

**University of California, San Diego
Skaggs School of Pharmacy and Pharmaceutical Sciences**



**SPPS 400AB
Acute Care
Advanced Pharmacy Practice Experience
2007 – 2008**

DRAFT



**University Of California, San Diego
Skaggs School of Pharmacy and Pharmaceutical Sciences
Advanced Pharmacy Practice Experience**

SPPS 400A & B, ACUTE CARE

I. COURSE DESCRIPTION: PREREQUISITES: GRADING

SPPS 400AB Acute Care - Inpatient Clinical Clerkship.

Summer, Fall, Winter, Spring

SPPS 400A Rotation I

SPPS 400B Rotation II

Prerequisites: Completion of years 1-3, fourth year academic standing, an academic record in good academic standing and a passing score on the Comprehensive Cumulative exam.

In response to the evolving role of the pharmacist in the delivery of health care services, the University of California School of Pharmacy and Pharmaceutical Sciences and the UCSD Health Sciences affiliated hospitals offer students the opportunity for a patient oriented drug therapy education with an emphasis on patient responsibility and effective communication with the other members of the health care community.

Through this experience the student will be able to apply academic basic science and clinical didactic course work to the situations which daily challenge the pharmacist in the clinical settings. The student will consult and discuss drug therapy with patients, the clinical pharmacist, medical staff, and nurses and other health care students in several different settings. As proficiency increases, more responsibility for monitoring and developing drug therapy will be given. As a result, the basic tools and insights necessary to deliver y high quality rational health care will be at the student's fingertips.

SPPS 400A & B is a supervised clinical pharmacy experience in an inpatient setting. Through observation and practice, students will develop and explore their roles in an interdisciplinary health care team. Students will take medication histories, monitor drug therapy, provide patient education, and research patient-specific drug information questions.

Grading: Pass/No Pass

Evaluated Activities: Daily activities on the medical and surgical services in the affiliated teaching hospitals. These activities are full time activities at > 40 hours per week.

Course Coordinator: Charles Daniels, Ph. D.
Professor of Clinical Pharmacy
Associate Dean for Clinical Affairs

II ADVANCED PHARMACY PRACTICE GOALS

Students will interact with a number of different healthcare providers and participate in a variety of patient care activities with the pharmacy preceptor and medical teams. The student will be provided with many opportunities to apply his/her academic basic science and clinical didactic course work to patient care in the hospital setting.

III APPE OBJECTIVES

- A. Given a patient's medical history (symptoms, physical examination laboratory values, current medications and diagnosis), the student will be able to:
1. Identify, list and prioritize the significant active and inactive medical problems.
 2. Identify which of the above problems require drug therapy.
 3. Identify those medical problems or laboratory values which may be induced or aggravated by present or future drug therapy.
 4. Identify potential drug interactions
 5. List the subjective and objective evidence for each problem.
 6. Assess the response and appropriateness of current therapy and if necessary make an assessment and design an individualized drug therapy plan for each of the patient's problems according to the objectives listed in the SPPS 212 ABC Therapeutics course syllabi.
 7. For each drug which the patient takes (now or in the future):
 - a. Critically evaluate the rationale for its use in this particular patient. This should include a statement of drug's efficacy and toxicity as compared to other drugs which may potentially be used for the medical problem in question. Also consider the impact of each drug on the patient's other medical problems.
 - b. Design a safe and effective dosing regimen for the patient, taking into consideration the pertinent pharmaceutical (dosage form, stability, flavor, etc.) and pharmacokinetic (bioavailability, elimination) features of the drug. The impact that other medical problems (e.g. renal, liver, or gastrointestinal disease) may have on the biopharmaceutic and pharmacokinetic parameters of the drug should also be considered.
 - c. Establish the therapeutic and toxic endpoints of therapy. What is the expected time for the therapeutic endpoint to be achieved?
 - d. List those laboratory, physical and subjective parameters which may be used to follow the therapeutic and toxic effects of the drug.
 - e. List and evaluate the most common adverse effects and drug interactions including the following points:
 1. clinical significance (incidence, severity, reversibility)
 2. pathogenesis
 3. predisposing factors
 4. presenting signs and symptoms
- B. For those medical problems and drugs which were not covered in the SPPS 212 Therapeutics series, the student will be able to efficiently locate appropriate literature resources and assimilate the information required to meet the objectives stated in "A" above.

- C. Each student will make a verbal presentation in fifteen minutes or less of any patient for which s/he is responsible. Each patient presentation should include the following elements;
- a. Patient's name, age, sex
 - b. Reason for admission and chief complaint
 - c. History of present illness
 - d. Significant medical history
 - e. Present medication history
 - f. Summary of review of systems and physical examination
 - g. Admission of laboratory values
 - h. Pharmaceutical considerations
- D. After the patient presentation, the student will be able to discuss all of the therapeutic considerations for that patient. Therapeutic considerations include assessment of the current therapy, recommendation and rationale for changes in therapy, therapeutic endpoints, assessment of the clinical significance of potential drug interactions and adverse reaction, and limitations of parameters which are being used to monitor effectiveness and toxicity of therapy. Students should review relevant pharmacology, pharmacokinetics and pathophysiology in preparation for patient presentations.
- E. Using the methods described in SPPS 212A entitled, "The Interview", **students will interview all assigned patients on their service within 36 hours** of admission for the purpose of obtaining an accurate medication history. Most interviews should be completed within 15 minutes and all should contain the following elements:
- a. A list of current drugs and dosing regimens
 - b. A list of pertinent past medications
 - c. A list and description of drug allergies and adverse side effects.
 - d. An assessment of the reliability of the information obtained.
 - e. An assessment of the patient's compliance to drug therapy
- F. Students will be able to educate all assigned patients on their medications. The student will evaluate patient comprehension of the material.
- G. The student will be able to provide drug information to preceptors, peers, physicians, nurses and other health professionals. The student will be able to utilize appropriate drug information sources, critically evaluate drug literature, apply drug literature in drug therapy and synthesize a patient-specific answer. Consults will be clearly written and well-referenced. Verbal presentation will be clear, concise and will utilize appropriate terminology.
- H. Students will be able to effectively perform the above functions in the clinical setting. The student will be organized and able to identify the urgency of tasks and complete them within a reasonable time. He/she will participate as an active team member.
1. By the end of the third week, the student will be able to:
 - a. Identify and demonstrate mastery of the pharmacology, pharmacokinetics and pathophysiology needed to contribute effectively to patient care on the services to which he/she is assigned.
 - b. Obtain drug histories, complete monitoring forms, educate patients, round, and provide drug information by performing according to ward routine.
 - c. Establish professional rapport and good working relationships with other health professionals.
 - d. Interview, counsel, monitor and assess the therapy of a full patient load.
 - e. Effectively contribute to patient care.
 2. During the next three weeks of the rotation, the student will continue to improve and will perform adequately in the patient care area.

IV. PRACTICE SITES

| | Medicine | PEDIATRIC | Surgery |
|------------------------------------|----------|-----------|---------|
| Rady Children's Hospital | - | Y | - |
| San Diego Naval Hospital | Y | - | - |
| Sharp Chula Vista Medical Center | Y | - | Y |
| Scripps Mercy Medical Center | Y | - | Y |
| Scripps Chula Vista Medical Center | - | - | Y |
| Tri-City Medical Center | Y | - | - |
| UCSD Medical Center Hillcrest | Y | - | Y |
| UCSD Medical Center Thornton | Y | - | Y |
| VA San Diego Health Care System | Y | - | Y |

V. CLERKSHIP ACTIVITIES

A. Ward activities

1. Attend and actively participate in ward rounds and attending rounds according to the schedule of the service.
2. Attend relevant grand rounds and medical conferences.
3. Interview and obtain medication histories from all patients assigned by the pharmacy preceptor.
4. Monitor drug therapy of all assigned patients. Maintain an up-to-date data base on each assigned patient according to the procedures outlined in this syllabus. "Goals and Procedures for Monitoring Drug Therapy".
5. Students will apply the information obtained through the interviewing and monitoring process to:
 - a. evaluate current drug therapy
 - b. anticipate and identify drug therapy problems
 - c. meet the objectives outlined in Section III of this syllabus
6. Provide patient specific drug information (verbally and/or in writing) to nurses, physicians, peers and pharmacy preceptors.
7. Counsel all assigned patients about their drugs.

B. Students will prepare and make at least one in-service presentation (s) to the clinicians on their unit on a drug or pharmacy related topic. The goals of this presentation, which will be approximately 20 minutes in length are:

1. To provide practical information for clinicians (e.g. basic pharmacology, recognition, and minimization of common drug side effects, proper and safe administration of drugs.)
2. To give the student the opportunity to organize and relate drug information to a specific audience (under the supervision of a faculty or resident preceptor)

C. Students will attend pharmacy rounds. During this time students will present their patients to the pharmacy faculty and to fellow students. A sample format for patient presentation is included and a discussion of the specific activities of pharmacy rounds is included as well. Pharmacy Rounds shall be conducted as follows:

Monday, Tuesday, and Wednesday at a designated time.

Pending a meeting later on

The intent of pharmacy rounds is to allow students an opportunity to present and discuss in-depth patients that they are monitoring. Two patients may be presented during each 60 minute rounds period. Students will present their patients using the format discussed in the section, "How to Present A Patient for Pharmacy Rounds". Following the patient presentation, which should take no longer than 10 minutes, the student will present an in-depth discussion of the pharmaceutical considerations of the patient including, but not limited to:

1. an evaluation of current therapy
2. proposed alternative therapies
3. monitoring parameters for therapeutic response and toxicity
4. the pathophysiology of the disease process in the patient
5. any pharmacokinetic parameters applicable
6. endpoints of therapy

After the first three weeks of the course, students should be able to present the patient referring to notes only for specific details, such as lab values, drug dosages, etc.

During pharmacy rounds it is expected that preceptors will question students to assess the degree of preparation, monitoring skills and knowledge base. In addition, preceptors will broaden discussion and share clinical "pearls" and direction for therapy.

The time and location of Pharmacy Rounds will be announced.

- D. Students should participate in department of pharmacy educational activities as assigned by preceptors.
- E. All students will attend and participate in a weekly conference. The location and time will be announced.

One student will present a patient-related drug topic during this time. Each student will be evaluated on his/her presentation by a preceptor. Student schedules for these conferences are available at the start of the quarter.

V. STUDENT EVALUATION

A. Grading will be Pass/No Pass

- B. Students will be evaluated twice per six week rotation on the basis of the behavioral form attached to this syllabus. Criteria which preceptor uses to evaluate students are also included.

CRITERIA FOR GRADING SPPS 400AB ACUTE CARE

A. Requirements for successful completion of the clerkship are:

1. Attendance and participation at an adequate level without significant deficits in performance in the above activities as defined in Section V.
2. Meeting the objectives as defined in Section III of the syllabus.
3. Reading the syllabus.

B. Grades in SPPS 400AB will be Pass/No Pass and based upon the following:

1. Performance Evaluations

Ninety percent (90%) of the grade will be based upon the performance evaluations which will be completed by the preceptors every 3 weeks. The mid-rotation evaluations are used primarily to determine student progress. The end rotation evaluations (i.e. end of each 6 week rotation) will be used to determine the student's grade in the course.

2. SPPS 400AB Conference

One conference presentation will account for ten percent (10%) of the final grade. Each student must present one patient-related drug topic in the twelve week period. Goals and grading criteria for the conference are listed in the syllabus.

3. Written comments by preceptors and conference participation will be used to lower or raise borderline grades.

4. Preceptor of students who are at risk to not pass must contact the course coordinator and the Associate Dean for Student Affairs at the earliest observation of unacceptable performance by student. School will review the case and take appropriate remediation.

VI. MISCELLANEOUS INFORMATION

A. Student Conduct in the Advanced Pharmacy Practice Experiences

Every student participating in the APPEs is expected to conduct himself/herself in a manner consistent with that of other members on the patient-care team.

A white laboratory coat with your name tag and photo identification must be worn when you are participating in activities relating to the APPEs. These activities also include conferences which you may be assigned or wish to attend.

Proper dress and grooming is expected of all participants in the clerkship.

Information you gain about a patient through your APPE activities must be considered personal and confidential. Such information must not be circulated or discussed outside the activities of the clinical setting. Breach of your patient's trust can have harmful consequences for the patient and his family, and may even affect the course of his condition. All students must read and be thoroughly familiar with the patient's Bill of Rights.

A situation of student misconduct or non-compliance where potential damage to the service or the staff's relationships with patients or other health professionals will be considered sufficient justification for the student's exclusion from further participation in the patient care environment. All complaints of misconduct or non-compliance will be reviewed by a committee of the faculty before any corrective action is taken. In all cases the student has the right of redress to the Associate Dean for Student Affairs if he feels that he has grievances against the action taken by the faculty. For specific information regarding grievance procedures, contact Dr. Manoguerra.

B. Absence Policy

1. Absences of >3 days require the repeating of one week of rotation.
2. Absences of > 5 days will require repeating the entire rotation. Students must realize that this will be done on a "space available" basis. Should space not be available, the completion of the student's academic program may be delayed.

3. Conditions for excused absence

Students are encouraged to attend professional meetings and interviews required for residency application activities. It is the responsibility of the student to organize these dates in ways to minimize the impact on their educational experiences. Students are expected to work with their preceptor when planning/scheduling interview dates. ASK PRECEPTORS AT THE MEETING.

C. Withdrawal Policy for SPPS 400AB Acute Care

1. Any request to withdraw from SPPS 400AB must be reviewed by the course coordinator and the Associate Dean for Student Affairs.

Students dropping SPPS 400AB may only enroll in SPPS 400AB in subsequent quarters on a "space available" basis. Should space not be available, completion of the student's academic program will be delayed.

GOALS AND ESSENTIAL ELEMENTS FOR MONITORING DRUG THERAPY

GOALS

- A. To maintain an up-to-date data base on the patient's condition.
- B. To organize the data base in a way which facilitates correlation and integration of information.
- C. To utilize this data base to evaluate the therapeutic effectiveness of current drug therapy, establish existent problems (drug and non-drug related) and anticipate potential drug problems.

ESSENTIAL ELEMENTS

- A. Name, age, weight, sex, race, should be recorded.
- B. Allergies and current medications should be recorded from the patient interview
- C. Problem:
 - 1. A problem can be defined as a proven diagnosis; a physiologic entity or syndrome; a symptom; a physical sign or finding, or an abnormal laboratory value.
 - 2. Based on the pharmacy interview, physician's work-up, nurse's work-up, the old chart, and admission laboratory data, an initial problem list can be defined. All problems should be listed.

Problem number 1 should be assigned to the primary reason for admission. All other active problems should follow the primary problem and should be numbered sequentially. Inactive problems should follow the "other" active problems and should be assigned sequential numbers and designated as "inactive" under the consideration column.

As new problems arise, the date should be noted, the problem stated, and the next sequential number assigned.

The rationale for the use of any medication should be based on the problem list and considerations

- D. Considerations
 - 1. Considerations can be defined as those thoughts relating to the problem viewed from a pharmacist perspective.
 - a. Is the problem drug induced?
 - b. Are there any drugs which the patient is currently receiving known to aggravate the problem, or which might be affected by the problem.
 - c. What potential therapeutic maneuvers (drug and non-drug) can be utilized to treat the problems? Co-relative with the patient's data base, what would be the therapy or therapies of choice?
 - 2. Not every problem will have an associated consideration or considerations.
- E. Complete Medication Profile

F. Lab Data

1. Record only serial lab data which will reflect the status of the patient's problem list and considerations.

- a. e.g., if the patient has diabetes insipidus the plasma electrolytes (Na⁺, K⁺, Cl⁻, HCO₃⁻), osmolality, urine volume and fluid intake, and his body weight should be monitored.
- b. e.g., if the patient is receiving an aminoglycoside, the patient's WBC, Cr, BUN, and fever should be followed.

2. If the patient has a non-serial lab value which is abnormal, it should be indicated in the problem column.

- a. e.g., a B12 of 100

This would be designated as: Date problem #x: B12 100

- b. e.g., an Fe/TIBC of 70/450

This would be designated as: Date Problem #x:

Fe/TIBC 70/450

Appropriate considerations and recommendations would then be recorded in the adjacent column.

HOW TO PRESENT A PATIENT FOR PHARMACY ROUNDS

Mr (s) _____ is a _____ year old _____
(Name) (age) (race) (sex)

who enters the hospital with a chief complaint of _____

HPI: The patient's problem began in _____.

Chronological history: include medications, other therapies, surgeries relating to the problem.

Concurrent unrelated active problem: include brief history of the problem, medications, other therapies, surgeries relating to the problem.

PMH: Significant past medical history.

MEDICATION HISTORY: Current medications (medications on admission). Allergies.

SUMMARY OF ROS/PHYSICAL FINDINGS

ADMISSION LABS

ADMITTING IMPRESSIONS

PLAN

If the patient has been in the hospital for a while, summarize his/her hospital course..

- Operations: Procedure, complications
- Events (in chronological order)
- New problems (in chronological order)
- Status of active problem (at the time of presentation)
- Current medications (at the time of presentation)

In summary, we have a _____ y.o. _____ with a chief complaint of
(age) (race) (sex)

which has been managed by _____

Other problems include _____

SPPS 400AB ACUTE CARE STUDENT CONFERENCE

GOALS

1. To provide an opportunity for the student to present a drug/disease topic in a conference setting.
2. To provide the student with an evaluation of his/her presentation based on the criteria listed.

CRITERIA

In a 60-90 minute period the student should be able to present a drug or disease related topic. Criteria for evaluation are as follows:

- A. At least one week prior to the presentation, the student should submit to the Program office for distribution to fellow students, a handout which should include:
 1. Topic of presentation
 2. Goal (s) and objective (s) of the presentation. Reference: (R.F. Mager's Preparing Instructional Objective)
 3. Outline of presentation
 4. Reference list and copy of the "best reference" on the subject that should be in each student's reference file.

No later than two weeks prior to the presentation, the student should review the topic of discussion with the conference faculty.
- B. If the topic includes a patient presentation, in 10 minutes or less, the student should be able to give the patient presentation with the following elements:
 1. Patient's name, age, race, sex
 2. Reason for admission and chief complaint
 3. History of present illness (in chronological order along with treatments, medications; concurrent unrelated active problems should also be included)
 4. Past medical history
 5. Present medication history (medication on admission, allergy)
 6. Summary of review of systems and physical examination
 7. Admission labs
 8. Admitting impression
 9. Therapeutic plan
 10. Pharmaceutical considerations (emphasis should be placed on this element)
 11. Hospital course (include, in chronological order, any procedure (s), complication (s), new problem (s), as well as any significant changes in active problems during hospital stay).
 12. A summary of the patient being presented.
- C. In the remaining time, the student should be able to clearly discuss a drug-related or disease-related topic. In this discussion, the student should include (when appropriate):
 1. Identification of the medical problem (s) to be discussed
 2. Assessment of response and appropriateness of current therapy
 - a. Evaluation of the rationale for its use
 - b. Discussion of pertinent pharmaceutical (dosage form, stability, flavor, etc.
 - c. Comparison of alternative therapies and therapeutic approaches which may be beneficial for the problem in question (this should include a comparison of efficacy, adverse reactions, toxicity and relative advantages and disadvantages of each therapy).
 3. Discussion of recent developments and/or controversies on the topic or drug presented and a critical evaluation of literature reviewed.
- D. Students should present the topic in a manner so as to stimulate group participation.
- E. Use of audiovisual materials is encouraged.

GUIDELINES FOR PRECEPTOR EVALUATION OF STUDENTS ENROLLED IN SPPS 400AB

I. Preceptor Responsibilities

- A. Each student will be evaluated a minimum of two times during each 6 week rotation. The initial evaluation must be completed no later than Friday of the third week after a student has begun a rotation. A second evaluation must be completed at the conclusion of each rotation. Each student will be evaluated a minimum of 4 times.

The 3-week evaluations to be completed by student as a self-assessment and discussed and signed by the preceptor. The 6-week evaluation is to be completed by the preceptor and discussed with the student.

Students may be evaluated at any other time (s) at the discretion of the preceptor. Preceptors are encouraged to evaluate weak students more frequently so that the student is informed of areas requiring improvement very early in the rotation.

- B. Evaluations to be completed by the preceptor include the performance evaluation form included, and a written summary of the student's performance. Preceptors are encouraged to document with examples superior performance and/or inferior performance of students. Comments may include descriptions of the student's attitude, concepts of pharmacy practice, knowledge of, or lack of knowledge, of specific pharmacologic information, correlative thought process, problem solving ability, ability to work independently and statements of a student's competence.
- C. The performance evaluation as well as the written evaluation is to be reviewed by the preceptor with the student on an individual basis. Ample time must be provided for the student and preceptor to discuss the evaluation.
- D. The evaluation form is to be signed by both the student and preceptor at the conclusion of the conference.

If a student refused to sign the evaluation for any reason, this should be noted by the preceptor with a specific explanation of the circumstances. The preceptor might suggest that the student sign it, with a statement that s/he does not agree with the evaluation.

- E. Student should be evaluated by all preceptors who have had contact with them. Behaviors which have not been observed should not be evaluated.

II. Pharmacy Resident Preceptor Responsibilities

- A. Pharmacy residents will follow the instructions as outlined in Section I.
- B. All evaluations completed by a pharmacy resident must be reviewed by a preceptor who has a clinical teaching appointment. All resident evaluations of students will also be signed by the faculty preceptor assigned to the rotation.

EVALUATION OF CLINICAL PHARMACY PERFORMANCE

The evaluation form for clinical pharmacy clerkship performance consists of four major skill categories. These include:

- I. Data Collecting and Interpretive Skills
- II. Drug Therapy Critique and Planning
- III. Communication and Professional Behavior Skills
- IV. Performance in the Clinical Setting

Each of these major categories is supported by descriptors of performance which represent those activities. Each descriptor is to be evaluated as not applicable, severe deficits, improvement needed, good, very good or outstanding by (X) the appropriate box.

Checking the “Sever Deficit” box for any descriptor results in an automatic failing (not passing) evaluation for that category and the course. The “Improvement Needed” box is to be checked (X) to indicate a specific area which does not quite meet the descriptor objectives and requires some additional work. A student may receive an overall category score of 3 or higher (passing) even with a few “Improvements Needed” descriptors checked. However, more than a few “Improvement Needed” descriptors within a category should represent an overall category score of less than 3 (not passing). Checking “Good” for a category indicates the student performs the descriptors in a satisfactory way and meets the objectives or minimum standards. Checking “Very Good” or “Outstanding” indicates increasing levels of efficiency and function.

The preceptor is required to make additional comments with specific documentation in any case where the student is receiving a non-passing evaluation. Preceptors are strongly encouraged to make additional comments on every evaluation (passing or non-passing) in order to provide the student with specific constructive feedback.

The performance evaluation grade is calculated by averaging the numerical scores circled in each major category. A score of 3 or greater in each category must be achieved by the student in order to pass the course. A student may not make up a score lower than 3 by getting a higher score in another category. In every case, numbers circled should approximately reflect the descriptors checked. For example, the circling of a 5 should be supported by the checking of numerous “Outstanding” descriptors. The grade is correlated to the numerical score by the following:

Less than 3 in any category = not passing (failing)
3 or greater in all four categories = passing