



Philadelphia University
Faculty of Science
Department of Biotechnology and Genetics Engineering
Fall Semester, 2008/2009

<u>Course Syllabus</u>	
Course Title: Forensic Medicine	Course code:
Course Level:	Course prerequisite (s) and/or corequisite (s):
Lecture Time:	Credit hours: 3 Credit Hours

Academic Staff Specifics

Name	Rank	Office No.	Office Hours
Salem Al-Maloul	Associate Professor	908	

Course module description:

The course introduces the students to some disciplines of forensic medicine/science, with emphasis on the use of forensic DNA analysis in human individualization and identification. Lectures will cover some of the principles and techniques of forensic investigation in forensic identification, forensic entomology, forensic toxicology, crime scene, etc.

Course module objectives:

At the end of this course, the students should be familiar with some of the various applications of forensic medicine/science, and able to apply the state of the art techniques in solving or finding answers to criminal settings.

Course/ module components

- Books (title , author (s), publisher, year of publication)

Title: Forensic Science: An Introduction to Scientific and Investigative Techniques.

Author(s)/Editor(s): S.H. James & J.J. Nordby

Publisher: Taylor & Francis

Year: 2005

Edition: 2nd edition

Teaching methods:

Lectures, discussion groups, visits

Learning outcomes:

Upon the successful completion of this module, students should be:

1. familiar with the various disciplines of forensic medicine/science
 2. familiar with some of the forensic techniques used in forensic investigations.
- Cognitive skills (thinking and analysis).
 1. Students will have a basic understanding of the scientific method.
 2. Students will have the opportunity to practice thinking critically and analytically and reason logically using current information and past experiences.
 3. Students will have practice in assessing basic sources of information and how to evaluate and use this information.
 - Communication skills (personal and academic).

Students will gain experience in effective communication skills by practicing, listening, reading, writing and speaking clearly.
 - Practical and subject specific skills (Transferable Skills).
 1. Students will develop an awareness of the relationship between science and technology in terms of the life and forensic Biotechnology.
 2. Emphasis will be placed upon an analytical problem-solving approach to forensic biotechnology. This approach will be implemented in lectures. Students will be given the opportunity to discuss forensic techniques during scientific visits.

Assessment instruments

<u>Allocation of Marks</u>	
<u>Assessment Instruments</u>	<u>Mark</u>
First examination	25
Second examination	25
Final examination	50
Laboratory	
Reports, research projects, Quizzes, Home works, Projects	
Total	100

Expected workload:

On average students need to spend 2 hours of study and preparation for each 50-minute lecture/tutorial.

Attendance policy:

Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the relevant college/faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

Course/module academic calendar

Week	Basic and support material to be covered	Homework/reports and their due dates
(1)	Orientation & Introduction	
(2)	The Crime Scene	
(3)	Forensic Entomology -I	
(4)	Forensic Entomology -II	
(5)	Forensic Toxicology -I	
(6)	Forensic Toxicology -II	First examination
(7)	Blood Markers	
(8)	DNA Extraction	
(9)	Polymerase Chain Reaction	
(10)	Short Tandem Repeats	
(11)	Variable Number Tandem Repeats	Second examination
(12)	Restriction Fragment Length Polymorphism	
(13)	Single Nucleotide Polymorphism	
(14)	Mitochondrial DNA	
(15)	Y-Chromosome STR	
(16)		Final Examination

Module references

***Books**

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***Journals**

***Websites:** Students will be oriented toward various forensic websites.