MATH 564: DYNAMICAL SYSTEMS I. SPRING 2020

Instructor: Dr. Saša Kocić

Office: Hume Hall 312

Office hours: Tu/Th 1:30 -2:30 pm, or by appointment

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Course Information

Textbook:	B. Hasselblatt and A. Katok: A first course in Dynamics with a panorama of recent developments, 1st Edition, Cambridge University Press (2003).
Time/Place:	TTh 9:30-10:45 am, Hume Hall 331

Course description and objectives

This course is an introduction to the theory of dynamical systems. Dynamical systems is a major mathematical discipline closely intertwined with many other areas of mathematics. The course will cover some basic examples of dynamical systems, in particular circle maps, an introduction to conservative, hyperbolic dynamics and chaos, and some connections with ergodic theory and number theory. The objective of the course is to give students a necessary background for further study in dynamical systems or related areas.

Course expectations

Since this is a 500 level course, there are different expectations for undergraduate and graduate students enrolled in the course. In addition to completing the homework assigned to the undergraduates, graduate students might be expected to complete a set of supplemental homework problems that will focus on more theoretical aspects of dynamics. The examinations for the undergraduate and graduate students might be different.

Evaluation

Three tests will be worth 50% of your grade, homework 15%, participation 5% and the final exam will be worth 30% of your grade. The following scale will be used to determine your final grade. Your course grade will be based on your percentage score (S) and determined according to the following scale.

A	$90 \leq S \leq 100$	A-	$87 \leq S < 90$	B+	$85 \leq S < 87$	B	$80 \leq S < 85$
B-	$77 \leq S < 80$	C+	$75 \leq S < 77$	C	$70 \leq S < 75$	D	$60 \leq S < 70$
F	$S < 60$						

Homework

Homework will be assigned almost every week. Working on homework problems will be beneficial to you since the test problems may be similar. You can work on homework problems with your fellow students, but the work submitted must be your own. If you have any questions about the homework, do not hesitate to stop by my office!

Midterm tests

All tests will count equally. The lowest test grade will be replaced by the final exam percentage grade if that improves a student's overall grade. There will be no make-up midterm tests (except those authorized by the University). If a student has a valid reason for missing a test, documentation must be provided (e.g., a doctor's note) and the final exam grade will be rescaled accordingly.

Additional Policies

Any student who must miss a scheduled exam because of an official university function must reschedule with the instructor to take the exam at a time before the exam is scheduled to be given. Official documentation must be provided. An I grade will not be given without the permission of the Department of Mathematics. Every student must take the final exam at the time scheduled.

Attendance and Participation

Attendance is mandatory! Students may have at most two undocumented absences. Any additional absences not documented by a doctor's note or an official letter from the University will result in the decrease of the student's participation grade.

Academic honesty

The following statement is the policy of Department of Mathematics regarding academic honesty: cheating on any exam, quiz, classwork, or homework, theft of exam questions or possession of exam questions prior to the time for the exam shall all be offenses subject to the appropriate penalties. The penalty for commission of any offense set out above is failure in the course, and subject to the approval of the Chancellor, dismissal or suspension from the university.

Withdrawal deadline

Withdrawal deadline for the 2020 Spring semester is Monday, March 2. After the Course withdrawal deadline, courses dropped will be recorded on University records and the W grade will be recorded if the student is not failing the course at the time of withdrawal; otherwise the grade recorded will be F. After the course withdrawal deadline, a student may drop a course only in cases of extreme and unavoidable emergency as determined by the academic dean; dropping a course after the deadline will not be permitted because of dissatisfaction over an expected grade or because the student is changing his/her major.

Important Dates

Test 1: Thursday, February 20.

Test 2: Thursday, March 26.

Test 3: Thursday, April 23.

Final: Thursday, May 7th, 2020 at 8 am.

Academic needs

It is the responsibility of any student with a disability who requests a reasonable accommodation to contact the Office of Student Disability Services (915-7128). Contact will then be made by that office through the student to the instructor of this class. The instructor will then work with the student so that a reasonable accommodation of any disability can be made.