

PharmD Research Track
 Doctor of Pharmacy Curriculum Option
 Butler University College of Pharmacy and Health Sciences
 (Approved 1-23-08 by COPHS Faculty)
 (Modified per Curriculum Committee 9-21-09)
 (Updated 10-20-2010 with addition of independent study; latest Faculty approval: 3-14-11)
 Updated 08.04.2011

COPHS faculty has approved an elective PharmD Research Track within the Doctor of Pharmacy curriculum to provide career exploration opportunities for students who might be interested in either an academic or basic science research career. The track comprises 12 credit hours of basic science research, a minimum of 5 credit hours of elective pharmaceutical sciences courses, and 2 credit hours of seminar or current topics. The research activity is to be done in either a pharmaceutical science or clinical research setting and must be under the direct supervision of a full time COPHS faculty member.

Recommended Research Track curricular modifications

Goal: create a longitudinal research experience in the professional curriculum that will recognize faculty and student work, that will better prepare students for the P4 research rotation experience, and that will provide guidance to students and the rotations coordinator for most effective P4 research rotation placement.

- Require student completion of a minimum of 2 credit hours of Independent Study with “hands on” experience in either basic or clinical science in the P2 and/or P3 year or an equivalent research experience such as Butler Summer Institute or paid research experience. The Research Track advisor will approve the equivalency of non-independent study research experience.
- Satisfactory completion of the independent study research requires submission of a written summary report on the research accomplishment or its presentation to a group of faculty and students
- Move the final Liberal Education Elective to the P3 year
- The above proposed changes will NOT produce any change in total credit hours required for graduation with the PharmD degree, Research Track option, which is currently 212 credit hours.

Pharmaceutical Sciences Research Track

SECOND PROFESSIONAL YEAR OF THE CURRICULUM

COURSES (FALL SEMESTER)	SEM HRS	COURSES (SPRING SEMESTER)	SEM HRS
RX411 Prin of Drug Action 1	4	RX412 Prin of Drug Action 2	4
RX413 Therapeutics 1	3	RX414 Therapeutics 2	3
RX403 Therapeutics 1 Case Studies	1	RX404 Therapeutics 2 Case Studies	1
RX421 Introduction to Dosage Forms	4	RX422 Advanced Dosage Forms	4
RX415 Self-Care and Health Promotion 1	2	RX416 Self-Care and Health Promotion 2	3
RX401 Intro to Pharmacy Practice Exper	0	RX432 Personnel and Financial Management	3
RX602/603 Independent Study*	2-3		
Total Semester Hours	16-17	Total Semester Hours	18

* Under current COPHS curricular guidelines, a student may count up to 3 hours of Independent Study toward completion of the 5 hour professional elective requirement. The Research Track advisor would approve equivalency of non-independent study research experience such as Butler Summer Institute or paid research experience at Butler or elsewhere which would result in a waiver of the Independent Study requirement. The Independent Study may be done anytime during the P2 or P3 years but must be completed prior to beginning the P4 rotations.

THIRD PROFESSIONAL YEAR OF THE CURRICULUM

COURSES (FALL SEM.)	SEM HRS	COURSES (SPRING SEM.)	SEM HRS
RX511 Prin of Drug Action 3	4	RX514 Therapeutics 4	3
RX513 Therapeutics 3	3	RX504 Therapeutics 4 Case Studies	1
RX503 Therapeutics 3 Case Studies	1	RX528 Advanced Drug Information and Literature Evaluation	2
RX522 Pharmacokinetics and Biopharmaceutics	3	RX526 Pharmacy and the Law	3
RX527 Biostatistics and Research Design	3	RX523 Clinical Pharmacokinetics	3
RX--- Professional Elective**	2-3	RX500 Intro to Experiential Rotations	1
RX634 – Seminar in Pharm Sci	1	----- Liberal Education Elective	3
RX501 Intro to Pharmacy Practice Exper	0	RX 609-80 – Sp Top: Current Topics in Pharm Sci	1
Total Semester Hours	17-18	Total Semester Hours	17

**Professional elective courses should be selected in accordance with the individual student's future career goals.

FOURTH PROFESSIONAL YEAR OF THE CURRICULUM

COURSES (SUMMER TERM, FALL SEMESTER, SPRING SEMESTER)	SEM HRS
RX6-- 3 Research Rotations*** (12 weeks total) – May thru July	12
5 Required Pharmacy Practice Rotations:	20
2 General Medicine, or Internal Medicine, or Family Practice Rotations	
2 Community Pharmacy Rotations	
1 Ambulatory Care Rotation	
2 Elective Pharmacy Practice Rotations	8
RX607 Pharm.D. Senior Seminar I (fall semester)	1
RX608 Pharm.D. Senior Seminar II (spring semester)	1
Total Semester Hours	42

*** Prerequisite for Research Rotations: Grade of C or better in Research Track Basic Science Courses; All 3 research rotations are to be completed consecutively. A syllabus describing the rotation experience must be submitted before a student is assigned into the rotation(s).

TOTAL CREDIT HOURS REQUIRED FOR GRADUATION: 212

Research Track Outcomes

At the completion of the Research Track, the student will be able to:

- Conduct a thorough literature review and write a concise summary of the literature relevant to a research project using appropriate critical thinking and analysis skills.
- Using one or two laboratory techniques, conduct laboratory experiments with sufficient proficiency so as to function with minimal supervision
- Generate, evaluate and interpret experimental data using the principles of scientific research integrity.
- Create and present an oral presentation summarizing the background, methods, results, and conclusions of the conducted research