

**DEPARTMENT OF MATHEMATICAL AND COMPUTATIONAL SCIENCES
UNIVERSITY OF TORONTO MISSISSAUGA**

**MAT332H5F LEC0101
Introduction to Nonlinear Dynamics and Chaos
Course Outline - Fall 2016**

Class Location & Time	Tue, 03:00 PM - 05:00 PM IB 377 Thu, 01:00 PM - 02:00 PM IB 377
Instructor	Jacopo De Simoi
Office Location	DH3040
Office Hours	Tue 02:00PM - 03:00PM Thu, 02:00PM - 03:00PM
E-mail Address	jacopods@math.utoronto.ca
Course Web Site	See Blackboard
Teaching Assistant	Miodrag Sokic
E-mail Address	miodrag.sokic@utoronto.ca

Course Description

Stability in nonlinear systems of differential equations, bifurcation theory, chaos, strange attractors, iteration of nonlinear mappings and fractals. This course will be geared towards students with interest in sciences. [36L, 12T]

Prerequisite: MAT232H5/233H5, 223H5/240H5, 212H5/242H5/244H5

Exclusion: MAT335H1, MATC35H3 (SCI)

Distribution Requirement: SCI

Students who lack a pre/co-requisite can be removed at any time unless received explicit waiver from department.

Textbooks and Other Materials

An Introduction to Dynamical Systems, Continuous and Discrete. Clark Robinson. 2nd edition. American Mathematical Society.

Assessment and Deadlines

Type	Description	Due Date	Weight
Assignment	Bi-weekly take home assignments	On-going	40%
Term Test	Midterm test	2016-10-25	20%
Final Exam		TBA	40%
Total			100%

More Details for Assessment and Deadlines

Homework is due at the beginning of the tutorial sessions (Monday) on the following days:

Sept 19, Oct 3, Oct 17, Oct 31, Nov 14, Nov 28

Penalties for Lateness

No late assignments accepted. No make-up tests. A late hand-in will result in zero credit. An undocumented absence from the test will result in zero credit.

Procedures and Rules

Missed Term Work

To request special consideration, bring supporting documentation to the instructor in person during office hours at least one week in

advance.

In case of illness, bring a UTM medical certificate (it can be found on Blackboard) to the instructor within one week of the missed work. The certificate must specify the exact period during which you were unable to carry out your academic work.

Missed Final Exam

Students who cannot write a final examination due to illness or other serious causes must file an [online petition](#) **within 72 hours of the missed examination**. Original supporting documentation must also be submitted to the Office of the Registrar **within 72 hours of the missed exam**. Late petitions will **NOT** be considered. If illness is cited as the reason for a deferred exam request, a U of T Verification of Student Illness or Injury Form must show that you were **examined and diagnosed at the time of illness and on the date of the exam, or by the day after at the latest**. Students must also record their absence on ACORN on the day of the missed exam or by the day after at the latest. Upon approval of a deferred exam request, a non-refundable fee of \$70 is required for each examination approved.

Academic Integrity

Honesty and fairness are fundamental to the University of Toronto's mission. Plagiarism is a form of academic fraud and is treated very seriously. The work that you submit must be your own and cannot contain anyone else's work or ideas without proper attribution. You are expected to read the handout How not to plagiarize (<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>) and to be familiar with the Code of behaviour on academic matters, which is linked from the UTM calendar under the link Codes and policies.

Final Exam Information

Duration: 2 hours
Aids Permitted: None

Additional Information

When writing an email to the instructor or the TA, please make sure to write your full name and Student ID in the email body. Also, please use your official utoronto email account when contacting the instructor or the TA; emails coming from any other account will be *silently ignored*.

Last Date to drop course from Academic Record and GPA is November 9, 2016.