CHEM 025 Intro to Forensic Chemistry
MTWR 5:45 – 7:45 PM
264 Reiss

Instructor: Dr. Mohammad Itani
Office: 240 Reiss **Office Hours**: M-F 12:00 – 1:00 PM
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With the beginning of the crime scene investigation (CSI) shows on TV, people started to show curiosity and interest in this field. West Virginia University was one of the leaders in starting a forensic chemistry major in their program. After 9/11/2001, the demand for forensic investigators was overwhelming which urged more universities to start this major in their programs. I though it would be a good idea to offer a non-science major course that fulfills the requirements for chemistry or a science course and at the same time it would be an interesting topic for a lot of non-science major students.

Text Book: "Investigating Chemistry, A Forensic Science Perspective", by Matthew E. Johll, 3nd Edition, Freeman
Homework: Sapling Learning https://www.saplinglearning.com/ibiscms/login/ or http://www.macmillanlearning.com/Catalog/elearningbrowsebymediatype/SaplingLearning

Course Description

This is a 3 credit course which is designed for the non-science major students to stimulate their interest in the forensic chemistry and help them appreciate and understand ***the basic fundamental concepts of chemistry***. In each chapter, chemical concepts related to a forensic topic are introduced in addition to a brief description of an analytical instrumentation or methodology used in crime investigation and a case study.

The main purpose of this course is to deliver the chemistry concepts to students without going into great details.

Course Objectives

By the end of the semester, it is expected that the student should have a clear idea of what forensic chemistry is all about including definition, history, sub-disciplines, evidence handling, reliable analytical methods and accurate data, critical thinking and scientific approaches in crime investigation in addition to the basic fundamental concepts of general chemistry. Student should have a general idea about the analytical instrumentation used in a forensic lab.

Honor System

The Georgetown University Honor Pledge:
In the pursuit of the high ideals and rigorous standards of academic life,

I commit myself to respect and uphold the Georgetown University Honor System:
To be honest in any academic endeavor, and
To conduct myself honorably, as a responsible member of the Georgetown community, as we live and work together.

You are responsible for familiarizing yourself with the Georgetown University Honor System. Information can be found at: http://www.georgetown.edu/undergrad/bulletin/regulations6.html

Classroom Conduct

In this course, as well as in all other courses, the academic policies and conducts of Georgetown University are applied.
I am committed to maintaining a classroom environment free of harassment and discrimination. I value different backgrounds and communication styles and I ask that all of you contribute to making a high standard of classroom civility by being respectful of your peers, your instructor and the regulations outlined in this syllabus. The use of cell phones, PDA's, laptop computers, etc. is not allowed during lectures. Eating or drinking in the classroom is prohibited by Georgetown University's policy.

Course Structure

Attendance is mandatory and counts 10% of the final grades. Please inform me if you have an excuse. One unexcused absence will cost you 2%. Two unexcused absence will cost you 5%. Three unexcused absence will cost you 10%.

Problem Sets: There will be assignments of problem sets for each chapter which will help you tremendously in the exams. **No grades on this set of problems**

Exams: There will be 3 x 60 min exams on **June 10, June 18, and June 26**. Each exams counts 20% of the final grades

Sapling Homework: The Sapling homework counts for 20% which will replace the lowest score exam

Final Exam: The final exam is a comprehensive and cumulative exam which counts 30% of the final grades and will be given on **July 3rd** on the last class session.

Letter grades are determined based on your cumulative total raw score during the semester. The letter grade equivalents are as follows:

Raw score	*Letter grade*	*Raw score*	*Letter grade*
92.5-100	A	72.5-77.4	C
89.5-92.4	A-	69.5-72.4	C-
87.5-89.4	B+	67.5-69.4	D+
82.5-87.4	B	59.0-67.4	D
79.5-82.4	B-	00.0-58.9	F
77.5-79.4	C+		

Subjects to Be Covered

Chapter I Introduction to Forensic Chemistry
Chapter II Evidence, Collection and Preservation
Chapter III Atomic Clues
Chapter IV Chemical Evidence
Chapter V Chemistry of Bonding: Structure and Function of Drug Molecules
Chapter VI Properties of Solutions I: Aqueous Solutions
Chapter VII Properties of Solutions II: Intermolecular Forces and Colligative Properties
Chapter VIII Drug Chemistry
Chapter IX Arson Investigation
Chapter X Chemistry of Explosions
Chapter XI Estimating the Time of Death
Chapter X11 The Nuclear Age: Energy, Medicine, and Terrorism
Chapter XIII Poisons
Chapter IXV Identification of Victims: DNA Analysis

Dates to Remember

Classes Begin	6/3/2019
Classes End	7/3/2019
Last Day to Add/Drop	6/5/2019
Last Day for Pass/Fail	6/5/2019
Last Day for Withdrawal	6/24/2019
Undergraduate Grades Due	7/12/2019

Looking forward to working with you and good luck!