



School of Pharmacy  
Required Course Syllabus  
Spring – P1  
Course # PHAR 6301/Track: Pharmaceutical Foundations

**Principles of Drug Action 1B**

Course Dates: January 17th – May 5<sup>th</sup>, 2023

Scheduled Course Time: Mondays 9:00am-10:50am and Wednesdays 9:00am-9:50am

Location: Campbell Building Room 213

Course Coordinator and Instructor

Ian Mendez, PhD Assistant Professor Office: Campbell Building Room 715    Email: <a href="mailto:iamendez2@utep.edu">iamendez2@utep.edu</a> Phone: (915)747-8216 In-Person Office Hours: Wednesdays 10:00am – 11:00pm, Campbell Building Room 715
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Course Instructors

Yong Qin, PhD Assistant Professor Office: Campbell Building Room 508    Email: <a href="mailto:yqin@utep.edu">yqin@utep.edu</a> Phone: (915)747-5842
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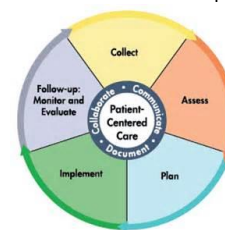
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**Course Description**

Principles of drug action is a course that introduces students to the general principles that govern pharmacotherapy. This course integrates medicinal chemistry, pharmacology, and toxicology building on the principles acquired in chemistry, biology, and pharmacology. This course is Part 2 of a 2-series course that begins with Principles of Drug Action 1A. The course begins with basic principles of pharmacology, including pharmacokinetics and pharmacodynamics, their relationship to receptor signal transduction, second messenger systems, drug-receptor interaction, dose-response curves, drug adverse effects, and drug-drug interactions. The course will also briefly discuss the physiology, medicinal chemistry, and pharmacology of the nervous system, including the autonomic system, receptors, and neurotransmitters of the nervous system. The course will conclude with an introduction into toxicology with discussion of commonly encountered toxicities and their antidotes. Emphasis for the course is placed upon learning the pharmacological properties, sites and mechanisms of action, and toxicology of important drug classes as a means for lifelong understanding of present and future pharmacological agents. Students are expected to bring with them the basic knowledge of chemistry, biology, and physiology to better understand the concepts taught in this course. Ultimately, the PDA courses will provide the knowledge foundation and background relevant to the subsequent Integrated Systems-Based Pharmacotherapy (ISBP) courses.

**What part of PPCP (Pharmacists' Patient Care Process) is addressed.** This course assists students in assessing the mechanism of action of drugs to make an appropriate recommendation.



Click on the following link for more information on the Pharmacists' Patient Care Process:  
<https://www.pharmacist.com/sites/default/files/files/PatientCareProcess.pdf>

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## Office Hours

*Dr. Mendez is available for in-person office hours, in Campbell 715, on Wednesdays from 10am-11am. Students may request an appointment to meet in person or virtually with any course instructor. All appointments should be made at least 24 hours in advance. Questions related to the course in general should be directed to the coordinator, whereas content/topic-specific questions should be directed to the instructor of that content.*

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## Detailed Course Meetings & Location

**Campbell Building Room 213, Mondays 9:00am-10:50am and Wednesdays 9:00am-9:50am**

**All course lectures and exams are scheduled to be held synchronously and in-person. Other course activities may be completed in-person or virtually, as described by the instructor. Exams and Group Activities will occur in the course room during scheduled class time, on the dates described in the calendar, unless otherwise stated. The final exam will occur on Thursday May 11th from 8am-11am in Campbell Building Room 213.**

In a major disruption (e.g., H1N1 epidemic, subzero weather), be prepared to maintain course progress via other means (e.g., Internet, our Blackboard course shell, etc.) and check your email (especially your UTEP miners account) regularly. All lectures will be recorded but will only be released in the case of a major disruption or at the course coordinators discretion.

### Online Platform/Blackboard:

This semester the course will be taught using Blackboard as the primary learning management system.

*Accessing Course Content on Blackboard:* All lectures, handouts, and course material will be in Blackboard. Log into My UTEP.edu and click on the Blackboard link to access the online course for PHAR 6301. The course is individualized, and students may access course material as it is made available by course instructors. Except in cases of a UTEP network being "down" or "offline" you are ultimately responsible to ensure that your computer is connected to the internet and that any issues are addressed prior to class and/or assessments.

### Online Assessment Requirements:

This course requires the use of ExamSoft®. Students are responsible for creating their online login within the first 3 days of class. It is the student's responsibility to maintain access to a reliable internet connection (with the rare exception of when UTEP's systems are down). If students cannot access your online account, please contact Adrian Enriquez (aealonso@utep.edu), to resolve this issue within the first 3 days of class. Students are responsible for ensuring they have access to the online assessment system. Mr. Enriquez is NOT available for questions or laptop failures/requests after business hours or on weekends. *Electronic exams need to be downloaded at a minimum of 2 hours prior to the examination to avoid a 10% grade penalty deduction. Repeated instances (> 1 time) of not downloading electronic exams will result in a referral to the professionalism committee on the SOP Progression Committee and an additional 10% grade penalty deduction from the student's earned exam score.*

<b>Course Learning Objectives</b> (Mapped to national outcomes) At the conclusion of this course, students should be expected to:	<b>CAPE Outcomes</b>	<b>PCOA / NAPLEX</b>	<b>Learning Activities</b>	<b>Outcome Measures</b>	<b>Level of Assessment</b> (I) Introduce, (R) Reinforce, (A) Apply
<b>Objective 1</b> Describe the basic concepts of pharmacology, such as pharmacokinetics (how the body handles a drug) and pharmacodynamics (how the drug affects the body).	1.1	2.1.2 2.2.1	Readings, lectures, discussions, and class activities	<b>Quiz, Exam</b>	<b>I, R</b>
<b>Objective 2</b> Describe the various drug metabolic pathways	1.1 3.1	2.1.5 2.2.1	Readings, lectures, discussions, and class activities	<b>Quiz, Exam</b>	<b>I, R</b>
<b>Objective 3</b> Describe the basic concepts of pharmacokinetics, such as route of administration, drug absorption, distribution, metabolism, and elimination (ADME), as well as the physicochemical properties of drugs in relation to ADME.	1.1	2.1.1 2.1.2 2.1.5 2.2.1 2.5.1 2.5.3	Readings, lectures, discussions, and class activities	<b>Quiz, Exam, team assignment</b>	<b>I, R</b>
<b>Objective 4</b> Describe the basic concepts of pharmacodynamics, such as potency, efficacy, agonist, antagonist (competitive and noncompetitive), synergism, antagonism, dose-response curve, biologic variability, etc.	1.1	2.2.1 2.2.2 2.6.1 2.6.1	Readings, lectures, discussions, and class activities	<b>Quiz, Exam</b>	<b>I, R</b>
<b>Objective 5</b> Describe the principles of drug-drug interactions, and drug adverse effects.	1.1 3.1 3.6	2.2.1 2.2.3 2.2.4	Readings, lectures, discussions, and class activities	<b>Quiz, Exam, team assignment</b>	<b>I, R</b>
<b>Objective 6</b> Identify the two subdivisions of the autonomic nervous system (ANS), the sympathetic (also called adrenergic) and the parasympathetic (also called cholinergic).	1.1	2.2.1 2.2.2	Readings, lectures, discussions, and class activities	<b>Quiz, Exam</b>	<b>I, R</b>
<b>Objective 7</b> Compare the contribution of each subdivision of the ANS in normal functions (physiology) as well as in different pathological states.	1.1 3.1	2.2.1 2.2.2	Readings, lectures, discussions, and class activities	<b>Quiz, Exam</b>	<b>I, R</b>

<b>Objective 8</b> Identify the major central nervous system functional regions and their relevance in different pathological states.	1.1	2.2.1	Readings, lectures, discussions, and class activities	<b>Quiz, Exam</b>	<b>I, R</b>
<b>Objective 9</b> Identify the important and major chemical functional groups and how these functional groups may contribute to the pharmacological effects of a drug.	1.1 3.1	2.2.1 2.2.2	Readings, lectures, discussions, and class activities	<b>Quiz, Exam</b>	<b>I, R</b>
<b>Objective 10</b> Apply the basic concepts of pharmacology to clinical problems and situations.	1.1 3.1 3.2	2.2.1 2.2.2	Readings, lectures, discussions, and class activities	<b>Quiz, Exam, Team Assignment</b>	<b>A</b>
<b>Objective 11</b> Describe the main principles of toxicology and clinical toxicology.	1.1 3.1 3.2	2.2.6	Readings, lectures, discussions, and class activities	<b>Quiz, Exam</b>	<b>I, R</b>

## Methods of Instruction/Learning

This semester, the course will be taught synchronously in-person. UTEP or SOP may change to primarily online course if major disruption (e.g., pandemic, weather). For tips on succeeding in an online environment, see:

<https://www.utep.edu/extendeduniversity/utepconnect/blog/february-2017/tips-for-online-learning-success.html>.

*The learning outcomes in this course will be achieved via:*

1. **Outside Preparation:** Student will be expected to complete the reading assignments and reviewing the slides and/or handouts before class in order to participate actively during class discussions
  2. **In-class Lectures:** Reinforces essential, complex information and models the processes of problem solving.
  3. **Team Assignment/Activity:** Designed to allow student to work cooperatively to come up with answers and thereby to learn from one another.
  4. **Interactive Activities:** Class or virtual discussion and active learning strategies will be employed throughout the course as needed to promote critical thinking and to strengthen understanding of the basic principles.
  5. **Exams/Quizzes:** Allows students to demonstrate the course ability outcomes and instructors to provide necessary feedback.
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## Required Course Technology/Tools/Needs

### Required Textbooks:

- Goodman & Gilman's *The Pharmacological Basis of Therapeutics*, 13<sup>th</sup> edition, McGraw-Hill, Medical Publishing Division, 2017.
- Hoffman RS, Howland MA, Lewin NA, and Nelson LS. *Goldfrank's Toxicologic Emergencies*. 10<sup>th</sup> ed. McGraw-Hill Publishing. 2015.

### Recommended Textbooks:

- Katzung BG. *Basic and Clinical Pharmacology*. 13<sup>th</sup> Ed. San Francisco: McGraw-Hill; 2010.
- DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM. *Pharmacotherapy: A Pathophysiologic Approach*, 10<sup>th</sup> edition, McGraw-Hill Education, 2017
- Golan, David E. *Principles of Pharmacology: The Pathophysiologic Basis of Therapeutics*. 4th edition. Lippincott Williams & Wilkins (*on reserve in library*)
- Lemke TL. Foye's Principles of Medicinal Chemistry. 7th ed. ISBN 9781609133450.

### Laptop Computer

- Students are expected to use their laptop computers each class day for participation in on-line exercises or assessments. It is the responsibility of the students to make sure that the laptops are in working condition and meets the University and School of Pharmacy IT requirements (See SOP Student Handbook).
- If class or activities are held virtually, students should be ready at any time to share their screen, camera, or audio with classmates/faculty.

### Calculator

- Students are expected to bring a non-programmable calculator to class and to all assessment activities. Some exams (e.g., ExamSoft®) may use the software calculator.

### Software/Technology must be tested in orientation/first week of courses to ensure functionality.

- ExamSoft® Exam Monitor
- Blackboard® Collaborate: Chrome Browser
- Microsoft® Teams or UTEP Zoom
- iClicker® polling platform

- Audio (speaker & microphone) and video (camera) MUST be checked to be functional should any classes or exams be held online.

## Attendance

The attendance policy for the School of Pharmacy is outlined in the Student Handbook. It is expected that students should demonstrate their commitment to the profession and respect for faculty, guest speakers, and colleagues by attending all classes and arriving to class on time prepared for the day's lesson(s).

*In-person attendance may be taken by roll-calling, sign-in sheet, pop quizzes, or any other means deemed appropriate by the course instructors. The course coordinator may elect to assign participation point for attendance on any given day, as deemed fit. Course coordinator reserves the right to adjust attendance policies in the case of a major disruption.*

If a student has an excused absence, they should immediately notify the course coordinator, instructor, and Director of Student Affairs (Mrs. Carmen Ramos: [crtorres2@utep.edu](mailto:crtorres2@utep.edu)). To secure approval for an absence related to travel for professional meetings or for events that fall outside of the criteria outlined in the Student Handbook, please refer to the Student Handbook for more information regarding required documentation for submission to the Office of Student Affairs.

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## Expectations of Students in the Course

Students are expected to be professionals and will be treated as such. Any behavior that impairs students' ability to learn will not be tolerated (e.g., side conversation, cell phone use, electronic device use for activities not related to coursework). Laptops may be used during class for taking notes. Using laptops for activities other than taking notes may cause a disruption to the class around you. It is the responsibility of the student to monitor his/her progress during the course and see that they are maintaining the required competency level. Students are encouraged to seek advice and assistance from the course coordinator as soon as he/she encounters any difficulty in the course.

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## Online Etiquette

Students are expected to be professionals during online activities that may occur during this course. Any behavior that impairs students' abilities to learn online will not be tolerated. Laptops may be used during class for taking notes. As with in-person activities, using your laptop for activities other than taking notes may cause a disruption to online activities. Please keep your microphones muted during live lectures and discussions, unless otherwise requested by the instructor. If you would like to comment, please use "raise hand" icon or text chat options.

Online Netiquette: Your instructors and classmates want to generate a safe online learning environment. Please use appropriate online classroom behavior by reading the UTEP Netiquette Guide for Online Courses available at: [https://www.utep.edu/technologysupport/Files/docs/BB\\_Netiquette-Guide-for-Online-Courses.pdf](https://www.utep.edu/technologysupport/Files/docs/BB_Netiquette-Guide-for-Online-Courses.pdf)

## COVID Precautions

Students who attend in-person activities are encouraged to wear a face mask while such meetings are taking place, maintain social distance as much as possible, and practice proper hygiene practices. Minimize the number of encounters with others, particularly in classrooms, elevators, and stairwells, to avoid infection. Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let the course coordinator and Ms. Carmen Ramos, Director of Student Affairs at [crtorres2@utep.edu](mailto:crtorres2@utep.edu) know as soon as possible, so that we can work on appropriate accommodations. The Student Health Center is equipped to provide COVID-19 testing. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area. For more information about the current rates, testing, and vaccinations, please visit [epstrong.org](http://epstrong.org).

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## Evaluation and Grading Policy

Course point distribution will be as follows:

Type of Assessment	Total Points	% Course Grade
Exam I	60	19
Exam II	48	15
Group Activity I	45	14
Group Activity II	45	14
Group Activity III	45	14
Participation Points	16	5
Final Exam	61	19
<b>Total</b>	<b>320</b>	<b>100%</b>

### Assignment of grades:

**A = 90 – 100%**

**B = 80 – 89%**

**C = 70 – 79%**

**F < 70%**

All Assessments will be administered via ExamSoft®, unless noted otherwise.

It is the responsibility of the **student** to monitor his/her progress during the course and see that he/she is maintaining the required competency level. Students should seek advice and assistance from the course facilitator as soon as he/she encounters any difficulty in the course.

Exams: Three in-class exams (including the final) are scheduled. The examinations contribute 62% toward the total score. Refer to the course calendar for dates, times, and topics. All Exams will be administered via ExamSoft®, unless noted otherwise. Students are expected to participate in the exams during the scheduled dates and times. \*Please make sure latest version of Examsoft's Examplify is installed on your computer.

**Group Activities:** Three group activities will be completed in the course. Group activities may include in-person and online components. Students are required to attend and participate in these activities. More information on the activity may be provided by instructors prior to the activity date. See course calendar for dates and times.

**Participation Points:** Participation points will be assigned based on class participation. This may include class discussions, iclicker questions, pop quizzes, writing assignments, attendance, or any other activities deemed appropriate by the instructor.

**Bonus Points:** Instructors may give bonus points at their own discretion at any point during the course.

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## **Exam Requirements and Guidance**

### Exam Day Policy

Students are expected to arrive at least 10 minutes prior to the start of all 3 course exams and start exams on time. If the student arrives after the examination has started, no additional time will be provided for the examination. If another student has already completed their exam and left the exam room before an unexcused late student arrival occurs, the late arrival will not be permitted to sit for the exam and will receive a grade of zero. No allowances will be made for an exam being missed, other than an excused absence. The student must contact the course coordinator, instructor, and Director of Student Affairs (Mrs. Carmen Ramos: [crtorres2@utep.edu](mailto:crtorres2@utep.edu)) for confirmation of excused absence as soon as possible and *prior* to the exam. If exam absence is excused, it is the student's responsibility to contact the course coordinator to arrange for a make-up exam. In this event, the nature of the make-up will be at the discretion of the course coordinator and instructors (oral, written, increased weighting, etc.). An unexcused absence from an exam may result in a grade of "zero" for that exam.

**Bathroom breaks:** No bathroom breaks are permitted during exams unless a prior accommodation is made. Faculty maintain discretion over the permissibility of bathroom breaks. No additional time will be provided for examinations when restroom breaks occur.

### ExamSoft®

This course requires the use of ExamSoft®. Students are responsible for creating their online login within the first week of class. If students cannot access their online account, please contact Adrian Enriquez ([aealonso@utep.edu](mailto:aealonso@utep.edu)), to resolve this issue within five (5) business days of the first day of class. Students are responsible for ensuring they have access to the online assessment system. Mr. Enriquez is NOT available for questions or laptop failures/requests after business hours or on weekends.

Students are responsible for having a functional computer that is up to date and meets all Examsoft® requirements needed for testing. Computers are available to check out as a loan for exams from the ILC, and students should make early arrangements for securing computers. Students who show up without a computer to take an electronic exam will be provided a paper exam but may receive a grade deduction or a professionalism referral to the SOP Progression Committee.

### Expectations Prior and During Examination

**Room:** All exams will occur in Campbell Building room 213. Students are not permitted to be in the examination room prior to assigned seating.

**Seating:** Randomized assigned seating will be utilized for each examination.

**Exams:** Electronic exams need to be downloaded at a minimum 2 hours prior to the examination. During an exam, if a student has any questions/concerns regarding exam questions, they may call on the exam proctor or



type the questions/concerns on the Notes section within Exemplify. *If approved by the exam proctor*, students may contact ExamSoft support for any technical issues during an exam. This would be the only scenario where students will be allowed to use their cell phones. Students must make sure to request a case/ticket number from ExamSoft, as it must be submitted to the course coordinator. The contact information for ExamSoft Support must be saved to your phones: ExamSoft Technical Support 1-866.429.8889 or 954.429.8889.

#### Availability of items during exam

- Exam proctor will provide scratch paper for examinations, unless faculty determines scratch paper is not necessary. Only faculty will provide scratch paper, and only scratch paper provided by the School of Pharmacy can be used during the examination. Any scratch paper utilized during an examination must have the student's name and date on every page and all pages must be turned in at the completion of the examination. Any exemption will be noted accordingly in the syllabus.
- No backpacks, sunglasses, purses, hats, large coats and/or other bulky clothing permitted; these items need to be left in an area in the exam room designated by the exam proctor.
- No food or drink allowed during an exam, unless approved by exam proctor or coordinator.
- No electronic devices (for example: watches, phones, calculators, etc.) are permitted on the student during an examination unless approved by the instructor prior to the examination or inspected upon entry into the exam room for approval. A specific model for calculators may be specified in the course syllabus or provided in advance of the examination to students.
- Silence all devices prior to start of exam. Disruption of examination time due to an electronic device can result in a grade penalty as stipulated in the syllabus.

**Please refer to the UTEP School of Pharmacy Student Handbook** for guidance for exams (online/remote as well as on campus) <https://www.utep.edu/pharmacy/current-students/current-students.html>

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#### **Missed Exams, Activities, and Assignments Policy**

##### **Unexcused Absence:**

No make-ups will be allowed for unexcused absences. Only students who miss an exam, group activity, or assignment due date as a result of an **excused absence** will be allowed to make-up the missed activity, assignment, or exam.

##### **Excused Absence Procedures:**

- The course coordinator, instructor, and Director of Student Affairs (Mrs. Carmen Ramos: [crtorres2@utep.edu](mailto:crtorres2@utep.edu)) MUST be notified **prior** to the missed activity for the student to be excused from that activity.
- In the case of religious holidays, the student MUST notify the course coordinator 10 business days prior to the exam.
- Students should not assume that they can miss an exam for vacation or other personal conflicts.
- Any excused absence from an exam for health reasons must be documented with a note from an appropriate health professional.
- If an activity or assignment is missed, then at the discretion of the coordinator and instructor, a make-up assignment may be developed and scheduled.
- Make-up exam date will be determined by the coordinator and must be taken before the final exam.
- Questions and format of make-up exams, assignments, and activities may differ from original format.
- If the student is unable to attend either the original exam or the make-up exam, the course coordinator is not required to provide additional opportunities for the student make-up exam.

Students should consult the UTEP School of Pharmacy Student Handbook for definitions and examples of excused absences.

### Questions Related to the Course and Grading/Exams

Course and Content: In general, questions related to the overall course should be directed to the coordinator. *Content/topic-specific questions* should be directed to the content instructor within *five (5) business days* of the material being presented.

Assignments, Activities and Exams: Any questions concerning *assignments, activity, or exam grades* should be discussed with the *course coordinator within five (5) business days* after the grades have been posted.

Request to Regrade: Regrade requests for assignments or exams should be made within *five (5) business days* of the posting of the grades.

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### Course Remediation Policy

Remediation occurs if a student fails the course. Students must participate fully in the course to be eligible for remediation. Please refer to the Student Handbook for further information and end-of-course remediation policies and timelines (*see Table of Contents for End of Course Remediation*). There will be no in-course remediation of any assessment or assignment.

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### Course Evaluation

During this course, you will be provided with an opportunity to evaluate this course and your instructors. The Associate Dean for Assessment, Accreditation, and Strategic Planning will send an email reminder toward the end of this course for you to complete the course evaluation. UTEP uses an online course evaluation system. Course Evaluations can be taken at [my.utep.edu](http://my.utep.edu) by clicking on the CLASSES TAB on the left. The Course Evaluation module will appear and your classes will be listed. Click on the Course Name, or CRN, to complete the evaluation for the course. Your participation is an integral part of this course and your feedback is vital to improving education at the School of Pharmacy.

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### General Statement about Course Policy

The syllabus is subject to change to meet course needs, especially if there are unexpected disruptions or changes in class size, resources, etc. The most updated syllabus can be found on the course Blackboard shell. It is the student's responsibility to review the syllabus periodically for updates.

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### UTEP and SOP Policy for Academic Integrity

Any student who commits an act of academic dishonesty is subject to discipline. The instructor is required to report all suspected academic dishonesty to the UTEP Office of Student Conduct and Conflict Resolution. Please refer to the Student Handbook for SOP guidance on academic integrity (*see Table of Contents for Curriculum and Classroom Policies: Academic Integrity*).

Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for full credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, and any act designed to give unfair advantage to a student or the attempt to commit such acts.

Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures (HOP), and available in the Office of the Dean of Students and on the homepage of the Dean of Students at [www.utep.edu/dos](http://www.utep.edu/dos), may result in sanctions ranging from disciplinary probation, to a failing grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others. (For more information, see: <https://www.utep.edu/student-affairs/osccr>)

### **Professionalism and Professional Conduct**

While enrolled at the University, a student neither loses the rights nor escapes the responsibilities of citizenship. Thus, UTEP and the SOP value professionalism and expect all students to not only acquire but also maintain the highest standards of professional attitudes and behaviors in their interactions with their fellow classmates, staff, faculty, colleagues and their patients, as described in the UTEP School of Pharmacy Student Handbook and as per UTEP's student conduct policies (see <https://www.utep.edu/student-affairs/osccr/student-conduct/index.html> for more information). Any student who engages in conduct that is prohibited by the Board of Regents' Rules and Regulations, University or SOP rules or by federal, state, or local law is subject to discipline whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct. Please refer to the Student Handbook for specific expectations regarding professional conduct in the SOP (*see Table of Contents for Academic Progression: Good Standing: Professional*).

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### **UTEP and SOP Policy for Special Accommodations (ADA)**

If you have or suspect a disability and need classroom accommodations, you should contact the Center for Accommodations and Support Services (CASS) at 747-5148. You can also e-mail the office at [cass@utep.edu](mailto:cass@utep.edu) or go by their office in Union Building East (Room 106). For additional information, visit the CASS website at <http://sa.utep.edu/cass/>

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### **Technical Assistance**

Checking computer requirements and ensuring that all software up to date is essential for students to access course content. **Supported browsers include** – For a PC: Mozilla, FireFox, Google Chrome (Do NOT use Internet Explorer) and for a Mac: Safari, Firefox, and Google Chrome. To enhance browser performance, students should clear the browser cache and allow pop-ups. In addition to testing the web browser, check to ensure that the computer has an updated version of Java (go to <http://java.com>, click on "Do I have Java", click on "Verify Java Version," update Java if needed). Additional browser plugins may also be needed to view some content that your instructor may share on the learning management system. Common plug-ins include: Adobe Reader, Flash Player, Windows Media Player, QuickTime. When creating documents, slide presentations, spreadsheets, etc., be sure to use Microsoft Office or a compatible program (see 10 Free MS Word Alternatives). The UTEP Technology Support Services (3rd floor, UTEP Library) can also provide students with any applications, compatibility packs, patches, and updates that may be needed. Students working off campus may need to set up a Virtual Private Network (VPN) on their computer to access UTEP resources for this class (i.e. Library). The link below provides information in setting up a VPN connection depending on the operating system. Students may contact the Help Desk for assistance. If technical problems are experienced with the course, students should

contact the UTEP Helpdesk during: Monday– Friday: 8AM – 5PM. If calling within UTEP: 915.747.4357. If calling from outside UTEP: 915.747.5257.

For more information, please visit <https://www.utep.edu/technologysupport>. For help with Blackboard: [https://www.utep.edu/technologysupport/ServiceCatalog/BB\\_Students.html](https://www.utep.edu/technologysupport/ServiceCatalog/BB_Students.html). In order for UTEP to provide a stable learning environment, Thursdays from 12:00-6:00am MST are reserved for minor preventive maintenance. This maintenance window is scheduled during the lowest usage time for the system. Blackboard may or may not be available during this time, depending on whether maintenance is necessary. Whenever possible, this time will be utilized to perform all minor maintenance. Unscheduled outages occur rarely, but they do happen. In the event of an unscheduled outage, Technology Support Services will confer with appropriate student and faculty networks to provide appropriate notifications to those affected. Students can also visit an on-campus lab such as the ATLAS lab located within the Undergraduate Learning Center (UGLC building) for additional technical assistance. In addition to the various campus computer labs (ATLAS in UGLC or LACIT in Liberal Arts for example), Technology Support Services provides workstations for student use. To learn more, please visit [https://www.utep.edu/technologysupport/ServiceCatalog/COMP\\_ComputerPrintingLabs.html](https://www.utep.edu/technologysupport/ServiceCatalog/COMP_ComputerPrintingLabs.html).

**For additional information, please refer to the UTEP School of Pharmacy Student Handbook** for guidance for exams (online/remote as well as on campus) <https://www.utep.edu/pharmacy/current-students/current-students.html>

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## **Additional Information**

### **Campus Concealed Carry:**

Effective August 1, 2016.

<http://sa.utep.edu/campuscarry/>

### **Civility Statement:**

You are expected to follow basic standards of courtesy (<http://admin.utep.edu/Default.aspx?tabid=73922>) and may be dismissed from class for blatant or sustained disruptive behavior

### **Cell Phone Policy (Optional for Faculty to adapt or not)**

Students should carry cell phones, but keep the phone on the vibrate mode in the event students need to be notified by the emergency alert system. Cell phone use for the purpose of texting, email or social media is not permitted. This is disruptive to fellow classmates, faculty and the learning environment. The use of a cell phone or the ringing of the phone in class is considered unprofessional behavior. No cellphones, calculators, laptops or other items may be used during an assessment (e.g., exam or a quiz) unless specifically as part of that assessment and approved by the faculty member/instructor.

### **Student Support:**

UTEP provides a variety of resources for those in need (e.g., if you feel overwhelmed, stressed or dealing with a crisis):

- UTEP's Counseling Center (free counseling to all students): 747-5302, which after-hours goes to a crisis line
- Emergency Health Crisis Line: 915-779-1800
- National Suicide Prevention Hotline: 1-800-273-8255
- Veterans Crisis Line: 1-800-273-8255
- NAMI (National Alliance Against Mental Illness) of El Paso: 915-778-5726

**Title IX:**

Title IX of the Education Amendments of 1972 (Title IX), prohibit discrimination on the basis of sex in education programs or activities operated by recipients of Federal financial assistance. Sexual harassment of students, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. Sexual violence refers to physical sexual acts perpetrated against a person's will or where a person is incapable of giving consent due to the victim's use of drugs or alcohol. An individual also may be unable to give consent due to an intellectual or other disability. A number of different acts fall into the category of sexual violence, including rape, sexual assault, sexual battery, sexual coercion, stalking, and relationship violence. All such acts of sexual violence are forms of sexual harassment covered under Title IX.

In accordance with Title IX of the Education Amendments of 1972, UTEP does not discriminate on the basis of sex in the operation of its educational programs and activities. This commitment to non-discrimination applies to both employment in and admission to such programs and activities. [Link to full text at <http://admin.utep.edu/Default.aspx?tabid=68750>]

**Course Number PHAR 64XX: Course Calendar and Topic Outline**

**Principles of Drug Action**

**Campbell Building Room 213, Mondays 9:00am-10:50am and Wednesdays 9:00am-9:50am, January 17 – May 04**

Class	Date	Time	Topics	Required Reading*	Faculty
1	Wednesday 01/18/2023	9:00am- 9:50am	Introduction to Course Principles of Pharmacology	Course Syllabus G&G#, Chapter 1	Dr. Mendez Dr. Qin
2	Monday 01/23/2023	9:00am- 9:50am	Drug Formulations	G&G, Chapter 1 Material by Instructor*	Dr. Qin
3	Monday 01/23/2023	10:00am- 10:50am	Drug Administration	Material by Instructor*	Dr. Qin
4	Wednesday 01/25/2023	9:00am- 9:50am	Introduction to Pharmacodynamics	G&G, Chapter 3	Dr. Qin
5	Monday 01/30/2023	9:00am- 9:50am	Second Messenger Systems	G&G, Chapter 3 & 5	Dr. Qin
6	Monday 01/30/2023	10:00am- 10:50am	Receptors & Signal Transduction	G&G, Chapter 3 & 5	Dr. Qin
7	Wednesday 02/01/2023	9:00am- 9:50am	Receptors & Signal Transduction	G&G, Chapter 3 & 5	Dr. Qin
8	Monday 02/06/2023	9:00am- 9:50am	Receptors & Signal Transduction	G&G, Chapter 3 & 5	Dr. Qin
9	Monday 02/06/2023	10:00am- 10:50am	Dose-Response Curves: Agonists and Antagonists	G&G, Chapter 3 & 5	Dr. Qin
10	Wednesday 02/08/2023	9:00am- 9:50am	Dose-Response Curves: Agonists and Antagonists	G&G, Chapter 3 & 5	Dr. Qin
11	Monday 02/13/2023	9:00am- 9:50am	Dose-Response Curves: Agonists and Antagonists	G&G, Chapter 3 & 5	Dr. Qin
12	Monday 02/13/2023	10:00am- 10:50am	Dose-Response Curves: Agonists and Antagonists	G&G, Chapter 3 & 5	Dr. Qin
13	Wednesday 02/15/2023	9:00am- 9:50am	Drug Adverse Effects	G&G, Chapter 4	Dr. Qin
14	Monday 02/20/2023	9:00am- 9:50am	Drug-Drug Interactions	G&G, Chapter 4	Dr. Qin
15	Monday 02/20/2023	10:00am- 10:50am	Drug Development	G&G, Chapter 1 + Material by Instructor	Dr. Qin
16	<b>Wednesday 02/22/2023</b>	<b>9:00am- 9:50am</b>	<b>Group Activity I</b>		<b>Dr. Qin</b>
17	<b>Monday 02/27/2023</b>	<b>9:00am- 9:50am</b>	<b>Exam I</b>	<b>Class 1-16</b>	
18	<b>Monday 02/27/2023</b>	<b>10:00am- 10:50am</b>			
19	Wednesday 03/01/2023	9:00am- 9:50am	Medicinal Chemistry of ANS		Dr. Weston
20	Monday 03/06/2023	9:00am- 9:50am	Physiology of the nervous system (CNS and ANS)	G&G, Chapter 8 (sections: Anatomy, Function)	Dr. Mendez
21	Monday 03/06/2023	10:00am- 10:50am	Neurotransmitters of the ANS (Synthesis and Metabolism)	G&G, Chapter 8 (section: Neurochem Transmission)	Dr. Mendez
22	Wednesday 03/08/2023	9:00am- 9:50am	Receptors of the ANS	G&G, Chapter 8 (section: Neurochem Transmission)	Dr. Mendez
<b>Spring Break: 03/13/2023-03/17/2023</b>					
23	Monday 03/20/2023	9:00am- 9:50am	Nicotinic Agonist, Antagonists	G&G, Chapter 9, 11	Dr. Mendez
24	Monday 03/20/2023	10:00am- 10:50am	Muscarinic Agonist, Antagonists	G&G, Chapter 9, 11	Dr. Mendez

25	Wednesday 03/22/2023	9:00am- 9:50am	Acetylcholinesterase Inhibitors	G&G, Chapter 10	Dr. Mendez
26	Monday 03/27/2023	9:00am- 9:50am	$\alpha$ Adrenergic Agonists and Antagonists	G&G, Chapter 12	Dr. Mendez
27	Monday 03/27/2023	10:00am- 10:50am	$\beta$ Adrenergic Agonists and Antagonists	G&G, Chapter 12	Dr. Mendez
28	Wednesday 03/29/2023	9:00am- 9:50am	Medicinal Chemistry of CNS		Dr. Weston
29	Monday 04/03/2023	9:00am- 9:50am	Neurotransmitters of CNS	G&G, Chapter 14 (sections: Central Neurotransmitters)	Dr. Mendez
30	Monday 04/03/2023	10:00am- 10:50am	Receptors of CNS	G&G, Chapter 14 (sections: Central Neurotransmitters)	Dr. Mendez
31	Wednesday 04/05/2023	9:00am- 9:50am	<b>Group Activity II</b>		<b>Dr. Mendez</b>
32	Monday 04/10/2023	9:00am- 9:50am	<b>Exam II</b>	<b>Class 19-31</b>	
33	Monday 04/10/2023	10:00am- 10:50am			
34	Wednesday 04/12/2023	9:00am- 9:50am	Toxicology Principles for Mgmt	Goldfrank's Ch 3	Dr. Martinez
35	Monday 04/17/2023	9:00am- 9:50am	Toxicology Principles for Mgmt	Goldfrank's Ch 3	Dr. Martinez
36	Monday 04/17/2023	10:00am- 10:50am	Toxic Agents & Antidotes: Toxidromes	Goldfrank's Ch 3 & 4	Dr. Martinez
37	Wednesday 04/19/2023	9:00am- 9:50am	Toxic Agents & Antidotes: Pk/Pd	Goldfrank's Ch 9 (sections: absorp, distrib, elimin)	Dr. Martinez
38	Monday 04/24/2023	9:00am- 9:50am	Toxic Agents & Antidotes: GI Decontamination, Enhanced Elimination	Goldfrank's Ch 8 & Ch 10	Dr. Martinez
39	Monday 04/24/2023	10:00am- 10:50am	Toxic Agents & Antidotes: Biochemical, Metabolic, Chemical Principles	Goldfrank's Ch 12 & 13	Dr. Martinez
40	Wednesday 04/26/2023	9:00am- 9:50am	Toxic Agents & Antidotes: Biochemical, Metabolic, Chemical Principles	Goldfrank's Ch 12 & 13	Dr. Martinez
41	Monday 05/01/2023	9:00am- 9:50am	Toxic Agents & Antidotes: Neurotransmitters, Neuromodulators, Withdrawal	Goldfrank's Ch 14 & 15	Dr. Martinez
42	Monday 05/01/2023	10:00am- 10:50am	Toxic Agents & Antidotes: Neurotransmitters, Neuromodulators, Withdrawal	Goldfrank's Ch 14 & 15	Dr. Martinez
43	Wednesday 05/03/2023	9:00am- 9:50am	<b>Group Activity III</b>		Dr. Martinez
<b>Final Exam: Thursday May 11<sup>th</sup>, 8:00am-11:00am, Location: Campbell Building Room 213 (classes 34-43, plus cumulative component)</b>					

\* The course coordinator may adapt the syllabus/course calendar at any time to support student and course success.

\*Additional reading material may be required by instructors.

# Goodman and Gilman textbook.