



**School of Pharmacy
Required Course Syllabus
Semester – Spring 2025 Block A
PHAR 6249 Sterile Compounding
Jan 21st- March 7th, 2025**

**Lecture (Room 115): Tuesday 8:00 – 8:50 am, Wednesday 8-9:50am;
Pre-lab (Room 115): Thursday 8:00-8:50 am
Laboratory (Room 609): 2 sections (Fridays 8:30-10:50 am; 11:30 am-01:50 pm)**

Course Instructors

Sandy Salazar (**Course Coordinator**)

Office: 706

Email: sosalazarab@utep.edu

Office Hours: in person and MS Teams by appointment

Nicole Dominguez Davis

Office: 304

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Michelle Martinez

Office: 303

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Cristina Ortega

Office 705

Email: caortega2@utep.edu

Office hours: in person and MS Teams by appointment

Office Hours:

The course coordinator and instructor(s) will post office hours and accommodate all students as time permits. Students may request an appointment with the coordinator or instructor(s) in person or via email. The course coordinator or instructor(s) will try to respond as soon as possible (generally within 24-48 hours). Office hours may be used to discuss problematic exam questions, any course logistic problems, and/or course/content concerns.

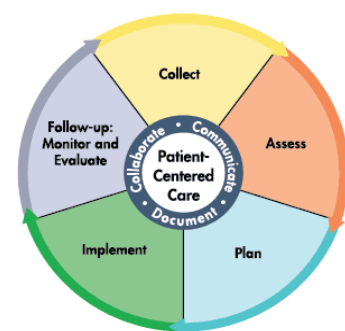
Questions related to the course in general should be directed to the course coordinator, whereas content/topic-specific questions should be directed to the instructor.

Additional / Detailed Course Meetings & Location:

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) as defined in the SOP Student handbook (usually daily during the long semesters).

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

The SOP primary form of instruction is in person but may be supplemented or augmented with online/asynchronous learning. The learning platform is determined by the instructor of the course/material. However, the UTEP SOP may change to primarily online courses 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). 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).

Course Learning Objectives (mapped to national outcomes):

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

Course Objectives	COEPA#	NAPLEX*	Types of Activities or Assessments to meet Learning Objectives	Level of Assessment (I) Introduce (R) Reinforce (A) Apply
Objective 1 and 2 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	EO's 1.1, 2.1, 2.2, 3.2 EPA 7	4.2, 4.3, 4.4, 4.5, 4.6, 4.7 5.1, 5.2, 5.6	Reading assignments, discussions, and Lab activities- making sterile products, mastering aseptic technique, BUD assigning	I, R, A
Objective 3 and 4 3. Demonstrate ability to calculate and mix ingredients for a sterile product 4. Compound and appropriately label sterile preparations	EO's 1.1, 2.1, 2.2, 3.2 EPA 7	4.2, 4.3, 4.4, 4.5, 4.6, 4.7 5.1, 5.2, 5.6	Reading assignments, discussions, and Lab activities- making sterile products, mastering aseptic technique, BUD assigning	R, A
Objective 5 and 6 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	EO's 1.1, 2.1, 2.2, 3.2 EPA 5, EPA 7	4.2, 4.3, 4.4, 4.5, 4.6, 4.7 5.1, 5.2, 5.6	Reading assignments, discussions, and Lab activities- making sterile products, mastering aseptic technique, BUD assigning	I, R, A
Objective 7 and 8 7. Identify the required elements of a prescription 8. Review a prescription for completeness and legality; identify incomplete or missing information	EO's 1.1, 2.1, 2.2, 3.2 EPA 7	4.2, 4.3, 4.4, 4.5, 4.6, 4.7 5.1, 5.2, 5.6	Reading assignments, discussions, and Lab activities-	A

COEPA – Curricular Outcomes and Entrustable Professional Activities

<https://www.aacp.org/sites/default/files/2023-09/coepa-document-final.pdf>

*Naplex Competency Statements <https://nabp.pharmacy/programs/examinations/naplex/competency-statements-2021/>

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 with memory to record up to 20 min.

Attendance

The attendance policy for the School of Pharmacy is outlined in the UTEP SOP Student Handbook (See <https://www.utep.edu/pharmacy/current-students/current-students.html> - See Student Handbook-Attendance). 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). See individual course for specific guidance.

Absences from class should follow procedures outlined in the UTEP SOP Student Handbook. It is expected that the student contact their course coordinator by email directly to inform them of the absence in classes where attendance is mandatory and for experiential activities. Even with an excused absence, make-up work/activities may not be available. To request an excused absence use the online form –

<https://www.utep.edu/pharmacy/current-students/student-absence-form.html>

To secure approval for an absence related to travel for professional meetings or for events that fall outside of the criteria outlined in the UTEP SOP Student Handbook, please refer to the Handbook for more information regarding required documentation for submission to the Office of Student Affairs.

Classroom / Online Etiquette

Students are expected to be professionals and will be treated as such unless circumstances deem otherwise. Any behavior that impairs a student's ability to learn will not be tolerated (e.g., side conversation, cell phone use, electronic device use for activities not related to coursework). Laptops or other portable devices may be used

during class for taking notes and other in class activities. Using laptops for other activities than taking notes causes a disruption to the class around you. Recording of lectures either video or audio is not authorized unless written permission (e.g., email) is granted by each instructor.

Conduct should be professional towards classmates and instructors and uphold the principles of the Student Professional Contract.

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 and recorded Lectures
3. Laboratory Assignment/Activity
4. Exams/Quizzes – allows students to demonstrate the course ability outcomes and instructors to provide necessary feedback
5. Active learning methodologies: Think-share-pair, Flipped classroom, Start-stop-continue, student self-recording, peer and self assessments, and others.

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 Clinical Pharmaceutics Database. Lexicomp. UpToDate, Inc.; 2023. <https://online.lexi.com/>. <https://ebookcentral.proquest.com/lib/utep/detail.action?docID=31089839>
- 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

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.

Emergency and/or Health Precautions:

**If the course meets on campus during the semester, then all CURRENT emergency and/or public health precautions/measures should be taken as provided via UTEP communication.

EXAM-RELATED Technology and Guidance:

The SOP provided guidance regarding exam-related technology can be found in Blackboard.

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
Bonus points: Incompatibilities	Total of 1 point

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: Handling compounding challenges, pharmacy calculation Olympics	Total of 4 points

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.

Remediation Policy:

Remediation occurs if a student fails the course. Students must participate fully (e.g., submit all assignments/exams, attend class) in the course to be eligible for remediation.

Please refer to the UTEP SOP Student Handbook for end-of-course remediation policies and timelines (see Student Handbook: Table of Contents for End of Course Remediation). <https://www.utep.edu/pharmacy/current-students/current-students.html>

In Course Assessment Grade Questions/Concerns:

Students should address a grade question, for an assignment, quiz, exam, or other course assessment, immediately after a grade is posted (e.g. No more than 5 business days). Students should work within SOP procedures and start the process with the individual instructor, then course coordinator, then Department Chair and finally the Associate Dean for Academic Affairs. For the final course grade, students should refer to the SOP student handbook for Final Course Grade Review and Course Grade Grievance. Students may file a formal grade appeal to the Faculty Senate's Grievance Committee. A challenge to a grade may be pursued only on the basis of: malice, bias, arbitrary or capricious grade determination or impermissible discrimination. Additional information on grade grievance is found <https://www.utep.edu/student-affairs/dean-of-students-office/resources/grade-grievance.html>

Missed Quizzes / Exams / Assignments Policy

Missed quizzes, exams and assignments may not be available for students with excused or unexcused absences. Students should speak with the course instructor or coordinator before an absence to discuss specific concerns and specific course policies.

For a Missed Quiz or Exam:

- 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 should 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.

Course Evaluation

During this course, you will be provided with an opportunity to evaluate this course and your instructors. Course coordinators will remind students of the end of course evaluations toward the end of the semester for you to complete the course evaluation. The course coordinators may provide additional clarification about which instructors should be included in the course evaluation's (e.g., those with significant teaching roles in the course). UTEP uses an online course evaluation system, which is managed by UTEP Technology Support. Only aggregated results (without any identifying information) are provided to course instructors after final grades are released. Course Evaluations can be taken at 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.

General Statement about Course Policy

The Individual Course and Common language syllabi are subject to change to meet course needs, especially if there are unexpected disruptions or changes in class size, resources, etc. The most updated individual course syllabus can be found on the course Blackboard shell. The Common Language Syllabus can be found on the SOP Website under Current Students. It is the student's responsibility to review the syllabus periodically for updates. If syllabus language is unclear, students need to seek clarification with the course coordinator.

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, 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>

The use of Artificial Intelligence (AI) tools:

Use of generative AI technologies or automated tools, particularly ChatGPT or DALL-E, is prohibited for generating assignments responses or other course work unless specifically permitted in the course syllabus. AI may be helpful to create study tools that reinforce your knowledge for your own benefit. Recognize AI tools often "hallucinate" and provide wrong or inappropriate answers.

If AI is permitted, appropriate credit/citations must be provided. Each student is expected to use critical and creative thinking skills to complete tasks and not rely on computer-generated ideas. Any direct use of AI-generated materials submitted as your own work will be treated as plagiarism and reported to the Office of Student Conduct and Conflict Resolution (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 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 silent 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/tablet 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

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).

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

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

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 or go by their office in Union Building East (Room 106). For additional information, visit the CASS website at <http://sa.utep.edu/cass/>

Students who have CASS accommodations need to meet and discuss with each course coordinator at the beginning of the semester and at least 1 week prior to using the accommodations.

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
- Veterans Crisis Line: 1-800-273-8255 / www.veteranscrisisline.net
- NAMI (National Alliance on Mental Illness) of El Paso: 915-778-5726/ <https://nami.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	Tuesday Didactic- 1 hour	Wednesday Didactic- 2 hours	Thursday Pre-lab 1 hour	Friday Laboratory 3 hours
Week 1 Jan 20- Jan 24	Instructor: Dr. Salazar Course Orientation / USP Intro	Instructor: Dr. Salazar Class 1: Cleanroom Suite Class 2: Cleaning Procedures	Instructor: Dr. Ortega Lab Tour Lab Policies Hand washing, Garbing procedure, Cleaning procedures	Lab Worksheet #1: Hand Washing and Horizontal/Vertical air flow hood cleaning Scavenger Hunt: Cleanroom and supplies. Calculations Pre-Assessment
Week 2 Jan 27- Jan 31	Instructor: Dr. Salazar Class 3: Personal Cleaning Class 4: Compounding supplies (recorded)	Instructor: Dr. Salazar Class 5: Aseptic Technique Calculations review #1: Flipped classroom Pre-quiz Post-quiz Dose, infusion rate, dilutions, concentration Calculations Worksheet #1	Instructor: Dr. Salazar Aseptic technique: Aseptic technique Rubric review Labeling	Lab worksheet #2: Aseptic technique. Self-Assessment table. Lab worksheet #3: Preparation of an electrolyte IV order (KCl + MgSO4 order IVPB)
Week 3 Feb 3 – Feb 7	Instructor: Dr. Salazar Calculations review #2: Flipped classroom Pre-quiz Post-quiz Powder volume	Instructor: Dr. Salazar Class 6: Beyond Use Date BUD –stability factor Class 7: Beyond use date BUD – sterility factor	Instructor: Dr. Salazar Preparing an IV Push and IVPB order. Reconstituting sterile powders Final verification rubric review	Lab Worksheet #4: IV push Order (Cefazolin) Lab worksheet #5: IV order IVPB (Ampicillin)
Week 4 Feb 10 – Feb 14	Instructor: Dr. Davis Calculations review #3: Flipped classroom Pre-quiz Post-quiz Allegation and dilutions, ratio osmolarity Calculations Worksheet #2	Instructor: Dr. Salazar BUD exercises – Practice questions for MIDTERM	Instructor: Dr. Davis Pre-lab content Allegation and dilutions	Lab Worksheet #6: NS Hypertonic solution – allegation method Lab worksheet #7: Phenylephrine syringe order - dilutions
Week 5 Feb 17- Feb 21	MIDTERM Exam	Instructor: Dr. Davis Class 8: Parenteral Nutrition Class 9: TPN Calculations Flipped classroom Pre-quiz Post-quiz	Instructor: Dr. Salazar Aseptic Process Validation: Handwashing, garbing, and Hood cleaning Aseptic Process Validation Bonus activity: Handling incompatibilities	LAB MIDTERM Exam Aseptic Process Validation
Week 6 Feb 24 - Feb 28	Instructor: Dr. Salazar Class 10: Quality assurance and quality control	Instructor: Dr. Davis Class 11/12: Hazardous Drugs Part 1 and 2	Instructor: Dr. Salazar Discuss Fingertip results OSCE final mock logistics	OSCE final mock Lab Worksheet #8: IV antibiotic order Lab worksheet #9: IV antibiotic order

			Bonus activity: Handling compounding challenges.	
Week 7 March 3 – March 7		Dr. Martinez Bonus activity Pharmacy Calculation Olympics	Lecture Final Exam	OSCE LAB FINAL
SPRING BREAK (March 10 –March 14)				
Week 8 March 17 – March 21	Calculation quiz			

*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.