

BHSC 1990 – Introduction to Forensic Diagnostics



Instructor: Allison Dean, M.S.

One of my favorite things about teaching this course is that we learn so much about areas of science that we don't often think are connected. Together, we will explore topics from lab safety to blood spatter analysis and determine how these are important in the field of forensic diagnostics. Please bring your curiosity, willingness to explore areas of science and a desire to understand forensic diagnostics to our first meeting and we will help each other through the rest of the course. I want you all to feel comfortable and welcome in our classroom and we'll discuss some classroom expectations when we meet for the first time. If you have any questions or concerns, please feel free to reach out to me at Allison.Dean@med.uvm.edu.

Prerequisites: Nothing except a desire to learn 😊

Course Dates: June 30-July 25

- **On Campus Dates:** June 30 – July 11, 2025; during this time, we will meet on campus for lectures and labs (No Class on July 4 or 11)
- **Online Dates:** July 14, 2025 – July 25, 2025; the course will take place asynchronously on Brightspace, although you will be expected to work collaboratively with groups and I will be available for meetings, help, etc.

Time for On Campus Meetings: 9:00am-3:30pm (12-1:30 lunch break)

Course Materials and Assignments: All necessary course materials and/or assignments will be listed (or attached) to the corresponding lesson on Brightspace. Each lesson will include specific instructions and due dates for related activities.

Course Description:

Students will learn and apply techniques in biology, genetics, chemistry, and physics while studying how they relate to the forensic investigation of crimes. A wide range of topics will be covered including DNA, entomology, fingerprinting, trace evidence, serology, blood spatter, and chemical analysis of

compounds. Students will use case studies, hands on activities and a true crime project to illustrate their learning.

Learning Objectives:

- Acquire foundational knowledge utilized in forensic diagnostics and crime scene investigation while applying the scientific method to critically analyze and evaluate forensic evidence.
- Demonstrate an understanding of the scientific principles of crime scene investigation and reconstruction, including evidence collection, preservation, and proper documentation.
- Understand and explain the role of the forensic scientist and physical evidence in crime scene investigation.
- Analyze evidence related to crime scene investigation by utilizing principles learning during the course and generate a true crime project based on scientifically sound research.

Our course will include the following topics:

- Roles of a Forensic Scientist
- Crime Scene Principles, Physical Evidence and Crime Scene Reconstruction
- Forensic Entomology, Anthropology and Pathology
- Evidence Collection, Testing and Analysis: Fingerprints, Biometrics, Firearms/Impression Evidence, Trace Evidence, Hair and Fiber Analysis, Forensic Toxicology, DNA, Forensic Serology (Blood and Body Fluids), Blood Spatter and Chemical Analysis.
- True Crime Applications
- Laboratory Safety Principles

Technology Requirements: Students will need to have access to a computer that meets the UVM Laptop Requirements to complete the online portion of the course, have access to the related course materials that will be posted on Brightspace and for submission of assignments.

Important Class Policies:

1. ***DEI Course Expectations:*** As a learning community, we should be working together to create an effective and respectful space; an environment that is safe and accepting, where everyone feels like they can bring their whole self to the table; a classroom that supports the ever changing and diverse learning needs and complexities all students; a space that maximizes learning for everyone. Differences of opinion are encouraged, and I expect that these will be handled respectfully in the classroom.
2. ***Lab/Lecture Attendance and Participation:*** **Attendance is required.** Class participation is expected as this is an interactive course. You will not be able to make up work that is due during a specific class session without notifying the instructor prior to the absence and without approval from the instructor that this is an excused absence.
3. ***Late work:*** will not be accepted after the deadline. **If there is an extenuating circumstance, please contact the instructor via email prior to the due date to discuss potential alternatives.**
4. ***Student Learning Accommodations***

In keeping with University policy, any student with a documented disability interested in utilizing ADA accommodations should contact Student Accessibility Services (SAS), the office of Disability Services on campus for students. SAS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations, which are communicated to faculty in an accommodation letter. All students are strongly recommended to discuss with their faculty the accommodations they plan to use in each course. Faculty who receives Letters of

Accommodation with Disability Related Flexible accommodations will need to fill out the Disability Related Flexibility Agreement. Any questions from faculty or students on the agreement should be directed to the SAS specialist who is indicated on the letter.

Contact SAS:

A170 Living/Learning
Center 802-656-7753
access@uvm.edu
www.uvm.edu/access

5. *Lived Name and Pronoun Information*

The UVM Directory includes fields for indicating your lived name and your pronouns. Lived names (preferred names, names in use) are names that an individual wants to be known by in the University community. Entering your pronouns is strongly encouraged to help create a more inclusive and respectful campus community. To update your information, login to the UVM Directory. A preview box will allow you to see how this information will appear in other systems used on campus such as Microsoft Teams and Brightspace. More information about how to make changes to your lived name and pronouns is available in the [Knowledge Base](#).

6. *University of Vermont Policies*

Religious Holidays:

All students at UVM have the right to practice the religion of their choice. If you wish to observe any religious holiday(s) during the semester, you should submit a written request to me by the end of the Add/Drop period. You will be permitted to make up work within a mutually agreed-upon time. <https://www.uvm.edu/registrar/religious-holidays>

Conduct in Classroom:

Students are expected to treat others with respect in the classroom. Those who engage in behavior that disrupts a classroom may be subject to disciplinary action under the Code of Student Rights & Responsibilities

<http://www.uvm.edu/policies/student/studentcode.pdf>

Disruptive classroom conduct means engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning.

Code of Academic Integrity:

The policy addresses plagiarism, fabrication, collusion, and cheating.

<https://www.uvm.edu/policies/student/acadintegrity.pdf>

All academic work must conform to the UVM Code of Academic Integrity. This means that all work turned in under your name (ex. lab report) must be the product of your own work or else appropriately referenced. Copying the work of others without permission or without identifying it as someone else's work is plagiarism and is a violation of academic honesty. Unless specifically noted, all work should be your own.

Violations may be in any of the following categories: plagiarism, fabrication, collusion or cheating. Any student, member of the University staff, or faculty may report any perceived

violation of this Code to the Center for Student Ethics and Standards. Charges will be heard by the Academic Integrity Council. Sanctions may range from a letter of warning to dismissal from the University.

Use of ChatGPT (or other similar tools or software that generate suggested text) is not allowed in this class for any part of a graded assignment, including generation of ideas, writing of text, or rewriting your own work. Doing so is considered a violation of the cheating and plagiarism standards of the UVM Code of Academic Integrity. Violations could result in failure of the assignment or failure of the course and a notation on your transcript.

Intellectual Property Statement/Prohibition on Sharing Academic Materials:

Students are prohibited from publicly sharing or selling academic materials that they did not author (for example: class syllabus, outlines or class presentations authored by the professor, practice questions, text from the textbook or other copyrighted class materials, etc.); and students are prohibited from sharing assessments (for example homework or a take-home examination). Violations will be handled under UVM's Intellectual Property policy and Code of Academic Integrity.

Grade Appeals: If you would like to contest a grade, please follow the procedures outlined in this policy: <https://www.uvm.edu/policies/student/gradeappeals.pdf>

Grading: For information on grading and GPA calculation, go to <https://www.uvm.edu/registrar/grades>

FERPA Rights Disclosure:

The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974. <http://catalogue.uvm.edu/undergraduate/academicinfo/ferparightsdisclosure/>

Promoting Health & Safety:

The University of Vermont's number one priority is to support a healthy and safe community:

Center for Health and Wellbeing:
<https://www.uvm.edu/health>

Counseling & Psychiatry Services (CAPS)
Phone: (802) 656-3340

C.A.R.E. If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (802-656-3380). If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at <https://www.uvm.edu/studentaffairs>

Course Evaluation and Grade Determination:

All necessary course materials and/or assignments will be listed (or attached) to the corresponding lesson on Brightspace. Each lesson will include specific instructions and due dates for related activities.

Your grade for this course will be calculated based on the following criteria:

- **Quizzes – (30%)** – There will be quizzes that will assess your understanding of the course material. These may be in the classroom or online, will be timed and taken without outside materials.
- **Lab Activities (30%)** – Labs will be interactive, and you will be expected to complete a variety of lab activities both on campus and on your own during the asynchronous portion of the class. Specific lab related supplies necessary for completion of asynchronous labs will be provided.
- **Class Participation and Assignments (20%)** – As stated earlier, I expect that you will be in class and that you will be an engaged learner during our time together, both in the classroom and online. If you do not come to class prepared, are not engaged during class, and/or do not participate in class, your grade will be negatively affected. There may be assignments that will be completed in or outside of class that will be included in this section of the grade.
- **True Crime Project (20%)** – You will be working in groups to research and present a project based on a true crime. This will be a collaborative project and will be presented online during the last two weeks of our course.

Your letter grade earned in the course will be based on the numerical ranges given below.

<60 = F	60 - 62 = D-	70 - 72 = C-	80 - 82 = B-	90 - 92 = A-
	63 - 66 = D	73 - 76 = C	83 - 86 = B	93 - 96 = A
	67 - 69 = D+	77 - 79 = C+	87 - 89 = B+	97 - 100 = A+

Decimals will be rounded up or down based on universal math conventions (.4 and below rounds down, .5 and above rounds up).

***You are encouraged to discuss your grade status with the instructor at any time.