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## II GENERAL INFORMATION

- Lecturers
- Lectures
- Reference texts and sources
- Approach to lectures
- Course aim and study aim
- Lecture timetable
- Tests and Examinations
- Syllabus and study themes

## III SYLLABUS AND STUDY THEMES

1. General introduction and overview
2. The application of forensic science in death and crime investigation with special reference to medical criminalistics
3. The study of trauma to the human body
4. Medico-legal investigation of death
5. Clinical forensic medicine
6. Forensic psychiatry
II GENERAL INFORMATION:

i. Lecturers: Prof G Saayman & Personnel - Dept of Forensic Medicine
Dr FB Sokudela - Dept of Psychiatry (tel.: 012 - 319 9741)

ii. Lecture times: First semester 2017, Tuesdays 17:30-19:20
Venue: GW/HS 3-15

iii. Lecturer contact address: Department of Forensic Medicine
Room 4-44, Pathology Building
Prinshof Campus (Dr Savage Rd, Riviera)
Telephone: 012 - 319 2122 / 012 - 323 5298
e-mail: marieta.scholtz@up.ac.za

iv. Literature references:

Prescribed text:

Recommended Reading:
*Knight’s Forensic Pathology* (Saukko & Knight) - 4th edition, 2016

v. Approach to lectures: Lecture sessions will cover the study themes as set out in the accompanying roster, with important aspects or problematic issues being highlighted. It is not possible to address (during lectures) all the factual and/or theoretical content that may be required for examination purposes. Therefore, students should consult the prescribed texts, together with other specific references and/or study material which may be provided by lecturers. In particular, students should take note of the medico-legal perspectives which may be relevant to a specific condition or disease / injury process.

*(see page 3 for lecture timetable).*

vi. Course aim and study aims: The purpose of this course is to provide legal practitioners and students of law an opportunity to become acquainted with some medical terms, concepts and conditions, particularly those aspects which may be relevant in legal proceedings related to interpersonal violence and possible medical negligence. The primary aim is to enable the legal practitioner to more adequately utilise, evaluate and question, where necessary, medical evidence – and to understand the process of medical evaluation of victims and the medico-legal investigation of death. This course must be viewed as being of an introductory nature. It is hoped that the course will stimulate an interest to further develop your knowledge in this field - in a society where interpersonal violence and non-natural death is extremely prevalent and where legal practitioners should be well informed of the forensic applications of biomedical sciences.
**MEDICAL LAW 410 (GRG 410): 2017**  
**COMPONENT: FORENSIC MEDICINE**

*N.B.: All lectures are scheduled for 17:30 - 19:20 (Venue: GW/HSB 3-15)*

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<td>2017-02-07</td>
<td>Introduction to forensic medicine &amp; science</td>
<td>Saayman</td>
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<td>2.</td>
<td>2017-02-14</td>
<td>Clinical forensic medicine</td>
<td>Loots</td>
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<td>3.</td>
<td>2017-02-21</td>
<td>Death &amp; dying: medico-legal perspectives</td>
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<td>4.</td>
<td>2017-02-28</td>
<td>Medico-legal investigation of death</td>
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<td>5.</td>
<td>2017-03-07</td>
<td>Asphyxial syndromes</td>
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<td>2017-03-14</td>
<td>Trauma 1/4</td>
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<td>7.</td>
<td>2017-03-15</td>
<td>SEMESTER TEST (GW/HB 3-23)</td>
<td>Carstens</td>
<td>Scope: Lectures 1 - 5</td>
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<td>Wednesday</td>
<td>17:30-18:30</td>
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<td>8.</td>
<td>2017-03-21</td>
<td>Human Rights Day (holiday)</td>
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<td>2017-04-04</td>
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**April Recess: 2017/04/08 - 2017/04/18**

| 9.  | 2017-04-25 | Trauma 4/4                                      | Saayman    |                   |
| 10. | 2017-05-02 | Sudden & unexplained death                      | Saayman    |                   |
|     |            | Deaths due to treatment                          |            |                   |
| 11. | 2017-05-09 | Alcohol: medico-legal perspectives               | Saayman    |                   |
| 12. | 2017-05-16 | (Forensic) Psychiatry                            | Dr FB Sokudela |               |
| 13. | 2017-05-23 | Drugs & poisons                                  | Saayman    |                   |

| 2017-03-29 | 2017-03-31 | PRACTICAL: NECROPSY DEMONSTRATIONS              | Pta Medico-Legal Laboratory | To be confirmed |
| To be confirmed | SEMESTER EXAMINATION | 12:00 - 15:00 | Scope: All work |
vii. **Tests and examinations:** The comments and contents pertaining to tests and examinations, as contained in the official study guide on Medical Law (GRG410), are also applicable in this section of the course. Furthermore, students should ensure that they have an adequate basic knowledge of the medical terminology, basic pathophysiology and/or disease processes and the essential features of injuries, together with the medico-legal applications and inferences which may be drawn. Questions pertaining to fact will require a brief definition and/or exposition of the nature of the condition, a listing of the physical features that may be found (where appropriate) together with the specific basis for medico-legal application of the said phenomena or features. Furthermore, students must know and understand the practical application of statutory directives and guidelines, also by way of utilizing practical examples to illustrate an answer.

viii. **Syllabus and study themes:** As set out below.

### III FORENSIC MEDICINE - AN INTRODUCTION FOR LEGAL PRACTITIONERS

1. **GENERAL INTRODUCTION AND OVERVIEW**

This lecture provides a brief history and overview of the nature and scope of forensic medicine, the structuring of medico-legal services in South Africa, the components of forensic medicine and the relevance thereof in the legal process.

2. **THE APPLICATION OF FORENSIC MEDICINE AND SCIENCE IN DEATH AND CRIME INVESTIGATION - WITH SPECIAL REFERENCE TO MEDICAL CRIMINALISTICS**

The purpose of this lecture is to provide an overview of the scope and nature of medical and related sciences that may find application in death and crime investigation.

You must have a basic understanding of the different components and categories of biomedical forensic sciences and how these can be applied in medical examination or death investigation.

3. **THE STUDY OF THE EFFECTS OF TRAUMA TO THE HUMAN BODY (TRAUMATOLOGY)**

   3.1 **General traumatology**

   You must have a basic knowledge and understanding of the principles and features of trauma and/or injury to the human body, with particular reference to the factors that determine the *nature and extent of injury*. You must be able to define the concept of a *wound*, have a basic
knowledge and understanding of the agents that can cause wounding, be able to categorize wounds according to the severity thereof and to describe the *natural course* of wounds and/or injuries (with reference to *inter alia*, loss of function, lack of oxygen in the tissues, complications such as shock and infection and the healing process).

You must know the different profiles and patterns of injury that are typically associated with specific circumstances, such as seen in (for example) interpersonal violence (see also paragraph 5 below) and transportation accidents.

### 3.2 Reaction of the body to injury / insult

You must have a basic knowledge and understanding of how the body responds to injury or trauma, and what the consequences of various complications may be.

### 3.3 Anoxic and/or asphyxial deaths

You must have a basic knowledge and understanding of the nature and consequences of oxygen deprivation in tissues (*tissue anoxia* / *hypoxia*), together with the different causes and/or mechanisms by which such conditions may come about. Specific knowledge regarding the different anoxic and/or *asphyxial syndromes* is required, with regard to *inter alia*:

- 3.3.1 Hypoxia and hypercarbia
- 3.3.2 Suffocation (smothering)
- 3.3.3 Choking
- 3.3.4 Strangulation
- 3.3.5 Hanging
- 3.3.6 Drowning / Immersion
- 3.3.7 Sexual asphyxias

### 3.4 Selected cases:

You should have a basic knowledge and understanding of the nature and features of specific patterns of injury and/or death, including

- 3.4.1 Suicide and self-inflicted injury
- 3.4.2 Sex-related deaths
- 3.4.3 Sudden unexpected death
- 3.4.4 Deaths of persons in custody
- 3.4.5 Deaths associated with medical procedures
- 3.4.6 Infanticide
- 3.4.7 Injuries seen in road traffic accidents
- 3.4.8 Other causes of injury
3.5 Different types of wounds

You must know the classification and basic morphological features of the different types of skin injuries (and know how they are caused), including those of bruises, abrasions, lacerations, incised wounds, stab wounds and gunshot wounds. In particular, the medico-legal perspectives pertaining to these injuries, should be well understood.

3.6 Regional injuries

You should have a basic knowledge and understanding of important regional injuries, including injuries to the head and neck, the chest and the abdomen.

3.7 Gunshot injuries

You should have a good knowledge and understanding of the morphological features of gunshot injuries (together with how these injuries are caused) and the basic components and technical aspects of firearms and ballistics. In particular, knowledge and understanding of the classification and features of entrance gunshot wounds, exit wounds and unusual gunshot injuries, is required.

3.8 Other injuries (including thermal injury and electrical injury)

You should have a basic knowledge and understanding of injuries caused by other than mechanical or physical means, including those caused by thermal and ionizing energy and electricity.

3.9 Medico-legal perspectives in traumatology

You should attempt at all times to understand the medico-legal implications and perspectives of specific injuries and injury profiles, together with the diagnostic shortcomings and pitfalls that may be important to subsequent judicial processes.

4. MEDICO-LEGAL INVESTIGATION OF DEATH

You must have a basic understanding of the nature and scope of the process of medico-legal investigation of death, and what the role and function of the various role players should be.
4.1 Natural vs other than natural death

You must know and understand the definitions of and differentiation between natural and other than natural death and be able to demonstrate your knowledge and understanding by supplying appropriate practical examples. You must have a thorough knowledge and understanding of the statutory provisions that are prescriptive pertaining to natural and other than natural deaths, with regard to the involvement of the medical practitioner, including the Registration of Births and Deaths Act and the Inquests Act.

4.2 Terminology related to cause and circumstance of death

You must have a good knowledge and understanding of the terminology and concepts related to cause and circumstance of death, including the primary medical cause of death, mechanism of death, circumstance of death, precipitating and predisposing cause of death.

4.3 Components of medico-legal investigation of death

4.3.1 The scene of death and medical case history
4.3.2 The examination of the body
4.3.3 Special investigations
4.3.4 Constructing a medico-legal report

You must have a good knowledge and understanding of the components of medico-legal investigation of death, including knowledge and understanding of the involvement of the medical practitioner and/or forensic medical investigator at the scene of death, the physical examination of the body (including the basic features of such an examination and the purposes thereof). You must know and understand the nature and scope of important special investigations that can be conducted on or pertaining to the body of a deceased person that is being examined, and what the relevance or importance of such tissue samples may be. You must have a basic understanding of the important principles which underlie the drafting of a technical medical report pertaining to the medico-legal investigation of death.

4.4 Death and dying (thanatology)

4.4.1 The diagnosis of death

You must have a basic knowledge and understanding of the physiological process of death, with particular reference to the positive and negative features of death. You must know the basis of and criteria pertaining to the clinical diagnosis of death, the features of somatic death, molecular death and brain death.
4.4.2 Post mortem changes
   4.4.2.1 Early post mortem changes
   4.4.2.2 Late post mortem changes
   4.4.2.3 Medico-legal applications

You must know and understand the nature and scope of *early and late post mortem changes* that may be found in the human body, and in particular what the medico-legal applications of these changes may be.

4.5 The science of identification

You must know and understand the morphological features and criteria that are assessed in order to identify an individual, or to assess the age of an individual.

4.6 Toxicology

   4.7.1 Medico-legal perspectives on poisoning
   4.7.2 Alcohol

You must know and understand the basic principles applicable to poisoning in the human body, with particular reference to the definition of a poison, the factors that determine the nature and intensity of a reaction and the medico-legal perspectives regarding the diagnosis and proof of poisoning.

You must have a basic knowledge and understanding of *alcohol (ethanol)* as a pharmacological substance, with particular reference to the physical properties thereof, the absorption and elimination thereof in the human body and the effects thereof at various concentrations in the blood. In addition, a basic knowledge and understanding of the effect of illicit drugs of abuse, is required.

5. CLINICAL FORENSIC MEDICINE

   5.1 Physical assault
   5.2 Rape
   5.3 Abuse of children
   5.4 Other

You must have a basic knowledge and understanding of the physical features and clinical findings that may be found in cases of physical assault, rape and the physical abuse of children. In particular, the specific approach to confirmation of diagnosis and use of specialized investigation techniques or tests, should be well known and understood.
6. **FORENSIC PSYCHIATRY**

   You must know and understand the *definition and scope of mental disease*. In particular, the conditions for which a patient can be admitted to a psychiatric hospital should be understood.

   The prerequisites for the *admission to and discharge* from a psychiatric hospital must be known and understood, in terms of the relevant sections of the Mental Health Act.

   The *role of the psychiatrist in determining accountability* should be known and understood.

   The criteria for *retrospective diagnosis of mental disease* should be known and understood.