



**School of Pharmacy**  
**Required Course Syllabus**  
**Semester – Spring 2024 Block A**  
**PHAR 6249 Sterile Compounding**  
Jan 16th- March 8th, 2024

**Lecture (Room TBD): Tuesday 8:00 – 8:50 am, Wednesday 8-8:50am;**  
**Pre-lab (Room TBD): Thursday 8:00-8:50 am**  
**Laboratory (Room 609): 2 sections (Fridays 8:30-10:30 am; 11am-1:00pm)**

<b>Course Instructors</b>
Sandy Salazar ( <b>Course Coordinator</b> ) Office: 706 Email: <a href="mailto:sosalazarab@utep.edu">sosalazarab@utep.edu</a> Office Hours: in person and MS Teams TBD and by appointment
Nicole Dominguez Davis Office: 513 Email: <a href="mailto:nddavis@utep.edu">nddavis@utep.edu</a> Office Hours: in person and MS Teams TBD, and by appointment
Michelle Martinez Office: 601 Email: <a href="mailto:pmmartinez2@utep.edu">pmmartinez2@utep.edu</a> Office hours: in person and MS Teams TBD, and by appointment
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Questions related to the course in general should be directed to the course coordinator, whereas content/topic-specific questions should be directed to the instructor.

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.

## **Course Description**

This laboratory course will focus on sterile products from the time of receipt of an order for a sterile product through the preparation and dispensing of the finished product. Pharmacy calculations, chemical interactions and stability of the finished product are reviewed. Students learn requirements for a sterile product preparation area, including equipment in the area, and aseptic techniques for compounding piggyback medications, large volume parenteral, parenteral nutrition and sterile irrigation solutions. Review of special procedures and equipment for hazardous product preparation, including chemotherapy, will be included. Students will learn the importance of in-line filters, specialized infusion tubing and protecting certain products from environmental exposure. Technologies such as the central line, PIC lines, infusion ports, and peripheral catheters used in administering sterile products, and OSHA standards for healthcare workers and patients, are addressed.



Source: <https://doi.org/10.21019/9781582122564.ch6>

**What part of PPCP (Pharmacists' Patient Care Process) is addressed.** This

course assists students in Collect, Access, Plan, Implement, Follow up: Monitor and Evaluate. Click on the following link for more information on the Pharmacists' Patient Care Process:

<https://www.pharmacist.com/sites/default/files/files/PatientCareProcess.pdf>

### Course Learning Objectives

At the conclusion of this course, students shall be expected to:

1. Identify and fulfill requirements for a sterile product preparation area and the USP Chapter 797
2. Demonstrate aseptic techniques in preparation of sterile products
3. Demonstrate ability to calculate and mix ingredients for a sterile product
4. Compound and appropriately label sterile preparations
5. Identify, critically evaluate and use standard references for pumps, filters, infusion tubing and routes of administration.
6. Use standard references to determine compatibilities and infusion techniques for standard medications
7. Identify the required elements of a medication order
8. Review a medication order for completeness

### Methods of Instruction/Learning

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>.

### Online Assessment Requirements

This course requires the use of CORE ELMS® and Blackboard. Students are responsible for ensuring they have access to CORE ELMS® and the appropriate Blackboard course **before** the beginning of the APPE. If you having issues with CORE ELMS®, contact the appropriate course coordinator. If you are having technical issues with Blackboard, please contact Adrian Enriquez ([aealonso@utep.edu](mailto:aealonso@utep.edu)). Assessments (e.g., assignments, quizzes, and exams) may be disseminated before the due date. This requires students to download the assessment using an internet connection. 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).

### CAPE Educational Outcomes

The Center for the Advancement of Pharmacy Education (CAPE) has defined educational outcomes to guide the PharmD curriculum (see AACP CAPE Outcomes weblink). The content of this course will cover the following CAPE educational outcomes.

**Level of Assessment:** 1 – Introduce 2 – Reinforce 3 – Apply.

CAPE Outcomes		Level of Assessment
<b>1.1</b>	<b>Learner (Learner)</b> Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	<b>1</b>
<b>3.1</b>	<b>Problem Solving (Problem Solver)</b> Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.	<b>1</b>
<b>3.2</b>	<b>Educator (Educator)</b> Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding.	<b>1</b>

Course Objectives	CAPE Outcomes	PCOA / NAPLEX	Learning Activities	Outcome Measures
<b>Objective 1 and 2</b> 1. Identify and fulfill requirements for a sterile product preparation area and the USP Chapter 797 2. Demonstrate aseptic techniques in preparation of sterile products	1.1, 3.1, 3.2	2.7.1 2.7.2 2.7.3 2.7.4	Reading assignments, discussions, and Lab activities- making sterile products, mastering aseptic technique, BUD assigning	<b>Quiz, Mid-Term &amp; Final</b>
<b>Objective 3 and 4</b> 3. Demonstrate ability to calculate and mix ingredients for a sterile product 4. Compound and appropriately label sterile preparations	1.1,3.1,3.2	2.7.1 2.7.2 2.7.3 2.7.4	Reading assignments, discussions, and Lab activities- making sterile products, mastering aseptic technique, BUD assigning	<b>Exercise, MidTerm &amp; Final</b>
<b>Objective 5 and 6</b> 5. Identify, critically evaluate and use standard references for pumps, filters, infusion tubing and routes of administration 6. Use standard references to determine compatibilities and infusion techniques for standard medications	1.1,3.1,3.2	2.7.1 2.7.2 2.7.3 2.7.4	Reading assignments, discussions, and Lab activitiesmaking sterile products, mastering aseptic technique, BUD assigning	<b>Mid-Term &amp; Final</b>
<b>Objective 7 and 8</b> 7. Identify the required elements of a prescription 8. Review a prescription for completeness and legality; identify incomplete or missing information	1.1,3.1,3.2	2.7.1 2.7.2 2.7.3 2.7.4	Reading assignments, discussions, and Lab activities- making sterile products, mastering aseptic technique, BUD assigning	<b>Quiz, Mid-Term &amp; Final</b>

- 2.7.1 United States Pharmacopeia guidelines on sterile and nonsterile compounding, hazardous drugs, and FDA regulation of compounding
- 2.7.2 Techniques and principles used to prepare and dispense individual extemporaneous prescriptions, including dating of compounded dosage forms
- 2.7.3 Dosage form preparation calculations
- 2.7.4 Sterile admixture techniques, including stability, clean-room requirements, sterility testing and dating

### **Required Course Technology/Tools/Needs**

#### Laptop Computer

- Students are expected to bring laptop computers to the class each 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).
- Audio (speaker & microphone) and video (camera) MUST be checked to be functional for classes and online exams.
- Students should be ready at any time to share their screen, camera, audio with classmates/faculty for online course learning situations

#### 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®
- Blackboard® Respondus Lockdown
- Audio (speaker & microphone) and video (camera) MUST be checked to be functional for classes and online exams

#### Calculator

Students are expected to bring a non-programmable calculator to class and to all assessment activities.

#### Video Recording device:

- Students are expected to bring a smartphone, camera, tablets, iPad to each lab session.

### **Attendance**

It is expected that students should demonstrate their commitment to the profession and respect for faculty, and colleagues by attending all classes and arriving to class on time prepared for the day's lesson(s). Students are responsible for the information covered during the didactic and pre-lab sessions, which may be included in quizzes and exams. **Note: Completing didactic and pre-lab sections is required prior to attending the lab section each day.** Attendance is mandatory for all sections. Attendance policy for the School of Pharmacy is outlined in the Student Handbook. (See <https://www.utep.edu/pharmacy/current-students/current-students.html> See Student Handbook-Attendance).

Who to contact/how document absence: **Dr. Sandy Salazar (course coordinator) via Blackboard® email**

To request an excused absence please contact Director of Student Affairs (Mrs. Carmen Ramos: [crtorres2@utep.edu](mailto:crtorres2@utep.edu)) via online form – <https://www.utep.edu/pharmacy/current-students/student-absence-form.html>

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## **Classroom / Online Etiquette**

Students are expected to be professionals and will be treated as such unless circumstances deem otherwise. Any behavior that impairs student 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 other activities than taking notes causes a disruption to the class around you.

## **Expectations of Students**

During Course It is the responsibility of the student to monitor their progress during the course and see that they are maintaining the required competency level. Students should seek advice and assistance from the course facilitator as soon as they encounter any difficulty in the course.

## **Sterile Products Laboratory Policies**

Students will first report to CABL 609 for the first Pre-lab meeting which will include a presentation by the Instructors on laboratory safety procedures, guidelines, rules, dress code, and other policies.

## **Methods of Instruction/Learning**

The learning outcomes in this course will be achieved via:

1. Outside Preparation
2. In-class Lectures
3. Laboratory Assignment/Activity
4. Exams/Quizzes – allows students to demonstrate the course ability outcomes and instructors to provide necessary feedback

## **Recommended Textbooks:**

- United States Pharmacopeial Convention. General chapter <797> pharmaceutical compounding—sterile preparations. USP-NF 2023, Issue 1, November 1, 2023.
- Hazardous drugs — handling in healthcare settings (general information chapter 800). In: The United States Pharmacopoeia, 42nd rev., and the National Formulary, 37th ed. Rockville, MD: United States Pharmacopeial Convention; 2019.
- Trissel's 2 Clinical Pharmaceutics Database. Lexicomp. UpToDate, Inc.; 2023. <https://online.lexi.com/>
- Rewald M, Lorang B, Schramm GE, eds. Pharmacy calculations: an introduction for pharmacy technicians. 2nd ed. Bethesda: ASHP; 2021.
- Buchanan CE, Schneider PJ, Forrey RA, eds. Compounding sterile preparations. 4th ed. Bethesda: American Society of Health-System Pharmacists; 2018:333-62

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## **Exam Day Policy**

Exams will be conducted via ExamSoft. Students must begin the exam on time. No allowances will be made for an exam being missed, other than an excused absence. The student must contact the course facilitator for confirmation prior to the exam. If permission is granted to delay the exam; it is the student's responsibility to contact the course facilitator to arrange for an alternative exam time. In this event, the nature of the make-up will be at the discretion of the course coordinator (oral, written, increased weighting on the final, etc.). An unexcused absence from an exam may result in a grade of "zero" for that exam.

## **Evaluation and Grading Policy**

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. The student must demonstrate knowledge and understanding of the material and competence in its application, and integration, as assessed through evaluation

of students' demonstrated ability to accurately interpret prescription orders, and prepare and dispense pharmaceutical preparations of high- quality. Understanding of practical dispensing and compounding concepts will also be assessed through written examinations, including a comprehensive final examination. To be eligible to receive a passing grade in this course, *both sections*, Lecture and Lab, are required to be passed with a minimum of 70% or higher average. Also, in order to pass this course, students should achieve a passing score in the calculation quiz.

The final grade for the class will be based on the following:

**Overall Course Point Distribution.**

Point breakdown	Points
Didactic (exams)	150
Compounding (Lab techniques)	150

Didactic Assessments	
3 quizzes	10 points each. Total of 30 points
Midterm Exam	30 points
Final Exam	90 points

Lab Assessments	
9 worksheets	5 points each. Total of 45 points
Midterm-	20 points
Calculation Quiz	30 points
2 Calculation worksheets	5 points each. Total of 10 points
Lab Final - OSCE	45 points
Bonus points: Incompatibilities, handling compounding challenges Pharmacy calculations Olympics	Total of 5 points

**Bonus points opportunity:**

Participation in the Pharmacy Calculation Olympics and handling compounding challenges.

**Evaluation procedures**

Grade	Range	Point Range*	Interpretation
A	90-100	270-300	Excellent
B	80—89	269-240	Above average
C	70-79	239-210	Average
D	<70	<105 in Lecture and or Lab	Failure
F	≤60	≤90 in Lecture and or Lab	Failure
Calculations quiz	<21	0-30	Auto failure
I			Incomplete

\*No partial points will be provided. Points earned will **not** be rounded up.

### **Missed Quizzes / Exams / Assignments Policy**

Only students who miss an exam, quiz or an assignment due date as a result of an excused absence will be allowed to make-up the missed assignment or assessment. Students should consult the UTEP School of Pharmacy Student Handbook for definitions and examples of excused absences.

The course coordinator MUST be notified on the day of the exam for the student to be excused from that exam for an emergency.

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.

Any unexcused absence from an exam will result in a grade of zero for that exam.

The course coordinator will determine the time and date for a make-up exam, which will occur before the final exam period. 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. The format of the make-up examination is at the discretion of the course coordinator, and may include any question type including, but not limited to, open-ended questions, an essay examination, or oral examinations.

#### **Remediation Policies:**

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 end-of-course remediation policies and timelines (see Student Handbook: Table of Contents for End of Course Remediation).

#### **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 the accreditation process, 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.

#### **UTEP and SOP Policy for Academic Integrity**

Any student who commits an act of academic dishonesty is subject to discipline (which could include failure of course or dismissal from School of Pharmacy). Please refer to the Student Handbook for SOP guidance on academic integrity (see Student Handbook - Table of Contents for Curriculum and Classroom Policies: Academic Integrity). Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for 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/student-conduct/academic-integrity.html>

### **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/studentconduct/index.html> for further 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 Student Handbook: Table of Contents for Academic Progression: Good Standing: Professional).

### **Cell Phones**

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. Disruptive cell phone use for the purpose of texting, email or social media is not permitted. This use 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.

### **Technical Assistance**

Checking computer requirements and ensuring that all software up to date is essential for students to access course content. Supported browsers include – 1) For a PC: Mozilla FireFox and Google Chrome (NOT Internet Explorer) 2) For a Mac: Safari, Firefox, and Chrome Check for updates on supported browsers: [https://help.blackboard.com/Collaborate/Ultra/Participant/Get\\_Started/Browser\\_Support#supported-browsers\\_OTP-0](https://help.blackboard.com/Collaborate/Ultra/Participant/Get_Started/Browser_Support#supported-browsers_OTP-0)

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 plug-ins 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 UTEP Help Desk (915-747-HELP) for assistance (or [https://www.utep.edu/technologysupport/ServiceCatalog/NET\\_VPNGlobalProtect.html](https://www.utep.edu/technologysupport/ServiceCatalog/NET_VPNGlobalProtect.html) )

ExamSoft Technical Support: 866.429.8889 or 954.429.8889



If technical problems are experienced with the course, students should contact the UTEP Help Desk 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 <http://helpdesk.utep.edu>. For help with Blackboard: [https://www.utep.edu/technologysupport/ServiceCatalog/BB\\_Students.html](https://www.utep.edu/technologysupport/ServiceCatalog/BB_Students.html) 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/BB\\_Students.html](https://www.utep.edu/technologysupport/ServiceCatalog/BB_Students.html)

### **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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### **Additional Information Campus**

**Concealed Carry:** Effective August 1, 2016. <https://www.utep.edu/campuscarry/>

**Civility Statement:** You are expected to follow basic standards of courtesy (<https://www.utep.edu/student-affairs/dean-of-students-office/community-of-care/>) and may be dismissed from class for blatant or sustained disruptive behavior.

**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): 915-747-5302, which after-hours goes to a crisis line
- Emergence Health Crisis Line: 915-779-1800, <https://emergencehealthnetwork.org/>
- National Suicide Prevention Hotline: 1-800-273-8255 / [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org) • Veterans Crisis Line: 1-800-273-8255 / [www.veteranscrisisline.net](http://www.veteranscrisisline.net)
- NAMI (National Alliance on Mental Illness) of El Paso: 915-778-5726/ <https://namiep.org>

### **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 <https://www.utep.edu/titleix/> ]

**PHAR 6249: Sterile Compounding Block A Calendar**

Week	Didactic	Readings	Pre-Lab	Laboratory
Week 1 Jan 16- Jan 19	Course Orientation / USP Intro <b>Instructor: Dr. Salazar</b>  Class 1: Cleanroom suite / Cleaning Procedures <b>Instructor: Dr. Salazar</b>	Class 1 Reading: USP Chapter 797 sections 4 and 6	<b>Instructor: Dr. Ortega</b> Lab Tour Lab Policies Hand washing, Garbing procedure, Cleaning procedures Compounding supplies Intro.	<b>Lab Worksheet #1:</b> Hand Washing and Horizontal/Vertical air flow hood cleaning. Scavenger Hunt: Cleanroom and supplies. Calculations Pre-Assessment
Week 2 Jan 22- Jan 26	<b>QUIZ #1</b> Class 2: Personal Cleaning <b>Instructor: Dr. Salazar</b>  Class 3 Aseptic Technique <b>Instructor: Dr. Salazar</b>	Class 2 Readings: USP chapter 797: Sections: 2 and 3  Class 3 Readings: USP chapter 797 Sections 8 and 9	<b>Instructor: Dr. Salazar</b> Calculations review #1 Rounding, unit conversion, dosing, final concentration, Compounding errors, 1000- fold overdose. Aseptic technique rubric review. <b>Calculations Worksheet #1</b>	<b>Lab worksheet #2:</b> Self- Assessment table.  <b>Lab worksheet #3:</b> Preparation of an electrolyte IV order.  (KCl + MgSO4 order IVPB)
Week 3 Jan 29 – Feb 2	<b>Instructor: Dr. Salazar</b> Calculations review #2: Allegations, Dilutions. Powder volume. Type of diluents (SWFI, NS, LR, Dextrose) <b>Instructor: Dr. Salazar</b> Class 4: Beyond Use Date BUD – stability factor	Class 4 Readings:  USP chapter 797 Sections; 1 (1.5) CSP categories, 14	<b>Instructor: Dr. Salazar</b> Preparing an IV Push and IVPB order. Reconstituting sterile powders, Compounding record, and Final check procedures Labelling  Final verification rubric review	<b>Lab Worksheet #4:</b> IV push Order (Cefazolin) <b>Lab worksheet #5:</b> IV order IVPB (Ampicillin)
Week 4 Feb 5 – Feb 9	<b>Instructor: Dr. Salazar</b> Class 5: Beyond use date BUD – sterility factor <b>Instructor: Dr. Salazar</b> BUD exercises – Practice questions for MIDTERM. <b>QUIZ #2</b> Packet insert, Trissel's	Class 5 Readings:  USP chapter 797 Sections; 1 (1.5) CSP categories, 14	<b>Instructor: Dr. Davis</b> Calculations review #3: Allegation and dilutions.  Packet Insert review  <b>Calculations Worksheet #2</b>	<b>Lab Worksheet #6:</b> NS Hypertonic solution – allegation method <b>Lab worksheet #7:</b> Phenylephrine syringe order - dilutions
<b>End of material for MIDTERM</b>				
Week 5 Feb 12- Feb 16	<b>MIDTERM Exam</b>  <b>Instructor: Dr. Davis</b> Class 6: Parenteral Nutrition		<b>Instructor: Dr. Salazar</b> Aseptic Process Validation: Handwashing, garbing, and Hood cleaning Gloved and thumb fingertip Media Fill procedure review Bonus activity: Handling incompatibilities	Aseptic Process Validation: Review Instructions in BlackBoard
Week 6 Feb 19 - Feb 23	<b>Instructor: Dr. Davis</b> Class 7 Parenteral Nutrition TPN Calculations <b>QUIZ #3</b> <b>Instructor: Dr. Davis</b> Class 8: Hazardous Drugs Part 1	Class 8 Readings;  USP Chapter 800	<b>Instructor: Dr. Salazar</b> Discuss Fingertip results Handling compounding challenges	<b>Lab Worksheet #8:</b> IV antibiotic order <b>Lab worksheet #9:</b> IV antibiotic order
Week 7 Feb 26 – March 1	<b>Instructor: Dr. Davis</b> Class 9: Hazardous Drugs Part 2 Recalls, quality assurance and quality control	Class 9 Readings;  USP Chapter 800	Bonus activity <b>Pharmacy Calculation Olympics</b>	
Week 8 March 4 –March 8	<b>Calculation QUIZ</b> March 5 <sup>th</sup> 2024 Course wrap up		<b>Didactic final</b> (March 7th)	<b>LAB OSCE</b> March 8 <sup>th</sup> 2024

\*The above schedule and the procedures for this course are subject to change according to any unforeseen circumstances, and as deemed necessary by the instructors.