

CHMC11HF

Principles of Analytical Instrumentation

FALL 2017 COURSE SYLLABUS

Course Objective

To describe and introduce the fundamentals of Analytical Instrumentation. An introduction to the workings and application of modern analytical instrumentation. A range of modern instrumentation including NMR spectroscopy, Mass Spectrometry, Microscopy. Light Spectroscopy (visible, Ultra Violet, Infrared, Fluorescence, Phosphorescence), X-ray, Chromatography and electrochemical separations will be addressed.

Course Instructors

Prof. Andre Simpson, e-mail: andre.simpson@utoronto.ca

Office hours: Mondays 12-2 pm in the Environmental NMR Centre (SY050)

Course location and time : Thursday 2-5pm in AC 223

Optional Text: Students are strongly encouraged to reiterate what they learn in the lectures with the relevant sections from the following textbook:

Principles of Instrumental Analysis, Skoog 6th Edition..

PLEASE DOWNLOAD AND PRINT THE LECTURE MATERIAL BEFORE YOU COME TO EACH CLASS FROM BLACKBOARD. THERE WILL BE SPECIAL "EASY PRINT" FORMAT. BRING THE NOTES SO YOU CAN ADD TO THEM DURING CLASS

Evaluation:

Mid-term Exam **30%**

Final Exam **70%**

Course Policies and General Information:

Course Announcements: Announcements, updates to readings, assignment topics, requirements, and evaluation, etc. will be posted to the course site. Students are responsible for checking the course website regularly. **Please, arrange your UTORONTO emails to accept the course announcements.**

Office Hours: Students are welcome to ask questions or resolve course-related problems by contacting the Course Instructor either by dropping in during scheduled office hours or by making an appointment. Students are responsible for work missed as a result of absence; the Course Instructors will not re-teach material covered in the lectures and lab sessions.

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Missed Mid-term Test: The exact dates of the mid-term tests are provided in the

AC312 and use the available general help hours. The schedule can be viewed at the link:

<http://ctl.utsc.utoronto.ca/mslc/>

Computer Use: Ethical use of University computers is expected at the University of Toronto Scarborough. Guidelines are set out in the UTSC Calendar. It is expected that the equipment and/or resources accessed in the UTSC Library and the computer labs are to be used for academic research, assignments, and course activities only.

Academic Integrity: Honesty and fairness are considered fundamental to the University's mission, and, as a result, all those who violate those principles are dealt with as if they were damaging the integrity of the University itself. When students are suspected of cheating or a similar academic offence, they are typically surprised at how formally and seriously the matter is dealt with - and how severe the consequences can be if it is determined that cheating did occur. The University of Toronto treats cases of cheating and plagiarism very seriously.

Examples of offences for which you will be penalized include (but are not limited to):

- Using any unauthorized aids on an exam or test (e.g., "cheat sheets")
- Representing someone else's work or words as your own - plagiarism (see web document "How not to plagiarize" available online at <http://www.utoronto.ca/writing/plagsep.html>)
- Falsifying documents or grades
- Purchasing an essay
- Submitting someone else's work as your own
- Submitting the same essay or report in more than one course (without permission)
- Looking at someone else's answers during an exam or test
- Impersonating another person at an exam or test or having someone else impersonate you
- Making up sources or facts for an essay or report.

As a student it is your responsibility to ensure the integrity of your work and to understand

[3](http://www.utoronto.ca/ac44(de)-6(m)-2(i)1(a)4((t)-2(u a)-2(e)4(g)10(r)3(i)-2(t)-2/he)4(m)-2(or)10(up s)3(</p></div><div data-bbox=)

C11 Course Overview

Lectures

Week

Evaluation

1 Mid Term Quiz = 25%

1 Term Paper = 25%

1 Final Exam = 50%

Office Hours

Mon 10am – 12am SY050 (Environmental NMR Center)

Environmental NMR Center -SY050 new science building (take elevator to basement of the science research building and bang on the large double door that are located around the corner labelled “Environmental NMR Center”)

E-mail : andre.simpson@utoronto.ca to make appointment.