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CHMC16H3 - Analytical Instrumentation

The course will be split into 5 main sections :

Section 1. A week will spent on UV and 2 weeks on FT-IR
Section 2. Two weeks will be spent learning NMR, MS, and LC
Section 3. Three weeks will be spent on GC and GC-MS
Section 4. A collaborative research project for two weeks
Section 5. A second collaborative research project for two weeks

Irrespective of which instrument you are using, we will always meet in S165.

Assessment

There will be ***no*** final exam for this course. Students will be assessed on the following criteria.

1) 5 x Lab reports. Lab reports are worth 12% each.
2) 1 x term paper (20%)
3) Ability and Performance in the Lab sessions (20%). Remember this is a lab course you will be evaluated on your involvement, safety (lab glasses, coat), you ability to work with your team members, your ideas especially in "the research project section", your ability to keep a lab manual that can both be used to verify your results, and repeat your work, your timeliness, and your ability to organize your time and leave the lab in good shape.

Lab reports are to be written individually and each student will be expected to attach their own copies of the relevant chromatograms, spectra etc with their reports.
Plagiarized reports will not be accepted.

Acknowledgement : Some sections of these practicals have modified from "Chemistry Experiments from Instrumental Methods" by Sawyer, Heineman and Beebe.

Week Number

	1	2	3	4	5	6	7	8	9	10	11	12
GC/ GCMS	A	A	*A*	B	B	*B*	C	C	*C*	D	D	*D*
UV/VIS FT-IR	B	B	B	A	A	A	D	D	D	C	C	C
Train NMR,MS	C/D	C/D					A/B	A/B				
Res 1.			C/D	C/D					A/B	A/B		
Res. 2					C/D	C/D					A/B	A/B

Green teaching labs S165 : Red NMR S139 : *Blue* **= New Science Building**

Contacts and Office Hrs

Office Hrs : Wed 4-5pm. In Room S139 (knock if the door is closed !)
E-mail : asimpson@utsc.utoronto.ca

Lab Books, Cleaning Up, and Leaving

Before Leaving

Make sure all chemicals have been returned and that all apparatus, has been cleaned an returned to its correct location. YOU WILL LOOSE MARKS IF YOU LEAVE A MESS. LOTS OF THE EQUIPMENT YOU WILL BE USING IS VERY EXPENSIVE RESEARCH EQUIPMENT, TREAT IT WITH RESPECT !!

Lab Manuals :

Lab Manuals are to be kept throughout the course. You *must get these initialed by the instructor or demonstrator* at the end of each session after you have cleaned up and shut down all the instrumentation properly. Lab manuals must be handed in along with the last lab report. **It is your responsibility to get you lab book signed each week. IF SIGNATURES OR LAB BOOKS ARE MISSING AT THE END OF THE COURSE THEN YOU WILL LOOSE MARKS.**

All students are required to make their own notes and observations in the lab books as they feel appropriate