

Major Map: Bachelor of Science Pharmaceutical Sciences Emphasis

Student's Name: _____ SID#: _____

Catalog Year: 2008-09

The following is a course of study for the Bachelor of Science with emphasis in Pharmaceutical Sciences {BSPS}. It is the student's responsibility to ensure that all program requirements are met. This guide is not a substitute for academic advisement. Students are responsible for checking and meeting course pre and co-requisites to any courses. Pre-requisites and co-requisites must be met to progress through the curriculum.

Your path to graduation may vary slightly based on factors such as college credit you earned while in high school, transfer work from other institutions of higher learning and placement in Mathematics.

Course Subject and Title		Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Date Completed	Final Grade	Additional Critical Tracking Notes
Fall Semester Year 1: 15 hours								
Eng 110 or 110A	English I	3.0	<input type="checkbox"/>					
Biol 108	General Biology I	3.0	<input type="checkbox"/>					
Biol 108L	General Biology I Lab	1.0	<input type="checkbox"/>					
Chem 211	General Chemistry I	4.0	<input type="checkbox"/>					
Chem 211L	General Chemistry I Lab	1.0	<input type="checkbox"/>					
Comms 110	Fundamentals of Effective Speaking and Listening	3.0	<input type="checkbox"/>					
			<input type="checkbox"/>					
Spring Semester Year 1: 18 hours								
Eng 225 or 225A	English II	3.0	<input type="checkbox"/>					
Bio 109	General Biology II	3.0	<input type="checkbox"/>					
Bio 109L	General Biology II Lab	1.0	<input type="checkbox"/>					
Chem 212R	General Chemistry II	4.0	<input type="checkbox"/>					
Chem 212LR	General Chemistry II Lab	1.0	<input type="checkbox"/>					
See Below	General Educ Elective	3.0	<input type="checkbox"/>					
See Below	General Educ Elective	3.0	<input type="checkbox"/>					
			<input type="checkbox"/>					
Summer Semester Year 16 hours maximum [optional]								
			<input type="checkbox"/>					
			<input type="checkbox"/>					
Fall Semester Year: 17 hours								
Math 210	Calculus I	4.0	<input type="checkbox"/>					- Complete WEPT
Chem 321	Organic Chemistry I	3.0	<input type="checkbox"/>					
Chem 321L	Organic Chemistry I Lab	1.0	<input type="checkbox"/>					
Biol 202	Cell Biology	3.0	<input type="checkbox"/>					
Hist/Pol Sci	Constitution Requirement [see below]	3.0	<input type="checkbox"/>					
See Below	General Educ Elective	3.0	<input type="checkbox"/>					
			<input type="checkbox"/>					

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Spring Semester Year 2: 16 hours								
Phys 210	Physics I	4.0	<input type="checkbox"/>					
Chem 322R	Organic Chemistry II	3.0	<input type="checkbox"/>					
Chem 322LR	Organic Chemistry II Lab	1.0	<input type="checkbox"/>					
**See Below	Statistics I	3.0	<input type="checkbox"/>					
Pharm 7110	Pharmacy Calculations	2.0	<input type="checkbox"/>					
See Below	General Educ Elective	3.0	<input type="checkbox"/>					
			<input type="checkbox"/>					
Summer Semester Year 2: 6 hours maximum [optional]								
			<input type="checkbox"/>					
			<input type="checkbox"/>					
Fall Semester Year: 15 hours								
Pharm 7341	Medicinal Chemistry I	3.0	<input type="checkbox"/>					
LSPHys 399	Pharmacy Physiology I	3.0	<input type="checkbox"/>					
LSBioch 365	Human Biochemistry I	3.0	<input type="checkbox"/>					
See Below	General Educ Elective	3.0	<input type="checkbox"/>					
See Below	General Educ Elective	3.0	<input type="checkbox"/>					
			<input type="checkbox"/>					
Spring Semester Year 3: 16 hours								
Pharm 7344	Medicinal Chemistry II	3.0	<input type="checkbox"/>					Discuss Summer Internships and Capstone Options
LSPHys 400	Pharmacy Physiology II	3.0	<input type="checkbox"/>					
LSBioch 366	Human Biochemistry II	3.0	<input type="checkbox"/>					
Chem 341	Analytical Chemistry I	4.0	<input type="checkbox"/>					
●See Below	Writing Intensive General Educ Elective	3.0	<input type="checkbox"/>					
			<input type="checkbox"/>					
Summer Semester Year 3: 6 hours maximum [optional]								
			<input type="checkbox"/>					Summer Internship
			<input type="checkbox"/>					
Fall Semester Year 4: 14-16 hours								
Pharm 7202	Pharmaceutics I	4.0	<input type="checkbox"/>					- Apply for graduation. Complete the Measure of Academic Proficiency & Progress [MAPP] assessment.
Pharm 7361	Pharmacology I	4.0	<input type="checkbox"/>					
Chem 345R	Instrumental Analysis	3.0	<input type="checkbox"/>					
●●See Below	Pharmacy Capstone	●●	<input type="checkbox"/>					
***See Below	400 or 500 Level Science Elective	3.0	<input type="checkbox"/>					Note here which capstone option(s) are chosen.

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		<input type="checkbox"/>					
Spring Semester Year 4: 15-17 hours							
Pharm 7203	Pharmaceutics II	3.0	<input type="checkbox"/>				<input type="checkbox"/> Social/Behavioral Met
Pharm 7203L	Pharmaceutics II Lab	1.0	<input type="checkbox"/>				
Pharm 7362	Pharmacology II	5.0	<input type="checkbox"/>				<input type="checkbox"/> Fine Arts Met
Pharm 7463	Toxicology	2.0	<input type="checkbox"/>				<input type="checkbox"/> Humanities Met
Pharm 7303	Pharmacokinetics and Biopharmaceutics	4.0	<input type="checkbox"/>				<input type="checkbox"/> Higher Order Thinking Met
●●See Below	Pharmacy Capstone	●●	<input type="checkbox"/>				
			<input type="checkbox"/>				

Non-course requirements

Written English Proficiency Test (WEPT)

Measure of Academic Proficiency & Progress [MAPP] Assessment

Met

The School reserves the right to make changes in courses, degree requirements and course schedules without notice.

Students are expected to maintain a quality of achievement significantly above minimum UMKC standards for degree work. Individual student progress will be monitored throughout the program. Satisfactory progress is required of all students for retention in the pharmacy program. Students are expected to maintain academic standards, perform satisfactorily in all courses, refrain from academic dishonesty, comply with the established University and departmental timetables and requirements, and refrain from unethical or unprofessional behavior or behaviors that obstruct the training process or threaten the welfare of the student or others. Other circumstances involving student behavior will be addressed by the faculty on an individual basis.

Graduation Requirements Summary:

Total Hours (127 minimum)	Totals Hrs at UMKC (30 hours minimum)	Major GPA (2.0 Minimum)	UMKC GPA (2.0 minimum)

General Education and other requirements for the BS in Pharmaceutical Sciences

- All BS in Pharmaceutical Science students must successfully pass the Written English Proficiency Test (WEPT) prior to graduation and as a prerequisite to the Writing Intensive (WI) elective. A 300/400 level WI course may double count for one of the general education elective requirements and meet the WI requirement or Chem 341WI may double count to meet the WI requirement. General CLEP credits cannot be used to fulfill the mathematics, physics, or chemistry requirements. Students must complete the following general education requirements:

6.0 credit hours English Composition I & II;

One 3.0 credit hour course covering the U.S. Constitution {American History or American Government};

One 3.0 credit hour public speaking course;

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3.0 credit hours of fine arts {Art, Art History, Music/Conservatory, Theatre};

3.0 credit hours of humanities course work {Foreign Language, Philosophy, Religion, additional English or Communication Studies};

6.0 credit hours of social and behavioral sciences {Sociology, Geography, Criminal Justice, Psychology, Economics, History, Political Science} course work;

6 credit hours of higher order thinking courses {Western Civilization, Ancient History, Philosophy or Logic, Cultural Anthropology};

and one, 3.0 credit hour writing intensive course.

Students are encouraged to work with their faculty advisor in planning their capstone course work. Students may choose to complete dual and/or double BS degrees in a related area. Students are also encouraged to seek out internship opportunities. Internship opportunities are usually a paid experience where a student can gain valuable, hands-on knowledge related to their program of study {note: students may not obtain course credit through internships}.

**The statistics course can be satisfied by successful completion of Education 5505 or Statistics 235.

***This optional elective brings the credit hours to 130. This elective is not necessary to achieve the minimum credit hours for a UMKC baccalaureate degree, but it allows the student to select a 400 or 500 level course in Chemistry, Biology, or Pharmacy.

●●BS Pharmaceutical Science Senior Capstone Options

BSPS students must choose from the following options to satisfy their 4.0 credit hour capstone during the senior year.

Option A – You may take one of the business courses as listed below. The business options are 3.0 credit hour courses. In order to make up the fourth credit hour, students will take a 1.0 credit hour class offered through School of Graduate Studies on Special Topics in the Responsible Conduct of Research or complete a 1.0 credit hour Directed Individual Study {DIS} course with a pharmacy faculty member.

Option B – Take four separate 1 credit hour graduate level research emphasis courses as available in either the Fall Semester or Spring Semesters (See Below).

Option C – Enroll in a Pharmacy 7497 {DIS} independent research project (work with one faculty member for all 4.0 credit hours within the amount of time per semester determined by the student and faculty. The Pharmacy 7497 course must be approved by the Committee on Admissions and Academic Requirements prior to enrollment. DIS forms available on the School of Pharmacy web site under Current Students under Forms.

Option D – Enroll in two separate 1.0 credit hour graduate level research emphasis courses as available and enroll in one, 2.0 credit hour Pharmacy 7497 independent research project (work with one faculty member for 2 credit hours).

Business Course Offerings:

Econ 202 Introduction to Economics II

HA 5571 Financial Mgmt Issues in Health & Human Services

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HA 5575 Long-Term Care Policy Administration
HA 5576 Managed Care Institutions
HA 5577 Healthcare Service Administrations & the Health Professions
ENT 5525 Entrepreneurship Managing Creativity & Innovation
ENT 5535 Small Business Management & Entrepreneurship
Pharm 7465 Economics of Health and Medicine

School of Graduate Studies Offerings [Offered over 5 week sessions] worth 1.0 credit each:

Fall Semester:

SGS 5590A ST in the Responsible Conduct of Research: An Introductory Overview
SGS 5590B ST in the Responsible Conduct of Research: Human Subjects Research
SGS 5590C ST in the Responsible Conduct of Research: Research Involving Animals

Spring Semester:

SGS 5590D ST in the Responsible Conduct of Research: Threats to Research Integrity
SGS 5590E ST in the Responsible Conduct of Research: Conducting Research
SGS 5590F ST in the Responsible Conduct of Research: Reporting/Reviewing Research

All students completing an undergraduate BS pharmacy degree must meet the following conditions in order to graduate and be recommended for graduation:

- 2.00 minimum cumulative UMKC GPA.
- Passing grade or higher in all subject-area courses.
- Successful completion of the 4.0 credit hour capstone requirements.
- Successful completion of the WEPT.
- Successful completion of the MAPP.
- Good behavioral standing.

Academic Advisor:

Faculty Advisor: