

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

FSAD 115-THANATOCHEMISTRY

**CIP Code:
(12.0302) Funeral Direction/Services**

**Created by: Darien Cain, MS and
David R. Penepent, PhD**

Updated by: October 25, 2023

**Science, Health and Criminal Justice
Funeral Services Administration
Fall 2024**

A. **TITLE:** Thanatochemistry

B. **COURSE NUMBER:** FSAD 115

C. **CREDIT HOURS (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity):**

Credit Hours: 2

Lecture Hours per Week: 2

Lab Hours per Week: 0

Other per Week: 0

Course Length: 15 Weeks

D. **WRITING INTENSIVE COURSE:** No

E. **GER CATEGORY:**

F. **SEMESTER(S) OFFERED:** Fall

G. **COURSE DESCRIPTION:**

This course is designed to assist the future funeral director/embalmer in developing a basic understanding of General Chemistry, Organic Chemistry, and Biochemistry and how they relate to embalming and the preservation of human remains.

H. **PRE-REQUISITES/CO-REQUISITES:**

a. Pre-requisite(s): Enrollment into FSAD program, or permission from instructor

b. Co-requisite(s): No

c. Pre- or co-requisite(s): No

I. **STUDENT LEARNING OUTCOMES:**

<u>Course Student Learning Outcome</u> <u>[SLO]</u>	<u>PSLO</u>	<u>ISLO</u>
Students will develop an understanding of basic chemistry as it relates to embalming theory and practice.	2.1.5 Demonstrate technical skills in embalming and restorative art that are necessary for the preparation and handling of human remains.	2. Critical Thinking – Critical Analysis

J. **APPLIED LEARNING COMPONENT:** Yes _____ No X

If Yes, select one or more of the following categories:

Classroom/Lab _____

Internship _____

Clinical Practicum _____

Practicum _____

Service Learning _____

Community Service _____

Civic Engagement _____

Creative Works/Senior Project _____

Research _____

Entrepreneurship _____

(program, class, project)

K. TEXTS:

Cruz, D. de la. (2018). *Turning art into science: Applying chemistry to funeral service*. Tuesday Evening Publications.

Penepent, D.R. (2023). A complete guide to the science section of the National Board Exam for funeral services: Revised edition. Anubis Publication Inc.

L. REFERENCES: None

M. EQUIPMENT: Microsoft Word or comparable software. Internet access is required.

N. GRADING METHOD: The grading will be as follows: A-F

NOTE: IN ALL FUNERAL SERVICE REQUIRED CORE COURSES A “C” OR HIGHER IS NEEDED TO PASS

Assignment Category	Grade Weight/ Point Distribution
Assignments	50%
Unit Test	35%
Final	15%
Total	100%

Your final grade will be calculated based on the following grading scheme:

From %	To %	Letter grade	
100	92.0	A	
91.9	87.0	B+	
86.9	83.0	B	
82.9	79.0	C+	
78.9	76.0	C	
75.9	69.0	D+	Required to retake the course.
68.9	60.0	D	Required to retake the course.
59.9	0	F	Required to retake the course.

O. SUGGESTED MEASUREMENT CRITERIA/METHODS:

- 19 Assignments
- 3 Unit Tests
- Comprehensive Final Exam
- FSAD students must obtain a grade of “C” or better in this course.

Once enrolled in the Funeral Services Administration program, students must complete the course of study within six (6) years. FSAD courses that are (6) years or older must be retaken because the American Board of Funeral Service Education revises the course outlines every seven years.

P. DETAILED COURSE OUTLINE:

1. General Chemistry
 - a. Intro
 - b. Topic 1: Matter (ch 1, 2)
 - c. Topic 2: Atoms and Elements (ch 3)
 - d. Topic 3: Chemical Bonding (ch 3)
 - e. Topic 4: Molecules and Reactions (ch 4)
 - f. Topic 5: Water and Solutions (ch 5)
 - g. Topic 6: Acids and Bases (ch 6)
2. Organic Chemistry
 - a. Topic 7: Organic Chemistry Intro (ch 7)
 - b. Topic 8: Alcohols, Phenols, Ethers (ch 8)
 - c. Topic 9: Aldehydes and Ketones (ch 9)
 - d. Topic 10: Carboxylic Acids and Esters (ch 10)
 - e. Topic 11: Amines and Amides (ch 11)
 - f. Topic 12: Organic Chemical Reactions (ch 12)
3. Biochemistry
 - a. Topic 13: Intro to Biochemistry (ch 13)
 - b. Topic 14: Proteins (ch 14)
 - c. Topic 15: Enzymes (ch 15)
 - d. Topic 16: Carbohydrates (ch 16)
 - e. Topic 17: Lipids (ch 16)
 - f. Topic 18: Cellular Respiration (ch 18)
 - a. Topic 19: Nucleic Acids (ch 17)
4. Application and Embalming Chemistry
 - a. *Radiology Chemistry
 - b. Topic 20: Tying it all together (ch 23)

Q. LABORATORY OUTLINE: None