

## Phase I Elective Description

**Campus:** Grand Forks (ALL)

**Elective/Experience Title:** Death Investigation and Rural Coroners

**Location of Elective:** Virtual

**Department:** Pathology

**Course Number:** PATH 9504-1

**Preceptor(s):** Mary Ann Sens, MD

**Period(s) Offered:** Continuously

**Course Prerequisites:** None

**Revised Curriculum Phase(s):** May take this elective in any phase but may only take once in the MD curriculum.

**Number of students per period:** Unlimited

**Purpose:** Learn information related to death investigation including the basics of death investigation, cultural competency, advanced topics, forensic pathology, terminology and diseases, and mental health issues related to death investigations.

**Objectives:** Following successful completion of this elective, the student will be able to:

1. Define and explain the 29 Principles of Death Investigation as endorsed by the National Institute of Justice.
2. Identify basic tools and equipment used in death investigation and appropriate local response strategies.
3. Distinguish various roles and steps in death investigation.
4. Compare and differentiate between various personal protective equipment in death investigation.
5. List key points for first responders in preservation and protection of the death scene.
6. Recognize how cultural/religious concerns impact death investigations.
7. Describe funeral customs of numerous cultures and religions.
8. List strategies to work with the family and local community to ensure the deceased is treated with cultural and religious integrity.
9. Describe adaptations of procedures as possible to maintain religious/cultural integrity.
10. Recognize the need for infant death investigation.
11. Describe steps in infant death investigation including completion and components of SUID form and approaches to doll-reenactment and documentation.
12. Cite types of identification used in death investigation including the importance of identification, methods used in identification, materials needed for identification and limitations of identification.
13. Recognize natural disease processes which may be associated with underlying, delayed trauma deaths and formulate investigation practices and questions to differentiate these situations.
14. Recognize some unusual manifestations of natural disease processes which may appear to present as traumatic or non-natural deaths.
15. Recognize and interpret post mortem changes of livor, rigor and decomposition, relating them to position movement of body after death, timing of death and documentation needed at death investigation
16. Cite types of asphyxia deaths, mechanisms and relationship to scene findings in common asphyxia deaths such as hanging, smothering, airway obstruction, mechanical asphyxia.

17. Distinguish between sharp and blunt force injury and findings in these deaths, including scene and investigative clues, potential evidence and documentation needed for a death investigation.
18. Recognize types and scene findings in electrical related deaths.
19. Identify findings, common circumstances and risk factors in hyperthermic and hypothermic deaths. Relate these to necessary scene documentation and investigation.
20. Specify findings in transportation fatalities and relate to investigation documentation and interpretation in motor vehicle, recreational vehicles, bicycles and non-motorized vehicles, pedestrian, and mass-transit (rail, airplane, bus). Recognize patterns of driver vs. passenger, restrained vs. non-restrained victims.
21. Identify delayed complications of traumatic deaths.
22. Distinguish findings in gunshot and shot gun injury including range of fire, type/class of weapon, entrance, exit and re-entrance or ricochet wounds.
23. Identify common toxicology testing, suitable fluids for testing and possible interpretive challenges in post-mortem toxicology.
24. Identify steps and challenges in child death investigation.
25. List findings and scene documentation in drowning and water-recreational deaths.
26. Understand basic medical terminology especially as related to conditions producing or contributing to natural death.
27. Define types of hemorrhage in the central nervous system and the possible causes of each type.
28. Articulate the pathophysiology of the electrical system of the heart, the anatomy of the heart and types of acute and chronic injury to the heart. Recognize common cardiac medications and treatments within the medical history of a death investigation.
29. Understand the common diseases and functional disorders of the liver, lungs, pancreas and reproductive organs and how these may relate to sudden death and causes of natural deaths.
30. Define inflammation and potential causes of inflammation.
31. Contrast infectious and non-infectious inflammatory responses as they relate to death investigation.
32. Define inflammation and potential causes of inflammation. Contrast infectious and non-infectious inflammatory responses as they relate to death investigation.
33. Understand and employ the basic concepts of mental health issues encountered by death investigators.
34. Recognize several mental health problems and crises.

**Instructional Activities:** During this elective, the student will be involved in/experience:

1. Completion of 6 online modules encompassing the above objectives.
2. Participation in at least one Zoom meeting for discussion of rural medicolegal death investigation systems

This elective will be graded Satisfactory/Unsatisfactory

**Criteria for Grading:** During and following this elective, the preceptor will:

1. Utilize the standardized UNDSMHS phase I elective evaluation form.
2. Evaluate by direct viewing of the student's certificate of completion for each online module the student's successful completion of all assigned modules.