

THE MCWHORTER SCHOOL OF PHARMACY
INFORMATION FOR FIRST-YEAR STUDENTS
TO PREPARE FOR THE 2020 FALL SEMESTER

Course Number (Credit Hours)	Course Title	Brief Description & Preparation	Coordinator / Instructors
PHRX 306 (4 hours)	Cellular and Molecular Biochemistry	<p>Topics addressed include DNA/RNA/protein structure and metabolism, gene regulation, organelle function and regulation, enzymology, fuel metabolism and its regulation, signal transduction pathways, and bacterial/viral biology. These are fundamental to understand the cellular and biochemical actions of drugs.</p> <hr/> <p>What do I need to know to prepare for this course: To be successful in this course, students need to have a strong foundation in general and organic chemistry. In addition, a good course in cell biology, which included DNA synthesis and basic cellular communication, will get students started on the right path.</p> <hr/> <p>What is the required text for this course: See table below.</p>	Dr. Robert Wang
PHRX 307 (1 hour)	Foundations of Drug Information	<p>Exploration to gain understanding of basic drug information sources and the different types of drug literature. Lab sessions are mandatory to practice these skills. Concepts applied will be reinforced throughout the curriculum.</p> <hr/> <p>What do I need to know to prepare for this course: To be successful in this course, the students need to have an understanding of pharmacy resources, searching skills and the ability to multitask. Lab sessions are critical to integrating learning from the classroom setting.</p> <p>Please note this course meets only during the first 5 weeks of the Fall semester. Also, students meet for lab every week during the first 5 weeks of the Fall semester.</p> <hr/> <p>What is the required text for this course: See table below.</p>	Dr. PJ Hughes

PHRX 308 (4 hours)	Physiologic Basis of Disease I	<p>Addresses the basics of physiologic processes in the body as these relate to various diseases. Provides basis for the Pharmaceutical Sciences and Pharmacotherapy courses in subsequent years of the program. Provides “what went wrong with the body’s natural processes” to understand drug mechanisms.</p> <hr/> <p>What do I need to know to prepare for this course: In order to be successful in this course, the students should review basic human anatomy and physiology. In addition, a review of basic cell biology that includes neuron and muscle cell function would be beneficial.</p> <hr/> <p>What is the required text for this course: See table below</p>	Dr. David Luthin
PHRX 313 (4 hours)	Pharmaceutics I	<p>Integration of pharmaceutical calculations with biopharmaceutics and technologies related to drug delivery systems and pharmaceutical dosage forms. Topics include weights and measures, proper prescription interpretation, concentrations, conversions, dosing, and mathematics of various dosage forms integrated with drug stability, solubility, dissolution, storage, delivery systems, and extemporaneous compounding.</p> <hr/> <p>What do I need to know to prepare for this course: Students should prepare by reviewing basic physical chemistry principles including: physical states of matter and bonding, pH, acid-base equilibria (i.e. acid dissociation constant), the Henderson-Hasselbach equation and its utility in determining ionization state of weak acids or bases, and common chemical functional groups. In addition, review algebra concepts such as ratio and proportions, percentages, fractions, integers, and dimensional analysis.</p> <hr/> <p>What is the required text for this course: See table below.</p>	Dr. John Arnold, Dr. Bernadette D'Souza

PHRX 315 (2 hours)	Intro to Patient Care Systems	<p>Introduction to the “big picture” of health care in this country. Aspects of patient care addressed include societal, financial, legal, and governmental influences. The pharmacist’s role emphasized as students begin to understand the opportunities and responsibilities of taking care of patients. Students also are assessed in their current level of professionalism in pharmacy education.</p> <hr/> <p>What do I need to know to prepare for this course: Beneficial for students to learn ahead of time about parts of a prescription, common abbreviations used in pharmacy, Medicare, Medicaid, Medication Therapy Management, the basics of insurance...that would be a great start. (Use required textbook for these.)</p> <hr/> <p>What is the required text for this course: See table below.</p>	Dr. Amy Broeseker
PHRX 320 (1 hour)	Integrated Pharmacy Applications-1 (IPA-1)	<p>Designed to integrate content within the first professional year as well as between years in the curriculum. In this course the student will begin to develop skills needed to solve drug related problems. These skills include pharmacy-related languages (systems of weights and measurement, medical terminology, drug nomenclature), resources (biomedical literature / drug information systems), processes (drug information retrieval and analysis, problem solving strategies, compounding, pharmacy calculations, and communications skills), plus professional development. Furthermore, students will begin to learn selected information regarding the Top 300 Most Commonly Dispensed Medications.</p> <hr/> <p>What do I need to know to prepare for this course: Instructions/requirements will be provided by the IPA coordinators.</p> <p>Please note that this course does not begin until week 6 of the Fall semester (week of September 28, 2020).</p> <hr/> <p>What is the required text for this course: See table below.</p>	Dr. Howard Hendrickson Mrs. Cheryl Miller

Course	Required Text Title	Author	Edition	Publisher	ISBN
PHRX 306	Mark's Basic Medical Biochemistry: A Clinical Approach *	Lieberman M, Peet A, Chanshy M	5 th	Wolter Kluwer / Lippincott Williams & Wilkins	978-1-49632481-8
PHRX 307	Drug Information: A Guide for Pharmacists *	Malone PM, Malone MJ, Park SK	6 th	McGraw Hill	978-1-259-83797-5
PHRX 308	Human Physiology. An Integrated Approach **	Dee Unglaub Silverthorn	8 th	Pearson Benjamin Cummings	978-0-13480-7270
	Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy *	Golan DE, Armstrong EJ, Armstrong AW	4 th	Wolters Kluwer / Lippincott Williams & Wilkins	978-1-45119-1004
PHRX 313	Pharmaceutical Calculations *	Ansel HC, Stockton SJ	15 th	Wolter Kluwer / Lippincott Williams & Wilkins	978-1-49630-0713
	Basic Concepts in Medicinal Chemistry	Harrold MW, Zavod RM	2 nd	American Society of Health-System Pharmacists	978-1-58528-601-0
PHRX 315	The Pharmacy Technician ***	American Pharmacists Association	7 th	Morton Publishing	978-1-64043-1386
PHRX 320	The Pharmacy Technician ***	American Pharmacists Association	7 th	Morton Publishing	978-1-64043-1386
	Pharmaceutical Calculations *	Ansel HC, Stockton SJ	15 th	Wolter Kluwer / Lippincott Williams & Wilkins	978-1-49630-0713
	Top 300 Medication Cards *				

* This text/resource is available **FREE** via the e-book collection/online databases at the McWhorter School of Pharmacy

** The 7th edition of this text is acceptable also.

*** This is the same textbook used to prepare for the P1 Terminology / Calculations quiz