

UC San Diego
SKAGGS SCHOOL OF PHARMACY
AND PHARMACEUTICAL SCIENCES

Hospital / Health-System Advanced Pharmacy Practice Experience

SPPS 403

Office of Experiential Education

Renu Singh, Pharm.D.
Assistant Dean of Experiential Education
Clinical Professor
rfsingh@health.ucsd.edu
(858) 822-5585

Felix Yam, Pharm.D.
Director, APPEs
Associate Clinical Professor
fyam@health.ucsd.edu
(858) 822-3648

Jayne Laity, MPH
APPE Experiential Education Coordinator
jlaity@health.ucsd.edu
(858) 822-2458

I. Course Description: SPPS 403 (7 units)

SPPS 403 is a six week, core advanced pharmacy practice hospital / health-system experience that provides opportunities to apply their acquired knowledge and skills to the range of professional services and activities expected in a hospital of integrated pharmaceutical services. Through observation and practice, students will develop and explore their roles in the various pharmaceutical operational initiatives that support the clinical services designed to care for the patient.

The student will learn the functions of various personnel (i.e. hospital pharmacy technicians and pharmacists) which may include experiencing the roles of pharmacists in central distribution, decentralized clinical services, transitions of care activities, investigational drug services, pharmacy administration, and more. Additionally, the student will learn and work with different technologies in pharmacy practice, such as order entry and verification, automated dispensing cabinets, high density storage devices, barcode medication identification technology, and the electronic healthcare record. Students will gain experience in the preparation of parenteral medications, drug distribution, practice management-related activities as well as decision-making and drug information activities.

Through this hands-on experiential rotation, an individual will progress from the student pharmacist level to being accountable for pharmacist-delivered, patient-centered care. Finally, in working with many different levels of personnel throughout the rotation, the student will understand the importance of relationship development, effective communication, and networking.

Students should refer to the Office of Experiential Education section on the Resources tab of PILS for specific Rotation Descriptions and additional resources.

Students are expected to adhere to all [Policies and Guidelines](#) at SSPPS.

II. Prerequisites

- A. Students must have successfully completed years 1-3.
- B. Students must meet eligibility requirements to progress to APPEs per SSPPS Progression Policy.
- C. Students must meet expectations as stated in the SSPPS Guidelines on the Evaluation of Professionalism.
- D. Students must have successfully completed all Introductory Pharmacy Practice Experience (IPPE) and Co-Curricular requirements.
- E. Students must have received a passing score on the Comprehensive Cumulative exam.
- F. Students must have a pharmacy intern license.
- G. Students must have up-to-date immunization records and have received HIPAA training.
- H. Students must have requisite training/certifications/other requirements necessary for the given activity.

III. Course Goals

- A. Students will interact with a number of different healthcare providers and participate in a variety of patient-centered care activities within the hospital / health-system environment. The student will be provided with many opportunities to apply academic basic science and clinical didactic course work, as well as their Introductory Pharmacy Practice Experiences in this setting.

IV. Course Domains, Objectives, and Activities¹

	Specific Objectives	Example Learning Activities
Domain 1: Dispensing System and Safety Management		
Objective 1.1: Participate in the medication use process in a health-system.	1.1.1 Accurately verify new medication orders.	<ul style="list-style-type: none"> For any given medication order, succinctly and accurately explain out loud all steps (e.g. legitimate prescription, appropriate dose, interactions, overlapping side effects, DUR) in the thought process needed for verification.
	1.1.2 Ensure the accurate preparation of medication orders.	<ul style="list-style-type: none"> Oversees the preparation of the order, product choice, and delivery. Review non-formulary requirements and approval process for individual orders as they are presented. Navigate drug selection based on formulary options.
	1.1.3 Respond appropriately to basic drug procurement issues using site protocols.	<ul style="list-style-type: none"> Appropriately respond to medication orders for which there are shortages. Follow the approval process for non-formulary medication orders, including what products are uniquely sourced, how a distributor is identified, and how to place an order for such a product.
	1.1.4 Utilize information technology and medication management systems.	<ul style="list-style-type: none"> Use pharmacy computer systems. Use automated dispensing systems. Use controlled substances monitoring systems. Use medication administration and barcoding systems.
	1.1.5 Perform IV admixture (where applicable/available, based on state and institutional requirements).	<ul style="list-style-type: none"> Given a medication order for a parenteral product, determine the correct compounding technique and related administration instructions. Given a new or unfamiliar IV product for which there are no order sets or standard admixture, identify the correct mixing. Technique/compounding, choice of diluent(s), packaging, labelling, infusion rate, concentration (central line versus peripheral), compatibility, expiration dating, and any requirements for safe administration.

Domain 2: Practice Manager

<p>Objective 2.1: Perform practice management in the health-system.</p>	<p>2.1.1 Oversee the pharmacy operations for an assigned work shift.</p>	<ul style="list-style-type: none"> • For a reasonable amount of time, manage the workflow of the dispensing process, including answering phone calls, delegating tasks, checking batched and compounded medications, and other administrative tasks commonly performed by pharmacists in the central fill setting. • Implement pharmacy policies and procedures. • Supervise and coordinate the activities of pharmacy technicians and other support staff. • Assist in training pharmacy technicians and other support staff. • Assist in the evaluation of pharmacy technicians and other support staff. • Identify pharmacy service problems and/or medication safety issues. • Maintain the pharmacy inventory. • Assist in the management of a pharmacy budget. • Interpret pharmacy quality and productivity indicators using continuous improvement quality techniques. • Assist in the preparation for regulatory visits and inspections.
	<p>2.1.2 Participate in continuous quality improvement projects to assess and/or optimize the medication use process.</p>	<ul style="list-style-type: none"> • Participate in reporting pharmacist interventions or other activities in the electronic medical records. • Participate in an exercise that measures, improves, or clarifies some aspect of pharmacy services quality or patient safety. • Active engagement in formulary decision making activities (e.g., prepare monograph, prepare presentation, etc.). • Participate in discussions and assignments regarding compliance with accreditation, legal, regulatory, and safety requirements.
	<p>2.1.3 Participate in institutional systems and programs to assure appropriate drug use.</p>	<ul style="list-style-type: none"> • Conduct and document medication reconciliation. • Interview and document medication adherence.

Domain 3: Population Health Promoter		
Objective 3.1: Promote population health.	3.1.1 Minimize adverse drug events and medication errors.	<ul style="list-style-type: none"> • Assist in the identification of underlying system-associated causes of errors. • Identify and report medication errors and adverse drug events.
	3.1.2 Maximize the appropriate use of medications in populations.	<ul style="list-style-type: none"> • Perform a medication use evaluation. • Apply cost-benefit, formulary, and/or epidemiology principles to medication-related decisions. • Conduct and document medication reconciliation in high-risk patients.
Domain 4: Interprofessional Team Member		
Objective 4.1: Collaborate as a member of an interprofessional team.	4.1.1 Actively contribute as a member of an interprofessional healthcare team.	<ul style="list-style-type: none"> • Contribute medication-related expertise to the team's work. • Use setting appropriate communication skills when interacting with others. • Use consensus building strategies to develop a shared plan of action. • Work collaboratively with pharmacists, technicians and other support staff in the operations of the pharmacy.
Domain 5: Ethics and Professional Behavior		
Objective 5.1: Apply ethical and professional behavior.	5.1.1 Demonstrate ethical and professional behavior in all practice activities.	<ul style="list-style-type: none"> • Adhere to patient privacy standards in verbal and written communications. • Demonstrate an attitude that is respectful of diverse individuals, groups, cultures and communities. • Demonstrate appropriate attire, demeanor, and conduct. • Adhere to attendance requirements, including punctuality.
	5.1.2 Demonstrate knowledge of and comply with all federal, state, and local laws related to pharmacy practice.	<ul style="list-style-type: none"> • Review and complete California State Board of Pharmacy hospital pharmacy self-assessment form • Review and prepare report on Title 22 Pharmaceutical Service Requirements

V. Evaluations

- A. Grading will be Pass / No Pass.
- B. Three evaluations using the standardized Pharmacy Evaluation Form are required for this course:
 - i. Mid-point Formative Evaluation: An online self-evaluation completed by the student and discussed with the preceptor. The preceptor will provide written and verbal comments and sign off.
 - ii. Preceptor & Site Evaluation: An online evaluation completed by the student at the end of the rotation.
 - iii. Summative Evaluation: An online evaluation completed by the preceptor at the end of the rotation and discussed with the student.
 - iv. Students may be evaluated at any other time at the discretion of the preceptor. Preceptors may evaluate students more frequently, so that the student is informed of areas requiring improvement early in the rotation. The primary preceptor may obtain feedback from all team members as well as any patient comments.
- B. Students must have submitted their Mid-point evaluations in addition to completing evaluations of their sites/preceptors in order to receive their grade.

VI. Resources

- A. SSPPS References: [Students & Preceptors](#)
- B. [UCSD Intranet Medication Resources](#)
- C. [Online Clinical Library Resources](#)
 2. Clinical Pharmacology
 3. Micromedex
 4. DynaMed
 5. Up to Date
 6. Natural Medicines
- D. Suggested Textbooks (Updated versions may be available)
 1. Trissel LA. Handbook on Injectable Drugs, 17th Edition. American Society of Health System Pharmacists. 2012.
 2. Alldredge, BK, Corelli RL, Ernst ME, Guglielmo BJ, Jacobson PA, Kradjan WA, Williams BR. *Koda-Kimble & Young's Applied Therapeutics: The Clinical Use of Drugs*, 10th ed., Lippincott Williams & Wilkins, 2012.
 3. DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM, eds. *Pharmacotherapy: A Pathophysiologic Approach*, 10th edition. McGraw-Hill, New York, 2017.
 4. Title 22 of the Code of Federal Regulations: Pharmaceutical Service General Requirements
 5. [California Pharmacy Law Book](#)
- E. [The Pharmacists' Patient Care Process \(PPCP\)](#)
 1. See **Appendix 3** for blank PPCP template
- F. As specified per individual rotation site/preceptor

¹ Course Goals, Objectives, and Activities Adapted from:

- *Essential Elements for Core Required Advanced Pharmacy Practice Experiences*. [Am J Pharm Educ](#). 2019 May; 83(4): 6865
- *Core entrustable professional activities for new pharmacy graduates*. [Am J Pharm Educ](#). 2017 Feb 25; 81(1): S2

Appendix 1

Student Presentation and/or Conference (example)

The student may be required, by the preceptor, to present a drug or disease related acute care topic. The presentation expectations will be guided by the preceptor, who is encouraged to provide specific and clear instructions to the student. An example of student presentation expectations is outlined below:

1. Handout should include:

- a. Topic of presentation.
- b. Student name, title, date of presentation.
- c. Goal (s) and objective (s) of the presentation.
- d. Outline of presentation.
- e. Reference list that utilizes primary literature, as appropriate.

2. If the topic includes a patient case presentation, the student should include the following elements:

- a. Reason for clinic visit and chief complaint.
- b. History of present illness.
- c. Past medical history.
- d. Medication history (Rx, OTC, allergies/ADRs, adherence).
- e. Summary of pertinent review of systems and physical examination.
- f. Pertinent labs.
- g. Assessment of response and appropriateness of current therapy:
 - i. Evaluation of the rationale for its use.
 - ii. Comparison of alternative therapies and therapeutic approaches which may be beneficial for the problem in question (this will include a comparison of efficacy, adverse reactions, toxicity and relative advantages and disadvantages of each therapy).
 - iii. Discussion of recent developments and/or controversies on the topic or drug presented and a critical evaluation of literature reviewed.
- h. Therapeutic plan.
- i. Therapeutic considerations:
 - i. Discussion of pertinent pharmaceutical considerations (dosage form, stability, cost, insurance coverage, ease of use by the patient, dexterity issues, etc.).
- j. Monitoring parameters.
- k. Planned follow-up.

Appendix 2

Journal Club Format

[PIES Method of Critique](#)

Appendix 3

Pharmacist patient Care Process (PPCP) Form

Patient Name:		DOB:	Age:	Sex:	Wt:	Ht:
COLLECT		ASSESS		PLAN	IMPLEMENT	FOLLOW-UP
Subjective	Objective			Treatment Goal(s):		
CC:	Lab results, physical exam, procedures and diagnostic test results, documented history	Primary Problem(s):			Patient Education/Counseling for selected plan (key points)	
HPI:		Exclusions for (Self) Treatment:			- 3 prime questions, General care, preventive measures, monitoring)	
		Need for therapy:		Recommended Drug Therapy Drug name(s), strength, dose, route, dosing frequency, duration of therapy		
		Evaluate Current Therapy				
Relevant Meds:		Treatment Options: (Pros/Cons of current or new therapy):				
Allergies/ADRs:		Drugs/Factors To Avoid:		Non-Drug Therapy		
Relevant PMH/FH:					Evaluate and modify plan if needed (e.g., alternative treatments)	
Relevant SH:						

Counseling/Three Prime Questions: What is it for (symptom(s) you are treating); How to take (medication name(s), strength, dose, dosing frequency, length of Tx); What to expect (e.g., onset time, common side effects and management, potential drug interactions, when to see provider, storage)