/ Chapter 5.1—5.2
Week 8, October 7-11: Ordinal Numbers and the Transfinite/ Chapter 5.3—5.4
Week 9, October 14—18: Cardinality and the Axiom of Choice/ Chapter 6.1—6.2
Week 10, October 21—25: Cardinality and the Axiom of Choice/ Chapter 6.3
Week 11, Oct. 28—Nov. 1: Real Numbers/ Chapter 7.1—7.2
Week 12, November 4—8: Real Numbers/ Chapter 7.3—7.4
Week 13, November 13—15: Real Numbers/ Chapter 7.5
Week 14, November 18—22: Models of Set Theory/ Chapter 8.1—8.2
Week 15, November 25: Ramsey Theory/ Chapter 9.1
Week 16, December 2—4: Ramsey Theory/ Chapter 9.2—9.3
**Attendance Policy, Class Expectations, and Make-Up Policy**

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies which can be found at [https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx). Excused absences must be consistent with university policies in the Graduate Catalog ([http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance](http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance)) and require appropriate documentation.

**Evaluation of Grades**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Total Points</th>
<th>Percentage of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework (about 8)</td>
<td>20 each</td>
<td>30%</td>
</tr>
<tr>
<td>Daily Participation(40)</td>
<td>2 each</td>
<td>20%</td>
</tr>
<tr>
<td>Exams (2)</td>
<td>25 each</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

**Tentative Exam Dates:** October 11; December 2

**Grading Policy**

<table>
<thead>
<tr>
<th>Percent</th>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.0 - 100.0</td>
<td>A</td>
<td>4.00</td>
</tr>
<tr>
<td>85.0 - 89.9</td>
<td>A-</td>
<td>3.67</td>
</tr>
<tr>
<td>80.0 - 84.9</td>
<td>B+</td>
<td>3.33</td>
</tr>
<tr>
<td>75.0 - 79.9</td>
<td>B</td>
<td>3.00</td>
</tr>
<tr>
<td>71.0 - 74.9</td>
<td>B-</td>
<td>2.67</td>
</tr>
<tr>
<td>67.0 - 70.9</td>
<td>C+</td>
<td>2.33</td>
</tr>
<tr>
<td>60.0 - 66.9</td>
<td>C</td>
<td>2.00</td>
</tr>
<tr>
<td>57.0 - 59.9</td>
<td>C-</td>
<td>1.67</td>
</tr>
<tr>
<td>54.0 - 56.9</td>
<td>D+</td>
<td>1.33</td>
</tr>
<tr>
<td>51.0 - 53.9</td>
<td>D</td>
<td>1.00</td>
</tr>
<tr>
<td>48.0 - 50.9</td>
<td>D-</td>
<td>0.67</td>
</tr>
<tr>
<td>0 - 49.9</td>
<td>E</td>
<td>0.00</td>
</tr>
</tbody>
</table>

More information on UF grading policy may be found at: [http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades](http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades) [https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx)

**Students Requiring Accommodations**

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [https://www.dso.ufl.edu/drc](https://www.dso.ufl.edu/drc)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

**Course Evaluation**

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at [https://evaluations.ufl.edu/evals](https://evaluations.ufl.edu/evals). Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at [https://evaluations.ufl.edu/results/](https://evaluations.ufl.edu/results/).
University Honesty Policy
UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Software Use
All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy
There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html

Campus Resources:
Health and Wellness
U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)
Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Academic Resources
E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.


Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/.


Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf
