

What is this course about? (curriculum, course outline)

King Saud University - College of Medicine - Department of Pathology

Forensic Medicine and Forensic Toxicology

FORM 321

2019

Forensic Medicine and Toxicology - male and female students

Khaldoon Aljerian - MBBS MHSc FRCPC FCAP

Ethicist: Medical errors, research, organizational, conflict resolution, patient rights

Pathologist: Autopsy, surgical, cytology, neuropathology, placental & fetal

Forensic Medicine expert: Forensic neuropathology, death certification, Sudden Unexpected death, hospital deaths, death in custody and under protection of law and/or occupier, mass disasters

## **COURSE OUTLINE**

2 credit hours covering two different courses. The first is the original course “Forensic medicine and forensic toxicology – FORM321” offered by the unit of “forensic medicine and forensic toxicology.” The second course is medical toxicology offered by emergency medicine. Although both courses are under the umbrella of FORM321 they are two separate courses, taught by different disciplines, different departments, and with different goals and objectives.

### **Class schedule:**

- Female: As agreed with Group manager
- Male Group A: As agreed with Group manager
- Male Group B: As agreed with Group manager

**Office hours:** Monday – Wednesday 3 - 4 pm

**e-mail:** [khaldoonaljerian@gmail.com](mailto:khaldoonaljerian@gmail.com)

**e-education:** [e-education FORM321 2019](#)

### **Course description:**

The course is an introduction to Forensic Medicine, Postmortem pathology, Forensic sciences and Toxicology. FORM 321 is conducted in English and presented to students who have completed the following pre-requisite disciplines including subspecialties (and prior to residency): Basic medical sciences, Laboratory medicine and pathobiology, Internal medicine, Surgery, Anesthesia, Pediatrics and Obstetrics and Gynecology. The students will be introduced to legal, professional and ethical aspects of Forensic Medicine, identification, cause, mechanism and manner of death, unexpected and natural death, Forensic Sciences, mechanical and physical trauma and injury (including that of the underprivileged and minorities), asphyxia and toxicology. The students will be evaluated on their various levels of learning, knowledge, cognitive skills, interpersonal skills and responsibility, and communication and information technology.

Your textbook is Simpson's Forensic Medicine 13th ed. - J. Payne-James, et. al. (see references below). Thorough understanding of the material in the textbook is essential for the course. You will not be able to obtain this from superficial reading of the chapters but you should master the terminology and the concepts in the textbook because this is a 300 level course (or optimally higher). The lectures, presentations, class discussions will assume that you are familiar with this information so that we can emphasize other topics, discussion and questions during class together. Your cooperation and feedback will create an optimal environment for learning that we can all enjoy.

### **Course Objectives:**

The students will be able to identify, understand and apply:

- The legal, professional and ethical aspects of Forensic Medicine including but not restricted to postmortem medicine.
- Various methods of identification, live and dead individuals.
- Cause, mechanism and manner of death when filling the death certificate.
- Unexpected and natural death.
- Forensic Sciences.
- Mechanical and physical trauma and injury (including underprivileged and minorities) and asphyxia.
- Postmortem toxicology.

The students will be able to compare and contrast various:

- Causes of death.
- Types of trauma.
- Mechanisms of death.

The student will be able to compose a scientific manuscript (optional) with critical analysis of previous references and suggest the benefits of the paper to the community. The student will demonstrate interpersonal skills, responsibility and will be able to communicate and utilize information technology.

### **Teaching Methods:**

Interactive lectures

Presentations - Case scenario/PBL

Project (This will be an elective activity at the professor's discretion)

eEducation

**Assessment Methods:**

Exam: Midterm and Final written

Case scenario/PBL presentations, Continuous assessment (quizzes), Death certification

Project: Scientific manuscript (This will be an elective activity at the professor's discretion)

**Components of Final Mark:**

Midterm (20 grades)

Midterm; MCQ & Case scenario exam 10

Midterm; Presentations - Case scenario/PBL 10

Final (30 grades)

Midterm; Continuous assessment / quizzes 5

Final; Death certification, presentation 10

Final; MCQ & Case scenario exam 15

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Total 50

**Teaching Philosophy**

The methods of teaching and assessment have been chosen to target the full spectrum of the cognitive and affective domains of learning, originally described by Bloom and colleagues. Unfortunately, our course does not grant us the time to incorporate the psycho-motor domain. However, we will be offering this learning experience in a postgraduate program. One objective of this course is to discuss Forensic related topics.

Interaction in class and in your eEducation ( [e-education FORM321 2019](#)), with your colleagues and course supervisors is imperative to learning. The eEducation will give you 24/7 access to the FORM 321 eEducation discussions and important documents for your course.

It is essential to understand that you are learning and how this is done. It is about what you do with the posts and comments.

How do you react?

How is this related to forensics?

What am I going to do with this information?

Does this post/comment/link/article raise any questions?

How would I answer them?

How would I evaluate that state, correct it or make it better?

These are the some of the objectives of the course.

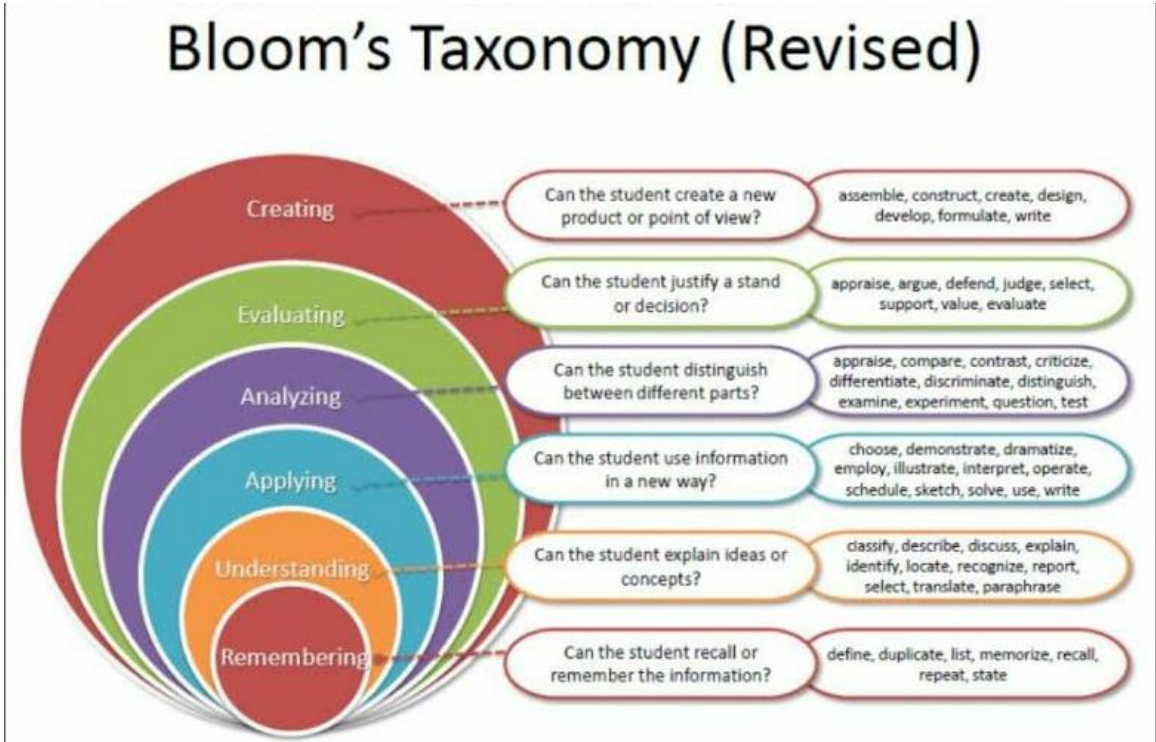
### **The “Cognitive Domain”**

The project will show your ability to create a forensic related scientific project/manuscript and evaluate, analyze and review others publications. Filling the death certificate means you have learned to apply your newly adapted knowledge and analyse cases of death. Presenting a forensic topic reveals your ability to understand value and organise your knowledge.

My future colleagues, the reason we are all putting up posts is not to test if you can read, if you have high speed internet, etc...It is to stimulate you to think about Forensics...to target the awareness and growth in attitudes, emotion, and feelings towards Forensics...to see if you can look at things and see them through a Forensic “lens” and to stimulate a project.

### **The “Forensic Lens” and the "Affective Domain"**

Targeting learning in the "affective domain" (similar to the way we target the cognitive domain) has several levels. The lowest is "receiving" (passive attention) but it is also the most essential (similar to remembering in the cognitive domain of Bloom's Taxonomy, it is also the lowest level of the cognitive domain but the most essential). Then comes responding or "reacting". Next is "valuing" and understanding if this information has worth. Then comes "Organizing" (the valued info/ideas, etc). The highest is "Characterizing", meaning you will have a value/opinion/belief towards the valued and organized information which will affect your behavior or your character.



**Psychomotor Domain**

This will be an elective activity at the professor's discretion. Including COD and DC.

**Presentation rubric:**

Points	1	2	3	4	Total
<b>Subject Knowledge</b>	Student does not have grasp of information. Many statements are incorrect and unsupported.	Student is uncomfortable with information, leaves out important details and/or presents inaccurate information.	Student is at ease with topic and presents accurate information.	Student demonstrates full grasp of the topic, presenting complete and accurate information.	
<b>Explanations from Evidence</b>	The student either has no conclusions or the conclusions are not related to the evidence provided in the presentation.	Conclusions are very poorly related to the evidence provided in the presentation.	The student uses some data, prior knowledge, research, and experience to draw conclusions but ignores other evidence introduced during the presentation.	The student uses all available data and his/her prior knowledge/research and experience to draw conclusions. If appropriate, student includes discussion of conflicting evidence.	
<b>Tables Graphs Graphics</b>	Presentation includes no graphics or graphics are unrelated to the subject and/or distract from the message.	Student doesn't explain tables/graphs, uses inappropriate graph type(s) or graphics conflict with conclusions.	Graphics illustrate evidence which supports the conclusion, appropriate graph type(s) used. Larger, smaller or simplified graphics would be more clear.	Appropriate graphics clearly present information which supports the conclusion and the student accurately explains the graphics during the presentation.	
<b>Conclusions</b>	Conclusions are not presented.	The conclusions are mostly inconsistent with the evidence.	The conclusion is only partially supported by the evidence.	Based on the data and evidence presented, the conclusions are reasonable.	
<b>Questions</b>	Student cannot answer questions about subject.	Student is able to answer only rudimentary questions, answers questions without explanation.	Student is at ease with answers to most questions, but fails to elaborate.	Student answers all class questions with explanations and elaboration.	
				<b>Total Points:</b>	<b>/20</b>

## Medical Expert

Throughout the year it will be required that you become a medical expert: Manager, Collaborator, Communicator, Health advocate, Professionalism, and Scholar.

Session specific objectives		Knowledge	Cognitive	Interpersonal skills, Responsibility	Comm, info, tech, Numerical	Psychomotor
Session 1	Introduction : Students as partners in the learning process Course curriculum and outline	Recalling the source for the course outline and accessibility	Recognizing acceptable sources and text	Demonstrating cooperation and leadership ability	Illustrating cooperative and management abilities	Assembling and operating student groups
Session 2	Principles in Forensics Chapter 1, 23-24	Listing, defining and describing professional and management aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences	Explaining, contrasting and comparing professional and management aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences	Demonstrating the professional and management aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences	Illustrating the professional and management aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences	Preparing and producing scenarios of the professional and management aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences
Session 3	Toxicology Chapter 18-22	Listing, defining and describing various chemical agents and their effect in disease and death within different scenarios	Explaining, contrasting and comparing various chemical agents and their effect in disease and death within different scenarios	Demonstrating various chemical agents and their effect in disease and death within different scenarios	Illustrating various chemical agents and their effect in disease and death within different scenarios	Preparing and producing scenarios of various chemical agents and their effect in disease and death within different scenarios
Session 4	Ethics and Legal, COD, DC, autopsy Chapter 2, 3, Appendix 1	Listing, defining and describing legal and ethical aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences	Explaining, contrasting and comparing legal and ethical aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences	Demonstrating legal and ethical aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences	Illustrating legal and ethical aspects of Science, Medicine, Postmortem medicine and forensic medicine and forensic sciences	Reviewing a hospital or forensic patient and producing a death certificate
Session 5	Identification, PM changes Chapter 4, 5	Listing, defining and describing the methods of identification and various PM changes in individuals and mass disasters	Explaining, contrasting and comparing methods of identification and various PM changes in individuals and mass disasters	Demonstrating methods of identification and various PM changes in individuals and mass disasters	Illustrating methods of identification and various PM changes in individuals and mass disasters	Preparing and producing scenarios of the methods of identification and various PM changes in individuals and mass disasters
Session 6	Natural death, SUD Chapter 6	Listing, defining and describing various natural diseases and their effect in disease and death within different scenarios	Explaining, contrasting and comparing various natural diseases and their effect in disease and death within different scenarios	Demonstrating various natural diseases and their effect in disease and death within different scenarios	Illustrating various natural diseases and their effect in disease and death within different scenarios	Preparing and producing scenarios of various natural diseases and their effect in disease and death within different scenarios
Session 7	Injuries I Chapter 8-10, 14	Listing, defining and describing various injuries and their effect	Explaining, contrasting and comparing various injuries	Demonstrating various injuries and their effect in disease and	Illustrating various injuries and their effect in disease and death within	Preparing and producing scenarios of various injuries and their effect in disease and death

			in disease and death within different scenarios	and their effect in disease and death within different scenarios	death within different scenarios	different scenarios	within different scenarios
Session 8	Injuries II	Chapter 8-10, 14	Listing, defining and describing various injuries and their effect in disease and death within different scenarios	Explaining, contrasting and comparing various injuries and their effect in disease and death within different scenarios	Demonstrating various injuries and their effect in disease and death within different scenarios	Illustrating various injuries and their effect in disease and death within different scenarios	Preparing and producing scenarios of various injuries and their effect in disease and death within different scenarios
Session 9	Vulnerable	Chapter 7, 11-13, 8 (torture)	Listing, defining and describing vulnerable groups and the various injuries, natural disease and toxins and their effect in disease and death within different scenarios	Explaining, contrasting and comparing vulnerable groups and the various injuries, natural disease and toxins and their effect in disease and death within different scenarios	Demonstrating vulnerable groups and the various injuries, natural disease and toxins and their effect in disease and death within different scenarios	Illustrating vulnerable groups and the various injuries, natural disease and toxins and their effect in disease and death within different scenarios	Preparing and producing scenarios of vulnerable groups and the various injuries, natural disease and toxins and their effect in disease and death within different scenarios
Session 10	Physical agents I	Chapter 15-17, Appendix 3	Listing, defining and describing various physical agents causing disease and their effect in disease and death within different scenarios	Explaining, contrasting and comparing various physical agents causing disease and their effect in disease and death within different scenarios	Demonstrating various physical agents causing disease and their effect in disease and death within different scenarios	Illustrating various physical agents causing disease and their effect in disease and death within different scenarios	Preparing and producing scenarios of various physical agents causing disease and their effect in disease and death within different scenarios
Session 11	Physical agents II	Chapter 15-17, Appendix 3	Listing, defining and describing various physical agents causing disease and their effect in disease and death within different scenarios	Explaining, contrasting and comparing various physical agents causing disease and their effect in disease and death within different scenarios	Demonstrating various physical agents causing disease and their effect in disease and death within different scenarios	Illustrating various physical agents causing disease and their effect in disease and death within different scenarios	Preparing and producing scenarios of various physical agents causing disease and their effect in disease and death within different scenarios
Session 12	COD, DC	Chapter 3	Listing, defining and describing of manners of death	Explaining, contrasting and comparing various categories and causes of death	Demonstrating various causes and manners of death	Illustrating various causes and manners of death	Reviewing a hospital or forensic patient and producing a death certificate



**Policy on language quality and late submissions:**

Class attendance is necessary to successfully complete this course. English is the official college of medicine language. You will also be judged on your writing abilities. It is recommended to take the appropriate measures to avoid mistakes. You will be penalized between 5-15% at the professor's discretion. Plagiarism will not be tolerated.

Late submissions are not tolerated. Exceptions are made only for illness and other serious situations deemed as such by the professor. There will be a penalty for late submissions. Each day of late submission will result in a penalty of 5%. This also applies to assignments sent by email and in this case the time of receipt of the email will be considered a guarantor of the time of delivery.

**Instructions for reading the book**

The reference for this class includes:

Simpson's Forensic Medicine 13th ed. - J. Payne-James, et. al. (Hodder-Arnold, 2011)

Other references are listed in the course outline and complimented by eEducation and class interactions, sessions and lectures. Thorough understanding of the material in the textbook is essential for the course. You will not be able to obtain this from superficial reading of the chapters but you should master the terminology and the concepts in the textbook because this is a 300 level course (or optimally higher). The lectures, presentations, class discussions will assume that you are familiar with this information so that we can emphasize other topics, discussion and questions during class together.

You are required to read approximately 10 pages a day, daily. This should take you approximately 15-30 minutes each day. The book contains 29 chapters and appendix 1 and 3 that you are required to cover. Therefore, you should be finished reading the book within approximately 16 days. One way you may wish to read the book is by reading the titles of each chapter and going over the pictures, graphs and tables before reading the entire chapter. Focus on the titles we have focused on in our course outline.

# Simpson's Forensic Medicine

13th Edition



Jason Payne-James  
Richard Jones  
Steven B Karch  
John Manlove

**Resource text book:**

Simpson's Forensic Medicine 13th ed. - J. Payne-James, et. al. (Hodder-Arnold, 2011)

**Other acceptable resources for this course are:**

<http://www.medscape.com>

<http://scholar.google.com/>

<http://www.ncbi.nlm.nih.gov/pubmed/>

Optional:

Project format

Types of Projects

Preparing a Manuscript for Submission to a Biomedical Journal

Biomedical Publication Ethics