

Course Syllabus – Forensic DNA Analysis, BIOL 3357, CRN# 34208 - Summer 2019 (June 10 – August 6)

100% On-line

INSTRUCTOR: Roshanak Jafari, M.D.

- Virtual Office Hours - Anytime via Blackboard Course E-mail or Blackboard Course Discussion Board.
- e-mail: rjafari@utep.edu

I will try to answer your questions as soon as possible, but if you would not hear from me, give me about 24-48 hours to reply

PREREQUISITE: BIOL 3320 with a grade of C or higher

CREDIT HOURS: 3.0

REQUIRED TEXT: *An Introduction to Forensic DNA Analysis Second Edition, Rudin, N. and Inman, K., 2002, CRC Press, New York. ISBN: 0-8493-0233-1*

IMPORTANT DATES

- **June 16** - Biography & Scavenger Hunt Results Due (5 points each with the total of 10 points)
 - **June 30** - Practical Problems I Due (15 Points)
 - **July 1 - 7** - Exam 1 (100 points)
 - **July 28** - Practical Problems II Due (15 Points)
 - **July 29 – August 4** - Exam 2 (100 points)
 - **August 5 - 6** - Case Study Paper Due (6 Points Extra Credit)
- * **Discussion Questions** - (80 points)
- You will be expected to make comments on 4 discussion questions on the Discussion Board in Blackboard. The Discussion Questions will be posted on June 10, 17, July 8, 15, and you will have through the following Sunday at midnight to post your responses.

There will be four (4) questions to answer over four (4) weeks. Each week's comments by you will be worth 15 points with the total counting 80 points. See the section below titled "Discussion Question Answers" for more information about expectations for how you should answer a Discussion Question.

COURSE DESCRIPTIONS:

Examination of the use of DNA analysis in law and medicine, including validity of the uses of these data, the analytical techniques used to identify specific genes and mutations in individuals, and statistical interpretation of DNA typing results.

This course is offered as a full, online course, meaning that no traditional classroom face-to-face meetings will take place during the semester. Time commitment is essential to complete the course requirements; you are expected to complete all online materials and assignments before the deadline. You need to remember that you should be studying for this course at least 3 hours per credit so for a 3 credit course, you should be spending at least 9 hours per week in a regular 16-week semester. If you have an outside job, family responsibilities or are taking other courses, be aware that this class takes a lot of time to master and if you do not spend an adequate amount of time, you will not do as well as you would like. Please keep that in mind as you spend your time studying for this course.

COURSE GOALS:

Students will learn and understand:

- To identify how DNA profiling and analysis can be used in law and medicine
- The scientific investigative and analytical techniques used to identify specific genes and mutations in individuals
- To determine the strength and validity of forensic DNA profiling for use in law and medicine
- To perform statistical analysis and interpretation of DNA profiling results

STUDENT'S RESPONSIBILITY:

Students will be expected to keep up with course assignments as indicated on the course syllabus. You will also be expected to make a substantial comment to each discussion question listed on the Discussion Board set up for this course. If you miss a scheduled exam or a deadline for an assignment, only a serious personal emergency will be considered as an excuse and you must apply in writing (e-mail O.K.) to the instructor to explain why an exam or assignment was missed. If any exam or assignment deadline is missed without an instructor approved excuse, one/half credit for the missed exam or assignment can be obtained by completing the exam or assignment within one week following the deadline. After one week has passed beyond the deadline for an exam or assignment, no credit will be able to be earned for that exam or assignment. The only exception to this rule is Exam 2 and Case Study Paper (extra credit) which must be completed by the end of day on **Sunday, August 4** and end of day of the last day of finals week which is **Tuesday, August 6**.

DISCUSSION QUESTION ANSWERS:

You may respond to the discussion question or make a response to another student's posting. Your posting in the discussion board must be at least 300 words long. Please remember to respond in your own words and if you use another person's writing, remember to put their words in quotes with appropriate reference to the author. To do otherwise is considered plagiarism which is a serious matter. Also note that responses to the discussion questions are due at the end

of day on the Sunday following their publication on the previous Monday morning and your response must be in the Discussion Board folder indicated for that discussion question.

Also, please remember that tolerance of other students' ideas or responses is expected. Remember, what one publishes in text form on a discussion board can sound harsher than when saying it to a person face-to-face so keep that in mind when you respond to another student's posting. It is O.K. to critique an idea or what has been said but it is not appropriate to critique another person personally. I read the postings every day and after the deadline for responses.

TESTING CONDITIONS:

All exams will be "open book" exams which means that when exams are taken, you will be able to have any and all support materials you think are necessary to answer exam questions. All exams will be given via the Internet using Blackboard. Exams can be True/False and multiple choice questions where you will have a list of answers to choose from a drop-down menu. Although the exams may be taken open-book, the exams will be timed to permit you to have a total of 60 -100 minutes based on the number of questions. If you have to look up a lot of answers, you will not be able to finish the exam so it is important for you to know the material as well as you can before starting an exam. The exams will be available to take during the week of an exam from Monday morning of that week through the following Sunday at 11:59 PM. The exams are to be taken alone without help from another person so that you can determine and be proud of your own accomplishments.

INSTRUCTOR'S RESPONSIBILITY:

To provide students with a challenging environment for learning which also encourages questioning and respects individual opinions.

BEING SUCCESSFUL IN AN ONLINE CLASS:

Online learning is not a spectator sport. It is everyone's responsibility to participate as fully as they can so everyone can get the most from the experience. Here are some simple rules to follow to ensure your participation and engagement in the learning process:

- Ask questions: If you do not know the answer, someone else will.
- Reach out to others: Offer a fact, article, link or other item that can help others learn.
- Be appropriate: The online classroom is not the place for insulting or insensitive comments, attacks, or venting. Inappropriate behavior will usually subject to disciplinary action, as well.
- Be diplomatic: When sending messages on emotionally charged topics, make sure you write the message and then walk away for at least an hour before re-reading the message and then sending it. Re-reading emotionally charged messages ensures that they are constructive instead of destructive. Think of the person at the other end.
- Stay focused: Stay on topic to increase the efficiency of your learning.

- Take advantage of all the resources given to you to succeed in the class.

A “Discussion Board” area will be set up in the courses Blackboard shell to allow students to ask questions to each other. Make use of it, since your instructor can monitor your questions and provide feedback.

EFFECTIVE ELECTRONIC COMMUNICATION:

It is important to share a word of caution, so we can become wiser about interpersonal distance learning communications. When communicating electronically, many of the feelings or impressions that are transmitted via body language in face-to-face communications are lost. Consequently, interpreting emotions and innuendos is much more difficult. Only what is written, or drawn, carries the message. Often, excitement can be misinterpreted as anger or insult. It is important that we all keep this in mind as we communicate. Words in print may seem harmless, but they could emotionally injure us when working at a distance. Hence, it is vitally important that we are conscious of how we communicate while working at a distance.

- For example, avoid the use of caps in your electronic messages, as wording in caps comes across as shouting.

The standard practice ("Netiquette") for participation in networked discussion requires that all participation be focused on the topic at hand, not become personalized, and be substantive in nature. (Translation: you may certainly disagree with others, but you must do so respectfully; you may express strong beliefs or emotions, but you may not get so carried away that you lose all perspective on the course itself.)

- More information on Netiquette, the etiquette of Internet communication, can be found at www.albion.com/netiquette.

DISABILITY STATEMENT

As per Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990, if a student needs an accommodation then the Office of Center for Accommodation and Support Services (CASS) located at UTEP needs to be contacted. If you have a condition, which may affect your ability to perform successfully in this course, you are encouraged to discuss this in confidence with the instructor and/or the director of the Center for Accommodation and Support Services (CASS). You may call 915-747-5148 for general information about the American with Disabilities Act (ADA) and the rights that you have as a UTEP student with a disability.

Individuals with disabilities have the right to equal access and opportunity. It is the student's responsibility to contact the instructor and [The Center for Accommodation and Support Services \(CASS\)](#) at The University of Texas at El Paso.

COURSE SCHEDULE:

Week	Reading assignment	Due (deadline)
Week 01	Chapter 1: The Nature of Physical Evidence Chapter 2: The Collection and Preservation of Physical evidence	<ul style="list-style-type: none"> • Submit Brief Bio (5 points) • Submit S. Hunt Questions Results (5 Points) • Submit a minimum 300 words response to Discussion Question 1 (15 points) <p>6/10 – 6/16</p>
Week 02	Chapter 3: A Short History of DNA Typing Chapter 4: The Scientific Basis of DNA Typing	<ul style="list-style-type: none"> • Submit a minimum 300 words response to Discussion Question 2 (15 points) <p>6/17 – 6/23</p>
Week 03	Chapter 5: An Overview of Forensic DNA Typing Systems Chapter 6: Procedures for Forensic DNA Analysis	<ul style="list-style-type: none"> • Practical Problems I (15 Points) <p>6/24 – 6/30</p>
Week 04	Review Chapters 1, 2, 3, 4, 5, & 6	<ul style="list-style-type: none"> • Exam 1 (100 Points) – Ch 1,2,3,4,5, & 6 <p>7/1 – 7/7</p>
Week 05	Chapter 7: Interpretation of DNA Typing Results Chapter 8: Assessing the Strength of the Evidence	<ul style="list-style-type: none"> • Submit a minimum 300 words response to Discussion Question 3 (15 points) <p>7/8 – 7/14</p>
Week 06	Chapter 9: The DNA Databank Chapter 10: Quality Assurance	<ul style="list-style-type: none"> • Submit a minimum 300 words response to Discussion Question 4 (15 points) <p>7/15 – 7/21</p>
Week 07	Chapter 11: Admissibility Standards: science on trial in the Courtroom	<ul style="list-style-type: none"> • Practical Problems II (15 points) <p>7/22 – 7/28</p>
Week 08	Review Chapters 7, 8, 9, 10, & 11	<ul style="list-style-type: none"> • Exam 2 (100 points) – Ch 7, 8, 9,10, & 11 <p>7/29 – 8/4</p>

Chapters from the textbook- **An Introduction to Forensic DNA Analysis Second Edition, Rudin, N. and Inman, K., 2002, CRC Press, New York. ISBN: 0-8493-0233-1**

The course schedule is tentative, and subject to change by the instructor who will punctually notify you of any changes.

GRADING

Your grade in this course is based on a combination of two exams, eight discussion questions and four Blackboard assignments (Brief Bio, Scavenger Hunt Questions, Practical Problems I & II) for a maximum of 300 points.

Grading Policy:

Brief Bio: 5 points

S. Hunt Questions: 5 points

Exam 1: 100 points

Exam 2: 100 points

Four Discussion Questions: 60 points

Practical Problems I: 15 Points

Practical Problems II: 15 Points

Total: 300 Points

Grades are based on the points you earned; there is no curve and no +/- grades are awarded. So, an A=270 - 300, a B= 240 - 269, a C=210 – 239, a D= 180 - 209, and F=< 180 points

SCHOLASTIC INTEGRITY

Academic dishonesty is an assault upon the basic integrity and meaning of a University. Cheating, plagiarism, and collusion in dishonest activities are serious acts which erode the University's educational and research roles and cheapen the learning experience not only for the perpetrators, but also for the entire community. It is expected that UTEP students will understand and subscribe to the ideal of academic integrity and that they will be willing to bear individual responsibility for their work. Materials (written or otherwise) submitted to fulfill academic requirements must represent a student's own efforts. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Violations will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.

TECHNICAL REQUIREMENTS:

The University of Texas at El Paso provides free 24/7 Helpdesk support to academic students and faculty members teaching on-line through the [Tech Support Company]. The Helpdesk can provide answers to questions about using technology and services, as well as, technical support. Please visit the [technical support page](#) for more information.

- Microsoft Office. If you do not have Microsoft Office, check with your University of Texas branch store for the special Microsoft Office package which includes Word, Excel and PowerPoint.
 - Contact the [UTEP Bookstore](#) (915)747-5594 for more info.
- Adobe Flash: This application is for advanced multimedia presentations/interactions over the internet.
 - You may download this player from the [Adobe Download](#) site.

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