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Students will learn about analytical techniques used in environmental chemistry, including: gas and liquid chromatography, mass spectrometry, atomic absorption, and ultraviolet-visible spectroscopy. Environmental sampling and ecotoxicology will also be covered. Students will carry out laboratory analyses and receive hands-on training with analytical instrumentation commonly used in environmental chemistry.

CHMB55H3 and CHMC11H3. \_\_\_\_\_

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CHMC16H3, CHM317H (St. George campus), CHM410H (St. George campus).

All course work including the Research Project and Laboratory Reports must be prepared using MS Office (or equivalent) software and submitted using Turnitin.com (see section on plagiarism). Students will also be required to submit hardcopies of their work to the course instructor or teaching assistant.

Late assignments will not be accepted and assigned a grade of zero.

There is no required textbook for this course and lecture notes will cover Examination material will include emphasized lecture material only (lecture material will be discussed in detail in class). Students should make every attempt to attend lectures regularly.



Monday, January 8 <sup>th</sup>	- Course introduction and overview - Sampling and isolation of compounds for quantification and identification - Basics of analytical measurements and quantification	
Monday, January 15 <sup>th</sup>	- Gas chromatography & related analytical detectors	
Monday, January 22 <sup>nd</sup>	- Liquid chromatography & related analytical detectors	
Monday, January 29 <sup>th</sup>	- Metal analysis (atomic absorption and atomic emission)	
Monday, February 5 <sup>th</sup>	- Guest speakers (2-4pm)	
Monday, February 12 <sup>th</sup>	- Student Project Presentations (order of presentations to be determined)	
Monday, February 19 <sup>th</sup>	<b><i>Family day &amp; reading week</i></b> <b><i>No lecture</i></b>	
Monday, February 26 <sup>th</sup>	Group 1 – Analysis of PAHs in soil by GC Group 2 – Analysis of water by LC & IC	
Monday, March 5 <sup>th</sup>	Group 1 – Analysis of PAHs in soil by GC (continued) Group 2 – Analysis of water by LC & IC (continued)	
Monday, March 12 <sup>th</sup>	Group 1 – Analysis of PAHs in soil by GC (continued) Group 2 – Analysis of water by LC & IC (continued)	
Monday, March 19 <sup>th</sup>	Group 2 – Analysis of PAHs in soil by GC Group 1 – Analysis of water by LC & IC	
Monday, March 26 <sup>th</sup>	Group 2 – Analysis of PAHs in soil by GC (continued) Group 1 – Analysis of water by LC & IC (continued)	
Monday, April 2 <sup>nd</sup>	Group 2 – Analysis of PAHs in soil by GC (continued) Group 1 – Analysis of water by LC & IC (continued)	
Friday, April 6 <sup>th</sup>	<b><i>Last day for submission of term assignments</i></b> <b><i>No laboratory experiments</i></b>	