

## Course Syllabus – Toxicology, BIOL 3357, CRN#12650 – Fall 2020

### 100% On-line (asynchronous)

**INSTRUCTOR:** Dr. Roshanak Jafari

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

I will try to answer your questions as soon as possible within 24 hours, but if you would not hear from me after 24 – 48 hours, please contact me again.

**CREDIT HOURS:** 3.0

**RECOMMENDED TEXT:** A Textbook of Modern Toxicology, 4th Ed.", by Ernest Hodgson, ISBN: 978-0-470-46206-5

Most of the course materials are prepared on Blackboard.

### IMPORTANT DATES

- **Aug. 30** - Biography & Scavenger Hunt Results Due (10 points each with the total of 20 points)
  - **Oct. 12 - 18** - Exam 1 (100 points)
  - **Nov. 30 – Dec. 6** - Exam 2 (100 points)
  - **Dec. 11** - Case Study Paper Due (6 Points Extra Credit)
- \* **Discussion Questions** - (80 points)

You will be expected to make comments on 8 discussion questions on the Discussion Board in Blackboard. The Discussion Questions will be posted on Aug. 31, Sep. 7, 14, 21, Oct. 19, 26, Nov. 2, 9, and you will have through the following Sunday at midnight to post your responses.

There will be eight (8) questions to answer over eight (8) weeks. Each week's comments by you will be worth 10 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:

The study of interactions between foreign chemicals and biological systems, including the physiological, developmental, and genetic consequences of exposure of human beings to environmental contaminants and medications. Also treated is the scope of toxicology in forensic science, particularly through its role in interpretation of evidence.

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 OBJECTIVES**

- Provide toxicological information at an introductory level while combining enough comprehensive information to meet the needs of more advanced students studying in the fields of Biomedical, Forensic, Nursing, Veterinary, Pharmacology, Environmental Science, and Biology.
- Study the effects of toxins on the physiologic, metabolic, reproductive, and developmental processes and body organ functions
- Generate an applicable technical knowledge base in undergraduate students, as well as extend the expertise of graduate students pursuing careers in the health, medical, and environmental sciences.
- Evaluate drug activity and interaction as described in the Physician's Desk Reference (PDR)
- Examine Material Safety Data Sheets (MSDS)

### **COURSE GOALS:**

Students will learn and understand:

- All substances can be toxic depending on the means and level of exposure
- The basic concepts of cellular toxicity and chemical actions on cells and body organs
- The importance and diversity of drug interactions if are administered together
- Governmental regulation and legislation to prevent exposures at domestic and industrial settings

### **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 weekly 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 Case Study Paper (extra credit) which must be completed by the end of day of the last day of finals week which is **Friday, Dec. 11**.

### **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 minutes for 50 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](http://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:**

<b>Week</b>	<b>Reading Assignment on Blackboard</b>	<b>Due (deadline)</b>
Week 01	Introduction to Toxicology: <ul style="list-style-type: none"> <li>• Types of toxic substances and exposure</li> <li>• Routes of exposure</li> <li>• Dose-Response relationship</li> <li>• Detection of toxic responses</li> </ul>	<b>Submit Brief Bio (10 points)</b> <b>Submit S. Hunt Questions Results (10 Points)</b> 8/24 – 8/30
Week 02	Toxicant Proceeding in Vivo: <ul style="list-style-type: none"> <li>• Absorption of toxic compounds</li> <li>• Distribution of toxic compounds</li> <li>• Excretion of toxic compounds</li> <li>• Metabolism of foreign compounds</li> </ul>	<b>Submit a minimum 300 words response to Discussion Question 1 (10 points)</b> 8/31 - 9/6
Week 03	Drugs as Toxic Substances: <ul style="list-style-type: none"> <li>• Pharmaceutical: overdoses, interactions</li> <li>• Genetic aspects</li> </ul>	<b>Submit a minimum 300 words response to Discussion Question 2 (10 points)</b> 9/7 - 9/13
Week 04	Industrial Chemicals: <ul style="list-style-type: none"> <li>• Government Regulation of Chemicals</li> <li>• Ways of exposure</li> <li>• Toxic effects</li> </ul>	<b>Submit a minimum 300 words response to Discussion Question 3 (10 points)</b> 9/14 – 9/20
Week 05	Industrial Chemicals: <ul style="list-style-type: none"> <li>• Long-term consequences and developmental toxicity</li> <li>• Heavy metals</li> <li>• Plastics</li> <li>• Asbestos</li> </ul>	<b>Submit a minimum 300 words response to Discussion Question 4 (10 points)</b> 9/21 – 9/27
Week 06	Food Additives and Contaminants <ul style="list-style-type: none"> <li>• Types of food additives</li> <li>• Preservatives</li> <li>• Saccharin</li> </ul>	9/28 – 10/4
Week 07	Review Week 1- 6 materials to prepare for Exam 1	10/5 – 10/11
Week 08	<b>Exam 1 (100 Points) – Week 1-6 Materials</b>	<b>Exam 1 (100 Points) – Week 1-6 Materials</b> 10/12 – 10/18
Week 09	Toxicants in Environment <ul style="list-style-type: none"> <li>• Air Pollutants</li> <li>• Water and soil pollutants</li> </ul>	<b>Submit a minimum 300 words response to Discussion Question 5 (10 points)</b> 10/19 – 10/25
Week 10	Toxicants in Environment <ul style="list-style-type: none"> <li>• Acid Rain</li> <li>• Lead Pollution</li> <li>• Mercury and methylmercury</li> </ul>	<b>Submit a minimum 300 words response to Discussion Question 6 (10 points)</b> 10/26 – 11/1
Week 11	Organ toxicity: <ul style="list-style-type: none"> <li>• Hepatotoxicity</li> <li>• Cardiotoxicity</li> </ul>	<b>Submit a minimum 300 words response to Discussion Question 7 (10 points)</b> 11/2 – 11/8

Week 12	Organ toxicity: <ul style="list-style-type: none"> <li>• Respiratory Toxicity</li> <li>• Toxicity of Male and Female Reproductive System</li> </ul>	<b>Submit a minimum 300 words response to Discussion Question 8 (10 points)</b> 11/9 – 11/15
Week 13	Organ toxicity: <ul style="list-style-type: none"> <li>• Neurotoxicity</li> <li>• Nephrotoxicity</li> </ul>	11/16 – 11/22
Week 14	Review Week 10 – 14 materials to prepare for Exam 2	11/23 – 11/29
Week 15	<b>Exam 2 (100 points) – Week 10 -14 materials</b>	<b>Exam 2 (100 points) – Week 10-14 materials</b> 11/30 – 12/6
Week 16	<b>Case Study Paper (6 Points Extra Credit)</b>	<b>Case Study Paper (6 Points Extra Credit)</b> 12/7 – 12/11

**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 two Blackboard assignments (Brief Bio & Scavenger Hunt Questions Result) ) for a maximum of 300 points.

Grading Policy:

Brief Bio: 10 points

S. Hunt Questions: 10 points

Exam 1: 100 points

Exam 2: 100 points

Eight Discussion Questions: 80 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.

## **COPYRIGHT NOTICE:**

Many of the materials that are posted within this course are protected by copyright law. These materials are only for the use of students enrolled in this course and only for the purpose of this course. They may not be further retained or disseminated.

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