

# Common Course Outline

## MORS 106

### Thanatochemistry

2 Semester Hours

## The Community College of Baltimore County

### Description

**MORS 106 – 2 Credits - Thanatochemistry** surveys the basic principles of chemistry as they relate to funeral service; examines the chemical principles and precautions involved in sanitation, disinfection, public health, embalming practice, and the government regulation of chemicals currently used in funeral service.

**2 credits; 2 lecture hours per week**

**Prerequisite: Science and Math electives**

### Overall Course Objectives

Upon satisfactory completion of a course in chemistry the student should be able to:

1. explain selected facts of general chemistry, organic chemistry, biochemistry, and embalming chemistry;
2. identify the characteristics of solutions, colloids, suspensions, and the processes of diffusions and osmosis;
3. explain the essential characteristics of autolysis, hydrolysis, fermentation, and putrefaction in the area of the chemistry of decomposition;
4. define organic chemistry and describe the characteristics of organic compounds as they relate to embalming chemistry;
5. compare and contrast the essential characteristics of carbohydrates, lipids, and proteins;
6. differentiate among the representative chemicals in embalming fluid (arterial, cavity, and accessory) and describe their respective functions;
7. identify and list the potentially harmful chemicals used in the preparation room, and their regulations.

### Major Topics

- I. Introductions to General Chemistry
  - a. Chemistry
  - b. Divisions of Chemistry
  - c. Chemical measurements – metric and SI System
  - d. Temperature scales
  - e. Matter
  - f. The physical states of matter
  - g. Types of matter based upon composition
  - h. Energy
  - i. Oxidation number

- j. Monoatomic ion
  - k. Polyatomic ion
  - l. Solutions
  - m. Selected elements
  - n. Water (occurrence)
  - o. Ionization
- II. Organic Chemistry
- a. Comparison between organic and inorganic compounds
  - b. Properties of carbon
  - c. Formulas in organic chemistry
  - d. Classes of organic compounds
- III. Biochemistry
- a. Carbohydrates
  - b. Lipids
  - c. Proteins
- IV. Embalming Chemistry
- a. Actions of preservative chemicals
  - b. Preservation by formaldehyde
  - c. Embalming fluids – basic fluids
  - d. Chemistry of decomposition
- V. Potentially hazardous chemicals used in embalming or present around the mortuary
- a. Poisons
  - b. Toxin
  - c. Lethal dose fifty percent - LD
  - d. Minimum lethal dose – MLD
  - e. Examples

### **Course Requirements**

Grading/exams: Final examinations in all Mortuary Science classes will be comprehensive. There will be no extra credit given in any Mortuary Science Class.

Grading Scale: The following is the grading scaled used in all mortuary science classes.

A = 92 – 100	Test I	20%
B = 85 – 91	Test II	20%
C = 78 – 84	Test III	20%
D = 77 – 70	Test IV	20%
F = 0 – 69	Comprehensive Final	<u>20%</u>
		100%

### **Other Course Information**

This course is a requirement for an Associate in Applied Science in the Mortuary Science Curriculum, which, in the State of Maryland, is required to sit for the National Board Examination (NBE). The NBE is implemented by the International Conference of Funeral Service Examining Boards ([www.CFSEB.org](http://www.CFSEB.org)). The Mortuary Science Program is statewide designated by the Maryland State Board of Higher Education and is nationally accredited by the American Board of Funeral Service Education ([www.CFSEB.org](http://www.CFSEB.org)).

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Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.