

UC San Diego

SKAGGS SCHOOL OF PHARMACY AND PHARMACEUTICAL SCIENCES

Advanced Pharmacy Practice Experience (APPE) Ambulatory Care

SPPS 401A

SPPS 401B

Office of Experiential Education (OEE)

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I. Course Description: SPPS 401A, 401B (8 units)

SPPS 401A or 401B is a six week, supervised clinical pharmacy experience in ambulatory care. Through observation and practice, students will develop and explore roles in ambulatory care practice settings. Students will have the opportunity to interact with diverse patient populations and are encouraged to collaborate with other health care professionals in the care of their mutual patients. Through this experience the student will apply the Pharmacist Patient Care Process (PPCP). The student will educate patients regarding their medication therapy, in addition to educating pharmacists and/or other health care providers regarding the appropriate use of medications. Students will use evidence-based information to advance patient care. Ambulatory care patient interactions may be face to face, over the telephone, or via telemedicine (while working onsite or remotely). In addition, students may have opportunities in the expanding areas of Medication Therapy Management (MTM) practice and transitional care with ambulatory patients.

Students should refer to the OEE section on the Resources tab of Canvas and Core ELMS for specific Rotation Descriptions and additional resources.

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

II. Prerequisites

Students must:

- A. Have successfully completed didactic pharmacy years 1-3.
- B. Meet eligibility requirements to progress to APPEs per SSPPS Progression Policy.
- C. Meet expectations of professionalism as stated in the SSPPS Guidelines on the Evaluation of Professionalism.
- D. Have successfully completed all Introductory Pharmacy Practice Experience (IPPE) requirements.
- E. Have received a passing score on the Comprehensive Cumulative exam.
- F. Have a valid and active pharmacy intern license.
- G. Have up-to-date immunization records and received HIPAA training.
- H. Have requisite training/certifications necessary for the given activity as well as all required components set by the practice site.

III. Course Goals:

Students will interact with patients, pharmacists and other healthcare providers and participate in a variety of patient care activities which will develop and enhance professional judgment, knowledge, and the skills needed to practice in the ambulatory care setting. The student will have opportunities to educate patients and health care professionals on appropriate medication use and will use evidence-based information to advance patient care.

IV. Course Domains, Objectives, and Activities¹

	Specific Objectives	Example Learning Activities
Domain 1: Patient Care Provider		
Objective 1.1: Apply the Pharmacist Patient Care Process (PPCP).	1.1.1 Demonstrate appropriate depth and breadth of pharmacotherapeutics and disease-related knowledge for common conditions in the ambulatory care population.	<ul style="list-style-type: none"> Participate actively in pharmacotherapeutic and disease related topic discussions (See Appendix 1). Present assigned patients to the preceptor in a manner that applies the PPCP principles.
	1.1.2 Collect information to identify a patient’s medication-related problems and health-related needs.	<ul style="list-style-type: none"> Perform a systematic patient interview and obtain a history to identify, anticipate and support decisions regarding drug therapy. Perform a medication reconciliation. Determine a patient’s medication adherence.
	1.1.3 Analyze information to determine the effects of medication-related problems and prioritize health-related needs.	<ul style="list-style-type: none"> Assess a patient’s signs and symptoms to determine whether a patient can be treated within the scope of practice or requires a referral. Interpret laboratory test results. Measure vital signs in an adult patient and interpret the results. Assess a patient’s health literacy using a validated screening tool. Evaluate an existing drug therapy regimen.
	1.1.4 Establish patient-centered goals and create a care plan for a patient in collaboration with the patient, caregiver(s), and other health care professionals that is evidence-based and cost-effective.	<ul style="list-style-type: none"> Determine patient-specific goals. Create a care plan with the patient. Select monitoring parameters to determine the therapeutic and adverse effects related to the treatment plan.
	1.1.5 Implement a care plan in collaboration with the patient, caregivers,	<ul style="list-style-type: none"> Document the care plan in the medical record.

	and other health care professionals.	
	1.1.6 Follow-up and monitor a care plan.	<ul style="list-style-type: none"> • Contact a patient after a clinic visit to assess response to therapy, or achievement of goals established at the previous visit. • Recommend modification or adjustments to an existing medication therapy regimen based on patient response.
Domain 2: Communication and Education		
Objective 2.1: Use appropriate education and communication strategies for a diverse patient population.	2.1.1 Advocate for patient access to medications to optimize patient outcomes.	<ul style="list-style-type: none"> • Assist patients with medication access concerns, including insurance or cost issues.
	2.1.2 Perform patient-centered medication education.	<ul style="list-style-type: none"> • Provide patients and their caregivers with appropriate medication education regarding prescription, OTC/self-care products, and supplements. • Apply techniques to assess patient understanding in a diverse patient population • Use diverse methods for delivering patient-centered education (e.g. telephone encounters, tele-health video)
	2.1.3 Adjust communication style techniques and language in response to cultural and patient-specific needs and individual social determinants of health.	<ul style="list-style-type: none"> • Demonstrate communication techniques for patient specific needs, including, but not limited to, motivational interviewing, coaching, counseling/education, teach back, teaching for devices. • Effectively provide written and/or verbal education to patients regarding medication-related topics.
Domain 3: Interprofessional Team Member		
Objective 3.1: Collaborate as a member of an interprofessional team.	3.1.1 Actively contribute as a member of an interprofessional healthcare team.	<ul style="list-style-type: none"> • Communicate medication therapy appropriateness recommendations and medication education to members of the health care team. • Provide an in-service presentation to health care providers regarding medication related issues (See Appendix 1). • Participate in collaborative interdisciplinary practice protocols.

		<ul style="list-style-type: none"> Establish professional rapport with pharmacy and other healthcare professionals and practice as a member of an interprofessional team.
Domain 4: Population Health Promoter		
Objective 4.1: Promote population health.	4.1.1 Identify patients at risk for prevalent diseases in a population.	<ul style="list-style-type: none"> Perform a screening assessment to identify patients at risk for prevalent disease in a population (e.g. BP measurement to assess for hypertension, screening test for depression, ASCVD risk assessment).
	4.1.2 Minimize adverse drug events and medication errors.	<ul style="list-style-type: none"> Assist in the identification of underlying system-associated causes of errors. Report medication errors and adverse drug events. Provide education on preventing adverse drug reactions
	4.1.3 Maximize the appropriate use of medications in a population.	<ul style="list-style-type: none"> Participate in collection of patient and disease specific information to assess the effectiveness of a treatment regimen or pathway. Provide educational outreach to a patient population to support their appropriate medication use Apply cost-benefit, formulary and/or epidemiology principles to medication-related decisions.
	4.1.4 Ensure that patients have been immunized against vaccine-preventable diseases.	<ul style="list-style-type: none"> Participate in collection of patient and disease specific information to assess the effectiveness of a treatment regimen or pathway. Provide educational outreach to a patient population to support their appropriate medication use Apply cost-benefit, formulary and/or epidemiology principles to medication-related decisions.
Domain 5 : Information Master		
Objective 5.1: Apply evidence-based literature in practice.	5.1.1 Educate patients and professional colleagues regarding the appropriate use of medications.	<ul style="list-style-type: none"> Respond appropriately to medication - related questions from the preceptor, medical team Counsel patients/caregivers about medication related issues

		<ul style="list-style-type: none"> • Prepare and lead a Journal Club or drug/disease-related topic discussion (See Appendices 1, 2).
	5.1.2 Use evidence-based information to advance patient care.	<ul style="list-style-type: none"> • Retrieve, interpret and apply medical literature to formulate decisions for optimal patient medication regimens. • Analyze, evaluate, and apply a clinical study to promote optimal healthcare. • Defend/justify recommendations using published evidence in support of a clinical situation.
Goal 6: Practice Manager		
Objective 6.1: Apply Systems Management for Medication Use.	6.1.1 Participate in institutional systems and programs to assure appropriate drug use.	<ul style="list-style-type: none"> • Participate in reporting pharmacist interventions or other activities in the electronic medical records. • Be familiar with policies and process for pharmacy related patient care activities • Participate in discussions and assignments regarding compliance with accreditation, legal, regulatory, and safety requirements.
Domain 7: Ethics and Professional Behavior		
Objective 7.1: Apply ethical and professional behavior	7.1.1 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. • Wear appropriate attire; have appropriate demeanor, and conduct. • Adhere to attendance requirements, including punctuality.

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

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: Separate online evaluations 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.

Students may be evaluated at any other time at the preceptor's discretion. Preceptors may evaluate students more frequently, so that the student is informed of areas requiring improvement early in the rotation. The primary preceptor may get feedback from all team members and any patient comments.

Students **must** submit a completed Mid-point Formative evaluation and evaluations of their sites/preceptors to receive a grade for the experience.

VI. SSPPS Rotation Equity, Diversity and Inclusion Statement

Each rotation is a place to expand knowledge and experiences safely, while being respected and valued. We support the values of UC San Diego to “create a diverse, equitable, and inclusive campus in which students, faculty, and staff can thrive.” It is our intent that students from all diverse backgrounds and perspectives be well served by this rotation, that students' learning needs be addressed, and that the diversity that students bring to this rotation be viewed as a resource, strength and benefit. It is our intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, religion, and culture. We ask that everyone engage in interactions with patients, caregivers and other members of the healthcare team with similar respect and courtesy. All people have the right to be addressed and referred to in accordance with their personal identity. We encourage everyone to share the name that they prefer to be called and, if they choose, to identify pronouns with which they would like to be addressed. We will do our best to address and refer to all students accordingly and support colleagues in doing so as well. We hope you will join us in creating a learning experience that upholds these values to further enhance our learning as a community.

VII. Resources

- A. SSPPS References: [Students & Preceptors](#)
- B. [UC San Diego Intranet \(“Pulse”\) Medication Resources](#)
- C. [Online Clinical Library Resources](#)
 1. Clinical Pharmacology
 2. Micromedex
 3. DynaMed
 4. UptoDate
 5. Natural Medicines Database
- D. Suggested textbooks (updated versions may be available):

1. Medical dictionary. Examples: Stedman's Medical Dictionary, Dorland's Medical Dictionary.
 2. Krinsky DL et al. Handbook of Nonprescription Drugs: An Interactive Approach to Self-Care. 20th ed., American Pharmacists Association, 2020.
 3. DiPiro JT, Yee GC, Posey LM, Haines ST, Nolin TD, Ellingrod V, eds. Pharmacotherapy: A Pathophysiologic Approach, 11th edition. McGraw-Hill, New York, 2020.
 4. Goodman & Gilman's The Pharmacological Basis of Therapeutics, 14th edition. McGraw-Hill, New York, 2023. Available on-line (free-of-charge) through the UC San Diego Biomedical Library Online Clinical Library at <https://accessmedicine.mhmedical.com/book.aspx?bookid=3191>
 5. The Sanford Guide to Antimicrobial Therapy 2023 (53rd edition)
- E. [The Pharmacists' Patient Care Process \(PPCP\)](#) - see **Appendix 2** for PPCP template.
- F. Journal club format: [PIES Method of Critique](#)
- G. As specified per individual rotation site/preceptor.

Appendix 1

Student Presentation and/or Conference (example)

The student may be required, by the preceptor, to present a drug or disease related topic related to ambulatory care. 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: Pharmacist Patient Care Process (PPCP) Template

Patient Name:	Age:	Race/Ethnicity:	Gender/Pronouns:	Wt:
COLLECT: What data is relevant to assess the primary problem?				
Subjective	<p>CC (Chief Concern/Complaint): reason for the visit or admission</p> <p>HPI (Symptoms, Characteristics, History, Onset, Location, Aggravating factors, Remitting factors):</p> <p>Meds (Rx, OTC, herbal/supplements): dose, route, frequency ± duration, indication, efficacy, ADEs, adherence</p> <p>Allergies and type of reaction:</p> <p>Relevant PMH/FH:</p> <p>Relevant SH: diet, exercise, alcohol, tobacco, recreational drugs, occupation, etc.</p>			
Objective	Labs, vitals (e.g., BP, HR, RR, temp, O ₂ sat, pain score), physical exam (positive findings, Ht, Wt), procedures/imaging			
ASSESS				
Primary Problem				
Problem Status	<p>What needs to be done for the problem:</p> <p><input type="checkbox"/> Needs treatment (e.g., chronic condition is uncontrolled, acute problem requires drug therapy) <input type="checkbox"/> Refer</p>			
Current Therapy	<ul style="list-style-type: none"> ▪ Indicated? Does the problem require drug therapy? Should current therapy be continued, changed or stopped? Why? ▪ Effective? What is the anticipated effect of current therapy (e.g., average A1c reduction)? Is the dose optimized (too high/low, appropriate for age, comorbidities, renal/liver function, convenient to take/administer, etc.) ▪ Safe? Any ADEs, DDIs or contraindications? 			
<ul style="list-style-type: none"> ▪ Indicated? ▪ Effective? ▪ Safe? 	<p>PROS: Identify patient-specific pros of current therapy</p> <p>▪</p>	<p>CONS: Identify patient-specific cons of current therapy</p> <p>▪</p>		
New Therapy	<p>What other meds could be considered? What is the anticipated effect of new therapy? Will it achieve goals?</p>			
<ul style="list-style-type: none"> ▪ Add-on? ▪ Alternative med? 	<p>PROS: Patient-specific pros of new drug/class</p>	<p>CONS: Patient-specific cons of new drug/class</p>		
New drug/class	▪	▪		
New drug/class	▪	▪		
New drug/class	▪	▪		
New drug/class	▪	▪		
New drug/class	▪	▪		
PLAN / IMPLEMENT / FOLLOW-UP				
Treatment Goal(s)	<p>Cure/reduce symptoms, correct lab/vitals, minimize/avoid ADE/DDI, prevent complications, reduce morbidity/mortality</p> <p>▪</p>			
Recommended Drug Therapy	<ul style="list-style-type: none"> ▪ Current therapy (continue/increase/decrease/stop): ▪ New drug therapy (start): Drug name(s), strength, dose, route, dosing frequency ± duration of therapy 			

Non-Drug Therapy	Patient-specific lifestyle modifications (e.g., specific targets for diet, exercise, tobacco, alcohol, actions to do/avoid...) ▪	
Monitor/Follow-up ▪ What ▪ When With who	Efficacy monitoring ▪ What monitoring (S/O) parameters will indicate if therapy is working? ▪ How often should parameters be checked?	Toxicity/adverse effects monitoring ▪ What monitoring (S/O) parameters will indicate if ADEs or toxicity is occurring? ▪ How often should monitoring occur? ▪ How would ADEs or toxicity be managed?
Patient Education (for selected plan) 3 Prime Questions Disease education ± Coordinate Care ± Documentation	<ul style="list-style-type: none"> ▪ What the drug is for: indication/symptoms being treated, why the drug is needed/preferred for this patient ▪ How to take it: medication name(s), dose, frequency, duration, administration, how to optimize adherence ▪ What to expect: onset, common side effects and how to manage, potential drug interactions, missed doses, storage ▪ General care/preventative measures ▪ Lifestyle changes/non-drug therapy ▪ ± Considerations for ensuring access to medication (e.g., who will prescribe, where to get medication, cost) ▪ ± Communicate plan to other providers (e.g., document in health record, phone call, provide written summary to patient) 	