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# CJUS 125N.50: Fundamentals of Forensic Science

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# **Fundamentals of Forensic Science**

#### CJUS 125 Online Version

Instructor: Katherine Baca Email: katherine.baca@umontana.edu Meetings by appointment only

## **Goals and Purpose:**

Successful students in this class will:

- gain an appreciation for the scientific method as a way to learn about the world
- be introduced to the basics of a wide variety of sciences
- explore the breadth of forensic science as practiced in crime labs in the 21st century
- understand the roles of police, forensic scientists, attorneys, expert witnesses and others in the process of a criminal investigation and trial
- learn about careers in the forensic sciences and how to prepare for them

**Texts, Readings and Class Materials:** There is no required text for this class, readings will be posted each week on Moodle. These readings will consist of PDFs from textbooks, current journal articles, and current websites. All test questions and assignments will come from the posted readings, powerpoints, and lectures. Each week, the student will be required to log onto Moodle to find the posted material for the week. The readings will correspond to the topics on the following calendar.

Progress Policy: Each week in this course will begin on Monday at 12:05 am and conclude on Sunday at 11:55 pm. All readings, assignments, and exams must be completed by Sunday at 11:55 pm (except for the final exam, which is due by Friday (May 8th) at 5:00 PM of finals week). The only exceptions to these deadlines will be given in the case of documented illness or university approved exceptions.

**Exams and Assignments:** Please refer to the schedule on this syllabus for the due dates of all assignments and exams. Each new week on Moodle will open at 12:05 AM Monday morning, at which point you will be able to see the readings and assignments for that week. Each writing assignment must be complete and mostly free of grammatical errors. More specific instructions for writing assignments will be posted for each assignment on Moodle. All exams will be multiple choice; exams 1, 2, and 3 will cover only the material covered since the previous exam. Exam 4 will be cumulative and will test on information covered throughout the entire semester. The final exam MUST be taken on or before May 8, 2020 by 5:00PM.

**Academic Integrity:** Students will be held to the provisions of the Student Conduct Code, online at <a href="http://life.umt.edu/vpsa/student\_conduct.php">http://life.umt.edu/vpsa/student\_conduct.php</a>, with regards to cheating, plagiarism, abusive language, and other issues. Violations will not be tolerated.

**Disabilities:** Every effort has been made to make the online materials accessible to students with disabilities. If you have a problem accessing the materials please let me know immediately. Please visit the Disability Student Services website for more information. http://www.umt.edu/dss/

**Grading:** Your grade will be based on four exams (worth 100 points each) and on eight assignments (worth 20 points each).

The following scale will be used for assigning grades:

A: 94%-100%

A-: 90%-93.9%

B+:87%-89.9%

B:84%-86.9%

B-:80%-83.9%

C+:77%-79.9%

C:74%-76.9%

C-:70%-73.9%

D+:67%-69.9%

D:64%-66.9%

D-:60%-63.9%

F: 0%-59.9%

# LECTURE AND READING SCHEDULE

Access all reading material and assignments through Moodle

## Week One: 1/13-1/19

- Introduction to the class
- What is forensic science?

#### Week Two: 1/20-2/26

- The scientific method
- The criminal investigation

#### Assignment 1 Due January 26 by 11:55pm

#### Week Three: 1/27-2/2

- Crime Scenes
- Evidence & the comparative method

## Assignment 2 Due February 2 by 11:55pm

#### **Week Four: 2/3-2/9**

• Trace evidence

\*\*\* STUDY FOR EXAM \*\*\*

Assignment 3 Due February 9 by 11:55pm

Week Five: 2/10-2/16

## EXAM 1 Due February 16 by 11:55pm

#### Week Six: 2/17-2/23

- The chemistry & physics of firearms
- Firearms, toolmarks, & impressions

## Assignment 4 Due February 23 by 11:55pm

## Week Seven: 2/24-3/1

- The genetics of fingerprints
- Fingerprints

## Assignment 5 Due March 1 by 11:55pm

## Week Eight: 3/2-3/8

• Ouestioned documents

\*\*\* STUDY FOR EXAM \*\*\*

Week Nine: 3/9-3/15

### EXAM 2 Due March 15 by 11:55pm

# Week Ten: 3/16-3/22

\*\*\*Spring Break\*\*\*

No reading/assignment due this week, but I will open week 11 if you want to work ahead.

#### Week Eleven: 3/23-3/29

- Basic analytical methods
- Serology

#### Assignment 6 Due March 29 by 11:55pm

# Week Twelve: 3/30-4/5

- DNA analysis
- Forensic chemistry and toxicology

## Assignment 7 Due April 5 by 11:55pm

#### **Week Thirteen: 4/6-4/12**

Forensic pathology

## Assignment 8 Due April 12 by 11:55pm

## **Week Fourteen: 4/13-4/19**

• Forensic anthropology & odontology

\*\*\* STUDY FOR EXAM \*\*\*

**Week Fifteen: 4/20-4/26** 

EXAM 3 Due April 26 by 11:55pm

**Week Sixteen: 4/27-5/3** 

• Careers in the forensic sciences

\*\*\*STUDY FOR CUMULATIVE FINAL EXAM\*\*\*

Week Seventeen: 5/4-5/8

FINAL EXAM Due by May 8 @ 5 pm.

NOTE THAT THE FINAL EXAM IS DUE BY FRIDAY AT 5:00 PM OF THIS WEEK (NOT SUNDAY).