

SSPPS Electives - Didactic

SPPS 250 Cannabis Pharmacology and Therapeutics

This course will provide students knowledge about the cannabis plant and the derivative constituents, primarily focusing on cannabinoids and their interaction with the endocannabinoid system. The goal of this course will be to introduce the scientific basis for the development of cannabis-derived medicinal drug products beginning with the ancient history of cannabis and learning about the cultural, social, political, legal, medical, pharmaceutical, scientific and educational perspectives. As an introductory course, it will cover many aspects of cannabis, including botany, pharmacology, and therapeutics and will potentially include guest speakers with relevant expertise. Students will have an opportunity to be at the forefront of this rapidly growing field in order to provide scientific based information to patients, and will gain expertise while interactively participating in the learning process.

SPPS 251 Special Studies - Tobacco Cessation Clinic Manager

The goal of the free clinic TCC is to serve the underserved and provide behavioral counseling and pharmacotherapy recommendations to our patients. In addition to TCC, students will also treat patients in comprehensive fashion focusing on medication management in complex patients. This will be a pre-APPE study mimicking an APPE ambulatory care rotation with emphasis on TCC and medication management of chronic diseases.

SPPS 261 Human Teratology

This course will provide an overview of the field of teratology with emphasis on specific medications used during pregnancy and the risk for congenital anomalies. Students will acquire ability to critically evaluate data and apply this to individual risk assessment.

SPPS 263 Principles of Pharmaceutical Sciences and Drug Development I

The goal of the 2-quarter series in 'Principles of Pharmaceutical Sciences and Drug Development' (PPSDD) graduate courses is to provide students with an in depth understanding of the drug discovery (Part A) and drug development (Part B) processes. As part of the Biomedical Sciences Graduate Program at UC San Diego, the PSDD Training Area is taught by Skaggs School of Pharmacy and Pharmaceutical Sciences (SSPPS) faculty in association with the Scripps Institution of Oceanography (SIO), the Protein Data Bank (PDB), the Center for Drug Discovery Innovation (cDDI), the UC San Diego Drug Development Pipeline, the Center for Compound Resources, the Center for Computer-Aided Drug Design and the Center for Discovery and Innovation in Parasitic Diseases. The PSDD courses are open to graduate students in related disciplines of Chemistry/Biochemistry, Bioengineering, Neurosciences, Bioinformatics, Biological Sciences, Marine Chemical Biology, and related, reflecting the multidisciplinary nature of drug discovery and development. The Principles of PSDD part 'A' course covers target discovery, lead discovery and early preclinical drug development. The Principles of PSDD part 'B' course covers lead optimization, late stage preclinical development, clinical trials and commercialization. In addition, Part B teaches regulatory affairs and intellectual property associated with drug development. Although both quarters are recommended for graduate students, part A (3 Units) and part B (3 Units) can each be taken alone. The PSDD training area will provide translational sciences training that bridges basic sciences and clinical research for the purpose of addressing the world's challenges in unmet therapeutic needs.

SPPS 263B Principles of Pharmaceutical Sciences and Drug Development II

SPPS 263B will provide students with a concrete understanding of the challenges and successes associated with moving optimized drug candidates to IND and clinical trials. Optimization of drug leads involves drug design and evaluation for efficacy with appropriate properties in pharmacodynamics, pharmacokinetics, safety and toxicology, drug formulation for routes of administration, FDA drug regulations, and intellectual property for IND application and approval of a projected therapeutic agent.

SPPS 264 Managed Care I

This course is intended to give students an opportunity to hone a variety of skills including critical analysis, presentation and research skills while gaining a real world perspective of the pharmacy management process. Students will become familiarized in evaluating the available scientific, clinical and economic evidence for a new molecular entity, conduct a cost/benefit analysis, assess the impact on patient population outcomes and relate drug therapy choices to practice guidelines.

SPPS 264B Managed Care II

Students apply clinical and outcomes assessment skills to clinical and economic dossier for extensive review. Completion of clinical studies evidence matrix, budget impact analyses, and cost-effectiveness analyses yielding a formulary use recommendation and medication use parameters on a population level.

SPPS 265 Geriatric Pharmacotherapy

Through didactic lecture and case study discussions of common pharmaceutical care and chronic disease management challenges in the senior population, this elective provides students with specialized focus on Geriatric Pharmacotherapy. Reading materials and case studies will be drawn from clinical practice, primary literature, evidence-based medicine, and clinical practice guidelines.

SPPS 266 Veterinary Pharmacy

This course introduces students to veterinary pharmacy, challenges in drug therapy, pharmacokinetic/pharmacodynamic variances, ethical issues, law and public health, and drug administration. Students will learn many aspects of serving veterinary patients through lectures, discussion, exercises, field visits and a project.

SPPS 267 Pediatric Pharmacotherapy

Through didactic lecture and case study discussions of common pharmaceutical care and chronic disease management challenges in the pediatric population, this elective provides students with specialized focus on Pediatric Pharmacotherapy. Reading materials and case studies will be drawn from clinical practice, primary literature, evidence-based medicine, and clinical practice guidelines.

SPPS 268 Systems-Wide Mass Spectrometry: Proteomics and Metabolomics in Biology and the Clinic

The goal of this course is for students to gain a basic understanding of biological principles of proteomics for protein biochemistry and structural evaluation by mass spectrometry. Students will gain knowledge of how to incorporate proteomic approaches into biological research. Students will be evaluated based on a project they carry out in the lab, the presentation on the work they did and class participation.

SPPS 269 Pain & Palliative Care

This course will provide students the foundation for pharmacologic management of acute and chronic pain in general care, post-surgical and terminal care. A variety of disease states and patient populations will be explored through didactic and clinical presentations.

SPPS 270 Beginning Conversational Spanish for Pharm Students I

Designed to develop/enhance students' working knowledge of medical/healthcare Spanish and cultural competency to facilitate communication with Spanish-speaking patients and families. Special emphasis on oral communication skills and clinical experiences. Open to beginners with no prior exposure to Spanish.

SPPS 270B Beginning Conversational Spanish for Pharm Students II

A continuation of SPPS 270A. Designed to develop/enhance students' working knowledge of medical/healthcare Spanish and cultural competency to facilitate communication with Spanish-speaking patients and families. Special emphasis on oral communication skills and clinical experiences.

SPPS 271 Current Concepts in Pharmacy Legislation

This course focuses on teaching students basic knowledge of the legislative process and fundamental advocacy techniques. Students will learn about current legislation relevant to pharmacy and influence lobbyists, legislators, and policy professionals. Throughout the course, there will be three mandatory meetings: orientation, Legislative day, and a lunchtime talk with a guest speaker who will present about their role in advocacy. After Legislative day, we will have a post-legislative day assignment for the students and a video assignment. Lastly, students will write a letter to their senator/assemblyman about any bill presented during Legislative Day.

SPPS 274 Critical Care Medicine

Presenting drug therapy management in critically ill patients. This is a complementary course to the therapeutics series. Emphasis on drug selection, pharmacology, monitoring therapeutics outcomes, integrating organ function/laboratory tests, drug interaction/adverse reaction recognition and management, pharmacokinetic analysis on select drugs.

SPPS 276 Current Topics in Drug Delivery and Development

Recently developed enabling technologies have changed the landscape in Drug Delivery and Development. This course will expose students to the most cutting edge developments in the field of Drug Delivery, Development and Dosage forms.

SPPS 278 Free Clinic Manager

Provides students the opportunity to work directly with an underserved population, provide patient education/counseling, and learn how to treat and manage chronic disease states that burden these communities. Students will receive administrative training in management, pharmacy operations and dispensing.

SPPS 279 Prescription Drug Abuse Prevention

The Prescription Drug Abuse Prevention Elective provides a general review of substances of abuse including stimulants, depressants, opioids, and marijuana. In addition, an overview of drug use, regulations, the mechanism of action of drugs, and preventing substance abuse and substance abuse and dependence will be covered.

SPPS 280 Diabetes Care

This elective will provide an overview of diabetes management including non-pharmacological treatments, pharmacological guidelines and treatment strategies based on the patient's culture and comorbid conditions. The students will then apply their treatment strategies to patients at the Student Run Free Clinic Program Diabetes Care Clinic.

SPPS 281 Ecological and Medicinal Aspects of Natural Products

Through descriptions of some of the most interesting phenomena involving natural products, this course will provide the foundations of the natural product sciences, including ethnobotanical uses of plants, ecological interactions and contemporary drug screening programs, and will increase awareness of the pervasiveness of natural products in pharmaceutical products. Students will gain knowledge of specific natural products of special note for their pharmaceutical or ecological value, and will integrate various scientific disciplines such as organic chemistry, pharmaceutical chemistry, pharmacology, ecology and the drug discovery process. There will be two planned but optional field trips (tide pool exploration, desert garden walk).

SPPS 282 VR Manipulations of Drug-Macromolecule Structural Interactions

Where to find and how to visualize atomic structures of biologically important macromolecules, proteins and nucleic acids. Computer visualization and analysis of their atomic level interactions with drugs. Creating slide-show presentations with incorporated molecular structures. Presenting visualized structures in stereoscopic 3D. Using cutting edge visualization resources at UCSD to display and immerse into macromolecular structures in 3D:Oculus Rift VR classroom where 6 students at a time will be able to simultaneously use individual Oculus Rift based VR gear for immersive sensing and analysis of their molecular visualization classroom projects. Each student will select drug*macromolecule complex of their choice to visualize and will have 5-10 min presentation time to emphasize most important atomic drug-molecule interactions in the system, based on visualization tool capabilities.

SPPS 283 Hepatitis Free San Diego Collaborative

An elective course focusing on viral and non-viral hepatitis and their impacts on the community. Lectures include epidemiology, testing, diagnosis, and therapeutic management for viral hepatitis, their significance in current healthcare, therapeutic considerations in disease and medication management, and pharmacists' and physicians' roles in prevention and transitions of care.

SPPS 286 Special Topics in Psychiatry

The Special Topics in Psychiatry is an elective course focusing on mental health disorders and dispelling the myths and stigma associated with mental health disorders. Topics that are currently not presented in required curriculum (e.g. Therapeutics) are highlighted.

SPPS 287 Solid Organ Transplant

Elective course on the therapeutic management of solid organ transplant recipients. In this course, students will use their previous knowledge of anatomy, physiology, pathophysiology, pharmaceuticals, pharmacokinetics, pharmacology, and therapeutics and literature evaluation to formulate appropriate therapeutic decisions. By the end of the course, students will have reviewed the pathophysiology of major disease states pre- and post-transplantation, the pharmacology of the drugs used in solid organ transplantation, and the decision processes to create and implement therapeutic plans. This course will prepare students for the practice of pharmaceutical care on acute and ambulatory care solid organ transplant rotations.

SPPS 288 Intro to Clinical Oncology: The War on Cancer

This is an elective that will introduce students to oncology pharmacy and basic concepts in oncologic care. The curriculum is designed to provide students with the continuum of oncology pharmacy from beginning to end: risks/cancer prevention, drug development, clinical trial design, drug administration, future therapies, adverse effects, survivorship, and hospice/palliative care. This course will prepare students for future oncology rotations and confer basic knowledge for the responsible provision of other aspects of pharmaceutical care of patients with cancer.

SPPS 289 Pharmacy Topics in Endocrinology

This course introduces students to endocrinology with an emphasis on endocrine pathophysiology. Topics include feedback control theory, the major hormone systems, presentation of hormone and drug receptors and targets and pharmacy applications. Course is designed to provide a foundation/enhance the SSPPS/SOM integrated Scientific Curriculum course SPPS 237.

SPPS 500 Special Studies in Pharmaceutical Biochemistry of Drug Target Mechanisms

This is an elective course open to 3rd-year pharmacy students to (1) gain teaching experience in student conference sessions and course grading, and (2) gain a focused review of enzyme and receptor drug target mechanisms of therapeutic agents through teaching activities.

SPPS 501 Human Anatomy Teaching

Assist in teaching SPPS 241 Human Anatomy, a P1 Spring Quarter required course. The goal of this course is for students to gain teaching experience in gross anatomy lectures and labs through any or all of the following activities: Preparing prosections; conducting review sessions; contributing to preparation of laboratory exams, including performing at least one assigned identification tag; attending labs; tutoring students; and assisting with the Cadaver Memorial service.

SPPS 502 Law & Ethics Teaching

This is a 3-unit elective open to P3s who are 1) interested in Law and Ethics, 2) would like to take a focused review of California Pharmacy Law, and/or 3) have interest in facilitating and leading a conference to obtain conference teaching experience.

SPPS 503 SSPPS Electives Teaching

Students who qualify and are approved by faculty are eligible to enroll in this 1-2 unit course to coordinate an SSPPS elective. Electives include, but are not limited to, the following: SPPS 264AB Managed Care I & II, SPPS 265 Geriatric Pharmacotherapy, SPPS 271 Current Concepts in Pharmacy Legislation, SPPS 279 Prescription Drug Abuse Prevention, SPPS 280 Diabetes Care, and SPPS 283 Hepatitis Free SD Collaborative.

In conjunction with the faculty advisor, the student coordinators organize the lecture topics, lecture locations, and outreach events*. They evaluate feedback from the previous year's students and faculty to determine if any changes need to be made to the course. The student coordinators also attend each course lecture and manage outreach events*. Student coordinators are also given opportunities to teach, by participating in various ways in the delivery of the course content of that elective.

SPPS 504 Compounding Lab Teaching

Assist in teaching SPPS 225 Dosage Forms and Drug Delivery Systems – Compounding Lab, a P1 required course. The goal of this course is for students to gain teaching experience in compounding labs through any or all of the following activities: Preparing non-sterile compounded dosage forms (i.e. capsules, creams, suppositories & suspensions), studying USP guidelines in order to effectively interpret current regulations in compounding, and participating in exercises geared towards identifying the proper role of compounding in patient therapies.