



University
of
Pittsburgh

School
of
Medicine

Behind the Veil of CSI: The Real World of Forensic Medicine Spring 2009

<u>Course Dates:</u>	March 30, April 6, 13, 27, May 4 Mondays, 4:00-6:00 PM
<u>Maximum Students:</u>	8
<u>Class Year:</u>	MS-1
<u>Course Directors:</u>	Karl E. Williams, M.D., M.P.H. Medical Examiner, Allegheny County
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Description:

The popularity of the television series CSI has radically changed the public perception of the world of Forensic Medicine. As entertaining as the series may be it pales in comparison to the variety, complexity and challenges that the practicing Forensic Pathologist encounters in their day to day work. This mini-elective will provide an overview of the practice of Forensic Medicine and provide for an opportunity for exposure to a full service Crime Lab.

In the United States, death investigation falls under the jurisdiction of either a Coroner or Medical Examiner. These two systems have radically different historical roots and the practice within jurisdictions varies widely from state to state and from county to county. In the Commonwealth of Pennsylvania, the jurisdiction of the Coroner is established under a 1953 Code which mandates the investigation of deaths occurring under a variety of unexplained or clearly unnatural circumstances. In Allegheny County the Medical Examiner's Office operates under this Code and has the responsibility for evaluating some 7000 deaths a year, of which approximately 1000 result in autopsies. Unlike many other jurisdictions the Medical Examiner also has direct responsibility for a full service Crime Lab. This provides the direct linkage between the autopsy and the scene investigation that is often essential to resolving the basic questions of cause and manner of death.

During the course of this mini-elective students will learn about the history and contrasting natures of Coroners and Medical Examiners systems. An in-depth view of the day to day practice in a major Medical Examiners system will be provided. An introduction to the basics of Forensic Science and Crime Scene Investigation will be presented.

Objectives:

- Enhance the participants knowledge of the scope and day to day practice of Forensic Medicine in determining cause and manner of death
- To gain a knowledge of the history and evolution of the current Coroners and Medical Examiner's systems in the United States
- Explore and identify relevant patterns of injury and disease as they apply to the individual case evaluation in correlation with scene investigation
- Outline the basic disciplines of Forensic Sciences including ballistics, serol-

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ogy, toxicology, fingerprint and trace evidence

Requirements:

- Active participation in all class sessions and completion of assigned reading, predominantly relevant articles from current literature.
- Completion of a brief in-class presentation during one of the last sessions.

Course Outline:

Behind the Veil of CSI: The Real World of Forensic Medicine

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Karl E. Williams, M.D., M.P.H.

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Class Format:

A typical session will last for two hours and consist of a 45 minute presentation, followed by an hour of discussion of specific cases. Ample time for direct interaction will be provided at all times.

Locations:

Session 1 in Scaife Hall.

Subsequent sessions at the Medical Examiners Office, downtown Pittsburgh

Session One: General Introduction and Overview

- Review of the current status of the Coroner/Medical Examiner legislation and the history of evolution of the systems. General overview of the case load of a typical large forensic practice and the nature of determination of cause and manner of death.
- Overview of the post-mortem process
- Death certification

Session Two: Overview of Forensic Pathology in Practice - I

- Overview of the diversity of daily forensic practice
- Recognition of patterns of disease and injury across the various homicidal, natural, accidental, suicidal and undetermined manners of death
- Importance of case by case integration of scene and circumstances evaluation

Session Three: Overview of Forensic Pathology in Practice - II

- Continuation of Session Two

Session Four: Overview of Forensic Science Disciplines and Application to Individual Cases

- Review of sciences
 - Forensic toxicology
 - Forensic anthropology
 - Ballistics and tool marks
 - Blood stain pattern analysis
 - DNA/serology
 - Forensic entomology

Session Five: On-site Visit to Morgue Facility and Crime Lab