MGT 729 DIRECTED READINGS IN STRATEGIC MANAGEMENT (4 CREDITS)
This course examines current theoretical and empirical research relating to emerging areas of knowledge in the strategic management field and assists students in locating and referencing their research. Reflecting the emphasis of current research on strategic and organizational phenomena, topics may vary based on individual student interests and research agendas. Prerequisite: Second year of full-time course work or equivalent

RESEARCH CORE

GRAD 710 RESEARCH DESIGN AND ANALYSIS (4 CREDITS)
This course provides an introduction to systematic inquiry and the designs, methods, and statistics used to investigate various kinds of research problems and issues. Prerequisite: None

GRAD 712 QUANTITATIVE RESEARCH AND ANALYSIS (4 CREDITS)
This course provides an opportunity to develop skill in the methods and statistics used to conduct and evaluate quantitative research studies. Prerequisite: GRAD 710

GRAD 716 QUALITATIVE RESEARCH AND ANALYSIS (4 CREDITS)
This course provides an opportunity to develop skill in the methods and statistics used to conduct and evaluate qualitative research studies. Prerequisite: GRAD 710

GRAD 718 ADVANCED QUANTITATIVE RESEARCH AND ANALYSIS (4 CREDITS)
This course prepares students for dissertations and other research projects requiring the design, collection, analysis and reporting of quantitative data. Prerequisite: GRAD 710, GRAD 712

GRAD 719 MIXED METHODS RESEARCH AND ANALYSIS (4 CREDITS)
This course prepares students to conduct research which incorporates both quantitative and qualitative design elements. The course focuses on the design, collection, analysis, integration, and reporting of mixed methodology research. Prerequisites: GRAD 710, GRAD 712, GRAD 716, and GRAD 718

MGT/CMM/CSC 795 DOCTORAL SEMINAR: PROPOSAL DEVELOPMENT (4 CREDITS)
This course allows a student to identify a research problem, conduct a review of the relevant literature, select a research design and complete a proposal for an original research project. Prerequisite: Last quarter of course work

COMPREHENSIVE EXAM, DISSERTATION AND RESIDENCIES

MGT/CMM/CSC 797 Ph.D. PROGRAM RESIDENCY (0 CREDITS)
The Ph.D. program requires students to attend the annual residence conference held annually at the Sullivan University, Louisville campus and scheduled in conjunction with the Sullivan University faculty retreat. All students who take Ph.D.-level courses at Sullivan University are required to attend residencies for the first two year of their enrollments.

MGT/CMM/CSC 798 DOCTORAL COMPREHENSIVE EXAM (2 CREDITS)
Students demonstrate mastery of the concepts learned in their course work. The comprehensive exam is taken at the conclusion of Ph.D. coursework and is graded on a pass/fail basis. Prerequisite: Last quarter of course work

MGT/CMM/CSC 799 DISSERTATION (1-12 CREDITS)
Students synthesize the knowledge that they have received in their doctoral studies into an original research-based project that advances the knowledge base of their area or discipline.

MGT/CMM/CSC 797 Ph.D. PROGRAM RESIDENCY (0 CREDITS)
The Ph.D. program requires students to attend the annual residence conference held annually at the Sullivan University, Louisville campus and scheduled in conjunction with the Sullivan University faculty retreat. All students who take Ph.D.-level courses at Sullivan University are required to attend residencies for the first two years of their enrollments.

College of Pharmacy Course Index

PHARMACEUTICAL SCIENCES

PBS 504 ANATOMY AND PHYSIOLOGY (4 CREDITS)
This course is a review of the basic principles of human physiology and anatomy with applications to disease states. Prerequisite: Admission to the College of Pharmacy

PBS 505 PHARMACEUTICS I (3 CREDITS)
This course underlines the basic physiochemical principles that govern pharmaceutical systems, particularly in light of the way in which they affect dosage forms and various drug products. Prerequisite: Admission to the College of Pharmacy

PBS 506 PHARMACEUTICAL CALCULATIONS WITH LAB (3 CREDITS)
Students will be prepared to perform accurate dosage calculations for the preparation of solid and liquid dosage forms, injectable medications and extemporaneously compounded prescription products to ensure patients' safety. Students will have time reserved to practice calculation techniques in the laboratory sessions. Prerequisite: Admission to the College of Pharmacy

PBS 511 BIOTECHNOLOGY (2 CREDITS)
This course provides an introduction to biotechnology and its relationship to pharmacy. Topics include how biotechnology is used to produce drugs, how those drugs work and the predicted potential and current limitations of biotech drugs. Prerequisite: Admission to the College of Pharmacy

PBS 513 BIOCHEMISTRY (4 CREDITS)
A review of the structure, physical/chemical properties, function and interactions of amino acids, peptides and proteins, nucleotides, and nucleic acids, carbohydrates, lipids, and hybrid molecules with an emphasis on its application to medication and clinical uses. Prerequisite: Admission to the College of Pharmacy

PBS 514 MICROBIOLOGY/IMMUNOLOGY (4 CREDITS)
A review of the principles of microbiology and immunology with an emphasis on the aspects that pertain to pharmaceutical science, pharmacotherapeutics and patient-centered care. Prerequisite: Admission to the College of Pharmacy
**College of Pharmacy Course Index - continued**

**PBS 515 BIOPHARMACEUTICS II/CLINICAL PHARMACOKINETICS (4 CREDITS)**
This will be an integrated course by the Pharmaceutical Sciences and Clinical and Administrative Sciences Departments. Principles in how drugs perform in a human being and how a physiology system affects the drugs as they relate to absorption, distribution, metabolism, and excretion will be presented. Clinical Pharmacokinetics will build on those concepts to teach how to design a safe and effective drug regimen to patients based on their physiological conditions and disease states and how to monitor therapy regimen for adjustment if needed. Prerequisite: Passing grade in PBS 505

**PBS 524 PHARMACEUTICS III WITH LAB (3 CREDITS)**
This course is an introduction to drug delivery systems and their physical and chemical properties. Emphasis will be placed on solid and semi-solid dosage forms. Quality control guidelines and standards of practice will be covered. Prerequisite: Passing grade in PBS 515

**PBS 534 PHARMACOLOGY/MEDICINAL CHEMISTRY I (5 CREDITS)**
Pharmacology and Medicinal Chemistry I is designed to coordinate with the Pharmacotherapeutics sequence and provides the chemical and pharmacological basics for the Pharmacotherapeutic courses. This course furnishes the detail of molecular, cellular and the physiologic basis of drug action, the influence of chemical and physical properties in structure-activity relationships, drug chemistry, and mechanism of drug action, drug metabolism, drug interactions, toxicity profiles, and pharmacokinetics. Prerequisite: PBS 513

**PBS 535 PHARMACOLOGY/MEDICINAL CHEMISTRY II (5 CREDITS)**
Pharmacology and Medicinal Chemistry II is designed to coordinate with the Pharmacotherapeutics sequence and provides the chemical and pharmacological basics for the Pharmacotherapeutic courses. This course furnishes the detail of molecular, cellular and the physiologic basis of drug action, the influence of chemical and physical properties in structure-activity relationships, drug chemistry, and mechanism of drug action, drug metabolism, drug interactions, toxicity profiles, and pharmacokinetics. Prerequisite: Passing grade professional year one

**PBS 537 INTRODUCTION TO PHARMACOGENOMICS (1 CREDIT)**
This will be an integrated course by the Pharmaceutical Sciences and Clinical and Administrative Sciences Departments. An introduction to the human genome, the science of genetics and how it relates to medication and treatments will be presented. Prerequisite: Admission to the College of Pharmacy

**PBS 623 PHARMACOLOGY/MEDICINAL CHEMISTRY III (5 CREDITS)**
Pharmacology and Medicinal Chemistry III is designed to coordinate with the Pharmacotherapeutics sequence and provides the chemical and pharmacological basics for the Pharmacotherapeutic courses. This course furnishes the detail of molecular, cellular and the physiologic basis of drug action, the influence of chemical and physical properties in structure-activity relationships, drug chemistry, and mechanism of drug action, drug metabolism, drug interactions, toxicity profiles, and pharmacokinetics. Prerequisite: Passing grade professional year one

**PBS 632 PHARMACOLOGY/MEDICINAL CHEMISTRY IV (5 CREDITS)**
Pharmacology and Medicinal Chemistry IV is designed to coordinate with the Pharmacotherapeutics sequence and provides the chemical and pharmacological basics for the Pharmacotherapeutic courses. This course furnishes the detail of molecular, cellular and the physiologic basis of drug action, the influence of chemical and physical properties in structure-activity relationships, drug chemistry, and mechanism of drug action, drug metabolism, drug interactions, toxicity profiles, and pharmacokinetics. Prerequisite: Passing grade in professional year one

**CLINICAL AND ADMINISTRATIVE SCIENCES**

**PCAS 501 INTRODUCTION TO PHARMACY (1 CREDIT)**
This course will cover the history of pharmacy, the patient-centered care concept, medical terminology, the various pharmacy organizations, and team work concept. Prerequisite: Admission to the College of Pharmacy

**PCAS 502 INITIATION TO THE PRACTICE OF PHARMACY (1 CREDIT)**
Students will visit different settings and will come back to classrooms for discussions and debriefing. The delivery of patient-centered care will be examined from the different types of services in various settings. This will help the students to be introduced from the start to the variety of pharmacy practices. Prerequisite: Admission to the College of Pharmacy

**PCAS 503 INTRODUCTION TO HEALTH CARE SYSTEM (2 CREDITS)**
An overview of the basic structures and operations of the U.S. health care delivery system, including its historical origins; the changing roles of the components of the system; and the technical, economic, political and social forces responsible for these changes. Prerequisite: Admission to the College of Pharmacy

**PCAS 507 MEDICAL INFORMATICS (2 CREDITS)**
This course is an introduction to the availability of various technology applicable to the delivery of pharmacy care, its impact on pharmacy practice, and its applications to patient care. Prerequisite: Admission to the College of Pharmacy

**PCAS 512 MEDICATION SAFETY (2 CREDITS)**
Students will learn the mechanism, roots of medication errors, its consequences on patients and health care in general. Mechanisms to promote medication safety will be examined. Prerequisite: Admission to the College of Pharmacy

**PCAS 516 COMMUNICATION AND COLLABORATIVE SOLUTIONS (2 CREDITS)**
Rudiments of communications skills will be practiced, the mechanism of conflicts will be explored and the techniques to establish a harmonious working relationship or to defuse/prevent conflicts at the workplace will be taught. Prerequisite: Admission to the College of Pharmacy
PCAS 521 PHARMACY LAW AND ETHICS
(3 CREDITS)
The laws, regulations and related ethical issues regarding to the practice of pharmacy; the regulation and control of drugs, cosmetics, medical devices, mail order and “Internet” pharmacy will be presented. Prerequisite: Admission to the College of Pharmacy

PCAS 522 COMPLEMENTARY ALTERNATIVE MEDICINE (3 CREDITS)
This course covers different aspects of natural products used as pharmaceuticals, including both plant-derived and microbial-derived (antibiotics) products. Also included will be an overview of whole extracts, herbal products, and purified components of plant and animal extracts. Diverse alternative treatments will be presented. Prerequisite: Admission to the College of Pharmacy

PCAS 523 RESEARCH DESIGN AND LITERATURE EVALUATION I (3 CREDITS)
The structure of a drug information center as well as the role and functions of a drug information pharmacist will be reviewed. The students will be familiarized with the skills required to handle different types of drug information questions and the techniques on how to fully evaluate health care related literature. Students will be introduced to the different phases of a research protocol. Prerequisite: Admission to the College of Pharmacy

PCAS 525 STERILE DOSAGE FORMS WITH LAB
(2 CREDITS)
Students will be familiarized with the organization and administration of an admixture program, admixture techniques, the proper utilization of different types of parental products, and students will have the opportunity to practice in the laboratory the techniques related to the compounding of sterile dosage forms. Prerequisite: PBS 524

PCAS 526 PUBLIC HEALTH ISSUES
(2 CREDITS)
Issues pertaining to the health of the public and public health policy will be discussed. Their impact on health care and the population will be explored. Pharmacoepidemiology will be emphasized. Prerequisite: Admission to the College of Pharmacy

PCAS 531 LITERATURE EVALUATION II
(1 CREDIT)
Application of the information learned in the course Research Design and Literature Evaluation I will be emphasized. Prerequisite: PCAS 523

PCAS 532 CLINICAL LABORATORY
(3 CREDITS)
This course will introduce students to the basics of clinical laboratory reports. A majority of the courses will cover the normal and abnormal laboratory values from different organ systems and disease states. Prerequisites: PBS 504, PBS 514

PCAS 533 PHYSICAL ASSESSMENT WITH LAB
(2 CREDITS)
The students will learn the basics in physical assessment of different organ systems and the art of monitoring the effects of drugs in patients. Prerequisites: PBS 504, PCAS 516

PCAS 601, PCAS 602 INTERMEDIATE PHARMACY PRACTICE EXPERIENCE
(10 CREDITS)
Students will practice as a pharmacy extern five weeks in a community setting and 5 weeks in an institutional setting. They will learn the distribution of a drug from the prescription received to the safe administration of the drug to the correct patient. Students will also learn the operational aspects with all its related issues during the experiences. Prerequisites: Passing grade in professional year one and fulfilling the conditions as listed in the student handbook for this rotation.

PCAS 611 PHARMACY PRACTICE MANAGEMENT
(2 CREDITS)
Emphasis is given to the managerial aspects of pharmacy practice within the different settings of the health care system. This course provides the basic financial and operational management, knowledge, and skills necessary for a successful professional practice. Prerequisite: Passing grade in professional year one

PCAS 615 PROFESSIONAL ELECTIVE I
(2 CREDITS)
This course may be offered by both departments, the Sullivan University, or the University of Louisville and will cover topics related to the profession of pharmacy. This course is designed to enhance professional knowledge and promote self-learning.

PCAS 616 PROFESSIONAL ELECTIVE II
(2 CREDITS)
This course may be offered by both departments, the Sullivan University, or the University of Louisville and will cover topics related to the profession of pharmacy. This course is designed to enhance professional knowledge and promote self-learning.

PCAS 617 PROFESSIONAL ELECTIVE III
(2 CREDITS)
This course may be offered by both departments, the Sullivan University, or the University of Louisville and will cover topics related to the profession of pharmacy. This course is designed to enhance professional knowledge and promote self-learning.

PCAS 621 CLINICAL NUTRITION
(2 CREDITS)
Students will learn the basic principles of enteral and parenteral nutrition. Students will learn how to write/adjust a parenteral/enteral nutrition formula, adapted to patients’ disease state. Students will learn how to monitor the effects of nutrition on patients. Prerequisite: Passing grade in professional year one

PCAS 622 RESEARCH PROJECT
(1 CREDIT)
The students will present the results of their projects to the Faculty and peers of the College of Pharmacy. Prerequisite: Passing grade in professional year one

PCAS 623 PHARMACOTHERAPEUTICS II
(6 CREDITS)
This course focuses on the pathophysiology and pharmacotherapy of disease states. Emphasis will be placed on the integration of knowledge and skills gained from previous courses with pathophysiology and therapeutics to devise appropriate pharmacy care plans.
PCAS 624 APPLIED THERAPEUTICS LAB
(1 CREDIT)
Students will learn to apply the knowledge gained from the Pharmacotherapeutics courses and other related pharmacy courses to real or simulated clinical situations. Active learning, role modeling, case study, and problem based learning will be emphasized.

PCAS 625 PROFESSIONAL ELECTIVE IV
(2 CREDITS)
This course may be offered by both departments, the Sullivan University, or the University of Louisville and will cover topics related to the profession of pharmacy. This course is designed to enhance professional knowledge and promote self-learning.

PCAS 626 PROFESSIONAL ELECTIVE V
(2 CREDITS)
This course may be offered by both departments, the Sullivan University, or the University of Louisville and will cover topics related to the profession of pharmacy. This course is designed to enhance professional knowledge and promote self-learning.

PCAS 631 PHARMACOECONOMICS AND OUTCOMES
(2 CREDITS)
Students are introduced to the principles and tools of pharmacoeconomics and outcomes assessment that are commonly used to study the impact of pharmaceutical care services on the health and health care of a patient or community. Prerequisite: Passing grade in professional year one

PCAS 632 PHARMACOTHERAPEUTICS III
(6 CREDITS)
This course focuses on the pathophysiology and pharmacotherapy of disease states. Emphasis will be placed on the integration of knowledge and skills gained from previous courses with pathophysiology and therapeutics to devise appropriate pharmacy care plans.

PCAS 633 PHARMACOTHERAPEUTICS IV
(6 CREDITS)
This course focuses on the pathophysiology and pharmacotherapy of disease states. Emphasis will be placed on the integration of knowledge and skills gained from previous courses with pathophysiology and therapeutics to devise appropriate pharmacy care plans.

PCAS 634 APPLIED THERAPEUTICS LAB
(1 CREDIT)
Students will learn to apply the knowledge gained from the Pharmacotherapeutics courses and other related pharmacy courses to real or simulated clinical situations. Active learning, role modeling, case study, and problem based learning will be emphasized.

PCAS 635 PRE-ROTATION REVIEW (1 CREDIT)
Students review the basic tenets of the eight clinical rotations that they will complete during the third year of the program and discuss the protocols involved, the expectations of each rotation, expected professional behavior and performance, requirements for performance levels, and completion activities for graduation. Prerequisite: Passing grade in professional year one. Taken in the quarter prior to the third year clinical rotations

PCAS 636 PROFESSIONAL ELECTIVE VI
(2 CREDITS)
This course may be offered by both departments, the Sullivan University, or the University of Louisville and will cover topics related to the profession of pharmacy. This course is designed to enhance professional knowledge and promote self-learning.

PCAS 701, PCAS 702, PCAS 711, PCAS 712, PCAS 721, PCAS 722, PCAS 731, PCAS 732 ADVANCED PHARMACY PRACTICE EXPERIENCES
(TOTAL 40 CREDITS)
The students will go through eight clinical rotations of five weeks each. The rotations include a core of Adult Medicine, Ambulatory Care, Advanced Hospital Pharmacy, and Advanced Community Pharmacy, and four electives. This will be the time for students to integrate and apply their knowledge to real patients’ situations. It will also be an opportunity for the student to function as a team member of a health care team. Prerequisites: Passing grade in professional year one and two

PCAS 700 RESEARCH PROJECT (1 CREDIT)
This course is intended to develop a student’s ability to evaluate and synthesize pertinent literature and effectively communicate a pharmacotherapy-related topic in a professional manner.

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