

**2023 Summer Sessions**  
**Special Programs for Global Engagement, Office of International Initiatives**  
**Georgia State University**

***CHEMISTRY TRACK***

**July 20- August 03, 2023**

**Instructor for Chemistry seminars:** Dr. Maged Henary  
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**Instructor for English Language seminars:** Dr. John Bunting  
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**1. SEMINAR DESCRIPTION**

The “**Introduction to Structure Elucidation of Organic Compounds**” seminars are designed to introduce the techniques of IR,  $^1\text{H-NMR}$ ,  $^{13}\text{C-NMR}$ , and mass spectrometry as powerful tools for structure elucidation in organic chemistry. Recognition of chemical structure is a very important problem currently solved by molecular spectroscopy, particularly IR,  $^1\text{H-NMR}$ ,  $^{13}\text{C-NMR}$ , and mass spec. The structure recognition of an unknown substance is made by comparing its spectrum with successive reference spectra of standard compounds, i.e., chemical compounds of known chemical structure, stored in a spectral database. To elucidate a chemical structure of small molecules, a trained chemist, can use one of these spectral methods or a combination of them. Students will have the opportunity to visit the museum at the Centers for Disease Control and Prevention headquarters. This museum showcases the historical involvement of the Centers for Disease Control in promoting the advancement of public health. Students will also have the chance to participate in culture and language discussions with Georgia State University students to learn about common cultural practices and speech in the United States.

**2. ATTENDANCE**

Attendance is essential for success. The Office of International Initiatives will be notified of any absences. Please talk with the instructors if you are not able to attend any of the seminars.

3. **SCHEDULE**

<b>Date</b>	<b>Time</b>	<b>Seminar</b>	<b>Content</b>	<b>Classroom</b>
Monday, July 24	9:00am- 12:00pm	Chemistry	Introduction of functional groups	
	2:00pm- 5:00pm	English	Culture shock: Adapting to Life in the U.S. and Atlanta	
Wednesday, July 26	9:00am- 12:00pm	Chemistry	Learning Field Trip (Visit to CDC)	
	2:00pm- 4:00pm	English	Business Etiquette	
	4:00pm- 5:00pm	Field Trip	Visit to GSU Business School	
Thursday, July 27	9:00am- 11:00am	English	Exploring Human & Civil Rights	
	11:00am- 12:00pm	Field Trip	Visit to the Center for Civil and Human Rights	
Friday, July 28	9:00am- 12:00pm	Chemistry	Introduction of functional groups	
	2:00pm- 4:00pm	English	Dining out in Atlanta	
	4:00pm- 5:00pm	Field Trip	Visit to a local restaurant	
Tuesday, August 01	9:00am- 12:00pm	Chemistry	IR and Mass Spectroscopy	
	4:00pm- 5:00pm	Field Trip	Visit to CNN	
Tuesday, August 02	9:30am- 12:30pm	Chemistry	<sup>13</sup> C-NMR, <sup>1</sup> H-NMR Spectroscopy	
	2:00pm- 4:00pm	English	The News Media	

This document is a guide. Changes can be made by the instructors as needed.