

SYLLABUS
TRANSITIONS: MATH 299, SECTION 6

FALL 2013

Instructor's Name: David Duncan

Instructor's Email: duncan42[at]math.msu.edu

Instructor's Office: Wells Hall C-315

Office Hours: M, W, F 10:30-12:30. I am also available by appointment.

Lecture Times and Location: M, W 5-6:20, Wells Hall A-120

TA's Name: Kellie Stilson

TA's Email: stilson2[at].msu.edu

Recitation Time and Location: Th 5-6:20, Wells Hall A-120

Course Webpage: math.msu.edu/~duncan42/Fall13S6.html

Textbooks:

Kevin Houston, *How to Think Like a Mathematician*, Cambridge Univ. Press (2009), ISBN 978-0521719780

Matthias Beck, *The Art of Proof*, available online. (See the course page.)

Objectives: The primary goal of this course is to learn to read and write mathematics. In particular, this means the course will have a heavy emphasis on writing proofs. A passing grade in this course indicates that a student should be able to read and write mathematics at a level necessary for more advanced courses in mathematics. Along the way, we will also be discussing various aspects of set theory, number theory and real analysis. You are expected to learn this material as well; however, at each stage, the focus will be on understanding and writing *proofs*.

Homework: Each day, in class, I will tell you which homework problems will be due the following class day. I will also post this information on the course webpage. Unless otherwise specified, homework will be due each day at the beginning of class. If you are ever unsure which problems are due, please ask me. It is your responsibility to turn in the correct assignment at the correct time. I will drop the lowest two homework scores when computing your final grade. **Late work will not be accepted.** Homework help is available during my office hours, during recitation, and at specified hours in the Math Learning Center.

Quizzes: Quizzes will be given every Thursday during the recitation. Your performance on the quizzes will be a good indication of your standing in the class. I will drop the lowest quiz score when computing your final grade.

Exams: There will be two midterm exams and one final exam for this course.

October 3: Midterm 1 - Sets and functions, formal logic;

November 7: Midterm 2 - Proof techniques, number theory;

December 9: Final - Real numbers.

The midterms will be held during the usual recitation time in the usual recitation room. The final exam will be a group exam (i.e., the same exam taken by all seven sections of this course). I will let you know when we have finalized a time and location for the final. You must take all exams at the times specified.

Final Grades: Here is the breakdown of how your final grade will be computed:

Homework	25%
Quizzes	20%
Midterm 1	15%
Midterm 2	15%
Final	25%

Here is a tentative grade scale:

$$\begin{array}{lll} 90 - 100\% = 4.0; & 80 - 84\% = 3.0; & 70 - 74\% = 2.0 \\ 85 - 89\% = 3.5; & 75 - 79\% = 2.5; & 60 - 69\% = 1.0 \end{array}$$

If the situation warrants, I retain the right of assigning grades higher than would otherwise result from the scale above.

Tips for Success: Your attendance and participation in lecture and recitation are crucial to your success. However, successful completion of the homework is equally important. If you can do all the homework problems comfortably (and correctly), you are almost certain of a good grade. If you neglect the homework, there is very little which can earn you more than a passing grade. As a final remark, simply memorizing what is covered in lecture, recitation, etc. will not be of much help — you must do math to learn math.

Cheating, plagiarism, and their cousins will not be tolerated. Also, please turn your cell phones off, or put them on silent mode during class.