
Subject: Use of Cadavers for Instructional Purposes

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[Appendix A: Cadaver Patient Embalming and Care Guidelines](#)

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1. Purpose

This policy establishes the procedures for the appropriate management and use of cadavers for instruction at Tidewater Community College. The use of cadavers provides a unique learning experience of the human body for students who are majoring in the health professions, funeral services, and related disciplines, and includes coursework dedicated to the dissection, preservation, restoration, and study of the human body in detail as well as observation by students in science courses that are related to the study of the human body.

2. Policy

Tidewater Community College is committed to the ethical treatment of cadavers for instructional purposes. The procurement, care and maintenance, use, and disposition of cadavers, handling hazardous chemicals and biohazardous waste, and training regarding those procedures shall be conducted safely and respectfully consistent with best practices in higher education and in compliance with applicable legal standards.

3. Responsibilities

- 3.1. The Vice President for Student Learning and Chief Academic Officer, in consultation with the faculty, is responsible for developing and maintaining procedures that are consistent with this policy and have a strong pedagogical focus.
- 3.2. The faculty, laboratory managers and assistants, academic deans, and provosts are responsible for ensuring compliance with this policy and procedures.

4. Procedures

4.1. Procurement of Cadavers

- 4.1.1. The campus academic dean will be responsible for ensuring that cadavers are procured from the Virginia Department of Health State Anatomical Program or an approved provider in accordance with purchasing guidelines and will determine, in consultation with the lab manager, the necessary arrangements for receipt and transport of cadavers at a mutually agreed upon campus location.
- 4.1.2. Cadavers exhibiting signs of decomposition, mold, or in poor condition will not be accepted.

4.2. Care and Maintenance of Cadavers

- 4.2.1. Cadavers will be properly cared for and maintained. Academic deans, faculty, and laboratory managers and assistants will adhere to the [Cadaver Patient Embalming and Care Guidelines](#) provided by the Virginia Department of Health State Anatomical Program. See Appendix A.
- 4.2.2. Un-embalmed cadavers will be accepted by the Funeral Services program only. Un-embalmed cadavers will be embalmed by the Funeral Services program within 24 hours of receipt. When necessary, un-embalmed cadavers will be refrigerated until embalmed.
- 4.2.3. Without exception, cadavers will have identification tags at all times while in the custody of the college.
- 4.2.4. Any suspicion of irregularities such as decomposition or mold will be reported immediately to the campus provost. Decomposition or mold can spread rapidly throughout the body and to other cadavers in the laboratory and may pose a health risk to faculty, staff, and students.

- 4.2.5. Students injured while participating in a lab will receive immediate first aid and, if necessary, professional medical assistance. Any and all injuries or chemical spills in cadaver laboratories will be reported according to standard operating procedures as documented in campus laboratory chemical hygiene plans.
- 4.2.6. Cadaver tanks must be emptied, cleaned, and disinfected following disposal of a cadaver.
- 4.2.7. The laboratory staff will be responsible for maintaining clean cadaver lab spaces.

4.3. Use of Cadavers

- 4.3.1. Faculty who use cadavers for instructional purposes will provide the criteria to be followed in the cadaver laboratory in their student lab packets and course syllabi. The criteria will be consistent college wide and will include, but may not be limited to, the following:
 - 4.3.1.1. A signed release form from the student to enter the cadaver laboratory. See Appendix C.
 - 4.3.1.2. No electronic devices allowed unless specifically authorized by the campus provost;
 - 4.3.1.3. Safety instructions to include appropriate attire and use of tools such scalpels and eye protection; and
 - 4.3.1.4. Consequences for violating the rules of the cadaver laboratory.
- 4.3.2. No cadaver will be utilized for anatomical study for a period greater than one calendar year.
- 4.3.3. The Rules of the Cadaver Laboratory will be placed prominently in the cadaver facilities. See Appendix B.
- 4.3.4. Access to cadaver laboratory facilities will be restricted to students enrolled in appropriate courses and the faculty and staff involved in preparing and teaching those courses. The cadaver laboratory is to remain locked at all times.
- 4.3.5. Cadavers will be appropriately draped at all times. All regions not being studied will be draped. Cadavers will be completely covered when left for any period of time.

- 4.3.6. Students participating in cadaver laboratories will use the proper protective gear including, but not limited to, gloves, gowns, shoe covers, a standard N-95 mask or dust mask, and goggles.
 - 4.3.7. The college will provide non-latex gloves to any student/faculty member making such request.
 - 4.3.8. The embalming laboratory will be tested periodically under the direction of the college's Director of Safety and Security for formaldehyde and air quality. Results of such test will be posted in the laboratory.
 - 4.3.9. Any identifying information about the cadaver, including but not limited to ethnicity, age, appearance, identifiable characteristics, is confidential and will not be discussed or disclosed outside of the laboratory.
 - 4.3.10. No part of a cadaver may leave the laboratory at any time except for disposal as arranged by the academic dean in consultation with the lab manager.
- 4.4. Staff Training and Responsibilities
- 4.4.1. Academic deans will ensure that all staff under their purview are properly trained in the handling, care, and maintenance of cadavers.
 - 4.4.2. The Vice President for Student Learning and Chief Academic Officer will ensure that such training is consistent across all four campuses and complies with all applicable federal and state regulations, as well as best practices in the field.
 - 4.4.3. Completion of training must be documented and filed in employee personnel files.
 - 4.4.4. Responsibilities for cadaver laboratory managers and assistants will be documented in the position's Employee Work Profile (EWP) or wage employee job description.
- 4.5. Disposing of Cadavers
- 4.5.1. The academic dean, in consultation with the lab manager, will arrange disposal via cremation of cadavers through a state certified vendor.
 - 4.5.2. In rare cases, the State Anatomical Program may request the Funeral Services Program embalm cadavers. In those instances, the State Anatomical Program will retrieve the cadaver once embalmed.

- 4.5.3. When remains are cremated, TCC adheres to the Code of Virginia - Title 54.1 Professions and Occupations - Chapter 28 Funeral Services, Section 54.1-2808. The college will retain the cremains for a period of 90 days from the date of cremation. If the cremains are not claimed within that period, the college will dispose of the cremains as stated in the Code of Virginia.
 - 4.5.4. Should the State Anatomical Program or approved vendor notify TCC that cremated remains are to be returned to the donor family, said cremains will be sent immediately by registered mail through the United States Postal Service. A letter from the Vice President for Student Learning and Chief Academic Officer will be sent with the cremated remains thanking the donor family for its gift.
 - 4.5.5. The college will maintain the cremation and transportation authorizations in academic division files on the campuses.
- 4.6. Handling Hazardous Chemicals and Biohazardous Waste
- 4.6.1. The college will maintain a current manual for handling hazardous chemicals and biohazardous waste.
 - 4.6.2. Each campus will have readily available two copies of the manual for handling hazardous chemicals and biohazardous waste, one kept within the laboratory and one kept in the academic dean's office. Manuals will contain the following:
 - 4.6.2.1. An alphabetized chemical inventory list including each chemical housed in the laboratory.
 - 4.6.2.2. Material Safety Data Sheets (MSDS) corresponding to each chemical listed in the aforementioned chemical inventory list for quick reference.
 - 4.6.2.3. Instructions to neutralize chemical spills in the laboratory. Chemical spills will be reported immediately to the campus provost.
 - 4.6.3. Laboratories that frequently utilize formaldehyde and/or phenol-based chemicals must maintain agents which rapidly neutralize and solidify chemical spills.
 - 4.6.4. Biohazardous waste and contaminated sharps will be disposed of according to federal and state law.

- 4.6.5. Cabinets, containers, and receptacles containing formaldehyde and/or biohazardous agents must be labeled in accordance with federal guidelines.

5. Definitions

Biohazardous, biomedical, or infectious waste – Any waste containing infectious materials or potentially infectious substances such as blood.

Contaminated sharps – Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, and exposed ends of wires.

Material Safety Data Sheets (MSDS) – Provides data regarding the properties of a particular substance. A requirement of the Department of Labor and OSHA under the Hazard Communication Standard, MSDS must accompany a hazardous product.

6. References

[Virginia Department of Health Office of the Chief Medical Examiner State Anatomical Program Cadaver Patient Embalming and Care Guidelines.](#)

[Code of Virginia - Title 54.1 Professions And Occupations - Chapter 28 Funeral Services.](#)

7. Review Periodicity and Responsibility

The Vice President for Student Learning and Chief Academic Officer shall review this policy at least annually on the anniversary of its approval and, if necessary, recommend revisions.

8. Effective Date and Approval

This policy is effective upon its approval by the College President on August 25, 2011.

Policy Approved:

Deborah M. DiCroce
President

Procedure Developed:

Daniel T. DeMarte
Vice President for Student Learning
and Chief Academic Officer

9. Review and Revision History

This is the first version of this policy.

APPENDIX A
VIRGINIA DEPARTMENT OF HEALTH STATE ANATOMICAL PROGRAM
CADAVER PATIENT EMBALMING AND CARE GUIDELINES

Each cadaver patient is unique and as such, the embalming procedure utilized for each cadaver is different. Many variables come in to play when assessing the overall condition of the cadaver patient, and unfortunately some of these variables remain an unknown entity to us, i.e., medications used which may counteract the embalming chemical's ability to sufficiently firm all of the tissues.

Embalming does NOT stop the decomposition process; it merely slows down this process. Therefore, embalming does not guarantee the longevity of a cadaver patient; it is not guaranteed in a funeral home setting and is not guaranteed in the anatomical setting. The care you give to the cadaver within your lab will help to prolong your use of the cadaver. Having a cadaver patient last for any extended period of time (example - a year) is the exception, not the rule.

As you receive your cadaver patient you may notice one or all of the following:

- Multiple incision sites - carotid, femoral, brachial, etc.
- Purge or leakage of body fluids and chemicals from the nose, mouth, and incision sites, etc. This is due to the patient's organs and abdominal cavity not being aspirated.
- Fishy odor - this is from the use of neutralizer. Neutralizer is used when the cadaver patient has required an extensive amount of formaldehyde in the embalming process.
- Cadaver patient is either wrapped in a flannel cloth or the extremities of the patient are wrapped in towels - these articles have been treated with either phenol or formaldehyde to aide in the embalming of those areas. Simply remove and discard.
- Bag may contain a powdery substance or a blue fluid. This is embalming powder and Dodge Dis-Spray. Each of these products is designed to prohibit mold growth and is being tested by us.
- Phenol may have been injected hypodermically into the hands and feet. Phenol is a cauterizing agent. This may turn the subsequent tissue black or bleached out white.

Each cadaver patient's embalming has started with the following process:

- Initial flushing of vascular system using Dodge Metaflow 8oz per gallon x 2
- Embalming chemicals by Dodge (Metasyn Firming, Plasodopake 25 or Introfiant) 25-36 index, 16-32 oz per gallon. (2-6 gallons)
- Each cadaver rests for 24 hours and then is finished with up to 2 gallons of the Carolina Perfect Solution which contains phenol. Some cadavers may have an

umbilical incision, where phenol was placed directly into the abdominal cavity. Please note that the organs are still intact without punctures.

More embalming chemical is injected as needed to either the cadaver as a whole or to various extremities. The cadaver patients are removed from our cooler monthly, evaluated and re-treated as necessary.

Recommended Cadaver Patient Care and Maintenance Guidelines

Research has shown that those labs which follow these care guidelines, have better results with their cadaver patients.

- 1) Upon receipt of cadaver patient, remove from plastic bag, dry off and spray down with your preferred disinfectant/ sanitizer. We recommend Dodge Dis-Spray which also contains a mold inhibitor.
- 2) Cadavers should be refrigerated. If refrigeration is not available, please lower and maintain the temperature of your lab to below 65 degrees. If your dissection tables are equipped with the immersion tank-this should be utilized and use your approved chemicals.
- 3) After each dissection lab, the cadaver should be sprayed with sanitizer and stored properly. Should the cadaver have any indication of molding, excise the affected tissue; sanitize the table and instrumentation used on the cadaver. Discard of any sheeting that may have been used to cover the cadaver.

Utilizing licensed embalmers as your lab technicians would be beneficial. They may need to do some low level embalming on the cadavers to help maintain their quality. Check with your local funeral home, they may be able to assist you with any touch up embalming as necessary.

APPENDIX B
RULES OF THE CADAVER LABORATORY

Tidewater Community College is committed to the ethical treatment of cadavers for instructional purposes.

1. Access to cadaver laboratory facilities will be restricted to students enrolled in appropriate courses and the faculty and staff involved in preparing and teaching those courses.
2. A signed Cadaver Laboratory Student Release Form is required to be in the laboratory.
3. No electronic devices are allowed in the laboratory unless specifically authorized by the campus provost.
4. Appropriate attire and use of laboratory tools as described in the laboratory packet provided by faculty are to be followed at all times.
5. Injuries and/or chemical spills are to be reported immediately to the lab manager or assistant, faculty, dean, or the campus provost.
6. Any identifying information about the cadaver will not be discussed or disclosed outside of the laboratory.
7. Cadavers will be appropriately draped at all times.
8. The cadaver laboratory is to remain locked at all times.

Any violation of the Rules of the Cadaver Laboratory may result in disciplinary action as described in the Student Handbook in effect for the current academic year.

APPENDIX C
CADAVER LABORATORY STUDENT RELEASE FORM

Indicate your agreement by initialing on the line next to each statement, print and sign your name at the bottom of this agreement and include the date.

_____ I have read, understand, and agree with the Rules of the Cadaver Laboratory.

_____ I understand that failure to comply with the Rules of the Cadaver Laboratory may result in disciplinary action as described in the Student Handbook.

Student (print name)

Student (signature)

Date

Completed forms will be maintained in division files.