KGI School of Pharmacy and Health Sciences
Graduation Requirements
Doctor of Pharmacy (PharmD) Classes 2022 & 2023

Students in the PharmD program are required to complete a minimum of **161.5 units** over the course of four years of study. The coursework is comprised of required courses, elective courses, and a capstone. Along with completing the required 161.5 total units, students must also complete 10 clinical rotations consisting of 3 Introductory Pharmacy Practice Experiences (IPPE) for a minimum of 320 hours and 7 Advanced Pharmacy Practice Experiences (APPE) for a total of 1,680 hours.

1st Year FALL Core Courses	Units
PHAR 301 Fundamentals of Drug Action and Drug Metabolism	3.0
PHAR 302 Principles of Pharmacology and Toxicology	3.0
PHAR 310 Pharmaceutics and Biopharmaceutics	3.0
PHAR 320 Health Care Delivery	2.0
PHAR 311 Pharmaceutical Calculations	2.0
PHAR 330 Scientific Inquiry – Intro to Drug Information, Biostatistics 1 and IPE/PBL	2.0
PHAR 340 Communication, Concepts in Diversity, Immunizations and Self-Care	2.0
PHAR 350 PDS1: Professional Development 1	2.0
Subtotal	**19.0**

1st Year SPRING Core Courses	Units
PHAR 303 Genetic Control of Cell Structure and Function, Genes, and Pharmacogenomics	4.5
PHAR 304 Metabolism of Carbohydrates, Lipids and Amino acids	3.0
PHAR 305 Anti-diabetic, Endocrine, GI and GU Pharmacology and Medicinal Chemistry	3.0
PHAR 321 Pharmacy Law and Ethics	2.0
PHAR 370 Introduction to the Industry	2.0
PHAR 331 Scientific Inquiry-Biostatistics 2, Clinical Trial Design and IPE/PBL	2.0
PHAR 341 Epidemiology, Health Disparity, Patient Advocacy Motivational Interviewing, and Self Care	2.0
PHAR 351 Professional Development 2	1.0
Subtotal	**19.5**

2nd Year FALL Core Courses	Units
PHAR 410 Pharmacokinetics	3.0
PHAR 401 Cardiovascular/Renal Pharm. and Med. Chemistry	3.0
PHAR 402 Neuropharmacology and Medicinal Chemistry	3.0
PHAR 420 Pharmacy Management	2.0
PHAR 430 Intro to Pharmacy Informatics	2.0
PHAR 431 Advanced Literature Evaluation	1.0
PHAR 440 IPE PBL, Patient Assessment, and Self-Care I	2.0
PHAR 450 Professional Development 3	1.0
PHAR 471E IPPE 1 – Community Pharmacy Practice	4.5
Subtotal	**21.5**

2nd Year SPRING Core Courses	Units
PHAR 403 Immunology/Oncology Pharm. and Medicinal Chemistry	2.0
PHAR 404 Anti-Infectives Pharm. and Medicinal Chemistry	1.5
PHAR 405 PTMM — Principles of Pharmacotherapy & Fluids, Electrolytes, Nephrology	3.0
PHAR 406 PTMM — Cardiology	4.0
PHAR 411 Sterile Products	1.5
PHAR 421 Pharmacoeconomics and Pharmacovigilance	2.0
PHAR 441 IPE PBL, Patient Assessment, and Self-Care II	2.0
PHAR 451 Professional Development 4	1.0
PHAR 472E IPPE 2 - Patient Communication in Senior Chronic Care	0.5
Subtotal	**17.5**

3rd Year FALL Core Courses	Units
PHAR 501 PTMM — Gastroenterology	3.0
PHAR 502 PTMM — Endocrinology and Urology	3.0
PHAR 503 PTMM — Neurology and Psychiatry	4.0
PHAR 550 Professional Development 5: IPE Clinic	1.0
PHAR 552 Pre-APPE Readiness I	1.5
PHAR 571E IPPE 3 Health Systems Pharmacy Practice	3.0
Didactic Certificate Electives	4.5
Subtotal	**20.0**

3rd Year SPRING Core Courses	Units
PHAR 506 PTMM — Infectious Disease	4.0
PHAR 507 PTMM — Hematology/Oncology	3.0
PHAR 508 PTMM — Pulmonology, Ophthalmology, Immunology, and Rheumatology	3.0
PHAR 553 Pre-APPE Readiness II	1.5
PHAR 572-576 Certificate Experience Elective	3.0
Didactic Certificate Electives	6.0
Subtotal	**20.5**

4th Year FALL Core Courses	Units
PHAR 600E Advanced Community Practice APPE	6.0
PHAR 601E Advanced Health-System Practice APPE	6.0
PHAR 602E Ambulatory Care APPE	6.0
PHAR 603E Acute Care APPE	6.0
Subtotal	**24.0**

4th Year SPRING Core Courses	Units
PHAR 6010E, 620-631 Direct Patient Care APPE	6.0
PHAR 611E, 620-631E, 650-656E, 672-676E Elective APPE	12.0
PHAR 640 Pharmacy Capstone Seminar	1.5
Subtotal	**19.5**

- **IPPE/APPE** = Introductory Pharmacy Practice Education/Advanced Pharmacy Practice Education – courses that are designated experiential and will take place off campus in a variety of pharmacy practice settings.
- **PTMM** = Pharmacotherapy and Medication Management

Introductory Pharmacy Practice Experiences (IPPE rotations)
Includes three rotations that will take place during the second (P-2) and third (P-3) year.

The IPPE rotations will provide the students with at least 320 hours. More than 50% of the IPPE hours are in community and institutional sites.

Advanced Pharmacy Practice Experiences (APPE rotations)
APPE rotations take place during the fourth (P4) year.

In total, seven APPE rotations are required in the program and will take place during the fourth professional (P4) year. Seven APPEs will provide the students with a total of 1,680 hours of practice experience during the PharmD program (40hrs/week for 6 weeks for 7 rotations).

PharmD graduates will also receive a certificate of choice in one of four areas: Healthcare Management (HCM), Health Information Technology (HIT), Medical and Clinical Affairs (MCA), or Medication Therapy Outcomes (MTO). Students must complete 10.5 units (1.5 units MTO and 9.0 units certificate specific courses) of elective courses to earn the certificate.

Healthcare Management (HCM)
The HCM certificate program offers management training and experience in dynamic healthcare settings. The curriculum emphasizes analytical and problem-solving skills in conjunction with a deep understanding of the healthcare environment. Students are required to complete 9 units from the list below.

Healthcare Management (HCM)	
ALS 451 Organizational Behavior	3.0
PHAR 513 Healthcare Finance and Reimbursement	1.5
PHAR 514 Quality and Performance Improvement	1.5
PHAR 542 Applying Technology to the Medication Use Process	3.0
Total	**9.0 units**

Health Information Technology (HIT)
The HIT certificate program will provide student pharmacists with the necessary skills to become leaders in healthcare technology and to understand the value technology brings to improving patient wellness and healthcare quality while reducing cost and enhancing the patient's experience. Students are required to complete 9 units from the list below. Students are required to complete 9 units from the list below.

Health Information Technology (HIT)	
PHAR 541 Clinical Decision Support Systems	1.5
PHAR 542 Applying Technology to the Medication Use Process	3.0
PHAR 543 Planning, Implementing and Optimizing Systems	1.5
PHAR 544 Security, Privacy, Law and Ethics	1.5
PHAR 545 Achieving Medication Safety through Informatics	1.5
Total	**9.0 units**

Medical and Clinical Affairs (MCA)

The MCA certificate program will provide student pharmacists with the skills needed to provide strategic, tactical, and operational direction within regulations to expedite the development and delivery of safe and effective healthcare products. Students are required to complete 9 units from the list below.

Medical and Clinical Affairs	
ALS 359 Introduction to the Biosciences Industries	3.0
ALS 362 Introduction to US Food and Drug Law	1.5
ALS 433 Design of Clinical Trials, Conduct, and Strategy	1.5
PHAR 520 Pharmaceutical Marketing	1.5
PHAR 563 Fundamentals of Medical Affairs	1.5
Total	**9.0 units**

Medication Therapy Outcomes (MTO)

The MTO certificate program provides opportunities to develop skills to provide care for patients in rural settings, from underserved populations, in accountable care organizations, and throughout the continuum of care process. There are required and elective courses in this certificate. Students are required to complete 9 units from the list below.

Medication Therapy Outcomes (MTO)	
PHAR 581 Advanced Topics in Drug Interactions	1.5
PHAR 582 Critical Care	1.5
PHAR 587 Nutrition Support	1.5
PHAR 588 Geriatric Patient Care	1.5
PHAR 589 Oncology and Palliative Care	1.5
PHAR 591 Pharmacists' Patient Care Process (PPCP)	1.5
PHAR 593 Cardiology	1.5
PHAR 595 Neuropsychiatric Pharmacotherapy	1.5
Total	**12.0 units**