

**640:300 Intro Math Reasoning  
Syllabus and course information**

**Course Information**

*Instructor:* Prof. Tom Benhamou

*e-mail address:* tom.benhamou@rutgers.edu

*Office Hours:* Wednesday 10-11am (Hill 205)

**Assessment**

HW 20%

Workshop and class participation 10%

Mid Term 1 15%

Mid Term 2 15%

Final exam 40%

**Recommended text** A transition to advanced mathematics, Smith, Eggen and St. Andre, 8th ed Brooks/Cole, ISBN 0-534-38214-2

**Lecture notes and supplementary materials will be provided**

**Students must comply with the technology requirements detailed on the department website:**

<https://math.rutgers.edu/academics/undergraduate/1693-technology-requirementsfor-math-courses-in-fall-2022>

<https://sas.rutgers.edu/technology-recommendations>

## **Course objectives**

This course is intended to help prepare students for high level mathematical reasoning and more generally, to help students transition from regular math courses, such as Calculus, to more abstract courses based on reading and writing mathematical proofs.

Our objective is to learn the language of mathematics, to learn to read and write structured mathematical proofs, to be able to judge if a proof is correct or incorrect and to defend a correct mathematical argument.

The subject matter chosen for this task is basic number theory, set theory and some combinatorics. However, the subject matter is not the emphasis, it is more a vehicle to learning and practicing the techniques.

## **Learning assistants program**

This section has an undergraduate Learning Assistant who is part of a university wide program that is in partnership with the Rutgers Learning Centers.

The objectives of this program are to engage students in the process of teaching and learning, to encourage students to work collaboratively and to communicate their findings.

Students will be able to interact with the Learning Assistant during weekly workshops where students work on problems together.

**Final grades:**

Cutoffs for A, B+, etc. will be determined only after the final grades are computed. There is no ‘curve’ for this course, in the sense that there are no pre-set quotas for each letter grade. Thus, one student doing well does not disadvantage another student.

**Academic Integrity:**

All students in the course are expected to be familiar with and abide by the academic integrity policy (Please visit <http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers> ). Violations of the policy are taken very seriously.

**Counseling, ADAP & Psychiatric Services (CAPS):**

*17 Senior Street, New Brunswick, NJ 08901, (848) 932-7884*

<http://health.rutgers.edu/medical-counseling-services/counseling>

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students’ efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

**Violence Prevention & Victim Assistance (VPVA):**

*3 Bartlett Street, New Brunswick, NJ 08901, (848) 932-1181*

[www.vpva.rutgers.edu/](http://www.vpva.rutgers.edu/)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

**Disability Services:**

*Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854, (848) 445-6800*

<https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

**Scarlet Listeners:**

(732) 214-9069

<https://rutgers.campuslabs.com/engage/organization/scarletlisteners>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.