



NAME _____ ID# _____ Date _____

GENERAL EDUCATION REQUIREMENTS

Introduction to General Education

UNIV 101 1 _____

English Composition*

ENGL 101 or 107 3 _____

ENGL 102 or 108 3 _____

OR

ENGL 109H 3 _____

Second Language

2nd semester proficiency** _____

Mathematics

MATH 113: Elements of Calculus 3 _____

MATH 122B, 125, or 129 may also fulfill this requirement

Exploring Perspectives (4 courses)

Artist 3 _____

Humanist 3 _____

Social Scientist 3 _____

Natural Scientist *fulfilled with CHEM 151* 3 _____

Building Connections (3 courses)

Course #1 3 _____

Course #2 3 _____

Course #3 3 _____

General Education Portfolio

UNIV 301 1 _____

BSPS FOUNDATION SCIENCE COURSES

Chemistry (General & Organic, with labs)*

CHEM 151 OR (161+163) OR (141+143) 4 _____

CHEM 152 OR (162+164) OR (142+144) 4 _____

CHEM (241A OR 242A) & 243A 3 _____ 1 _____

CHEM (241B OR 242B) & 243B 3 _____ 1 _____

Introductory Biology, with lab*

MCB 181R & 181L 3 _____ 1 _____

Microbiology, with lab

MIC 205A & 205L 3 _____ 1 _____

Physics, with lab

PHYS 102 & 181 3 _____ 1 _____

Physiology

PSIO 380 4 _____

OR

PSIO 201* 4 _____

PSIO 202 4 _____

PSIO 201 + 202 option is required for PharmD admission

Biochemistry

BIOC 384 3 _____

BIOC 385 or 462B can also fulfill this requirement

PHARMACEUTICAL SCIENCES MAJOR CORE COURSES

PCOL 305: Scientific Writing for Health Sciences 3 _____

PCOL 310: Drug Approval: The 3 Billion Dollar Bet 2 _____

PCOL 350: ADME: How the Body Changes Drugs 3 _____

PCOL 355: Drug Delivery Systems 3 _____

PCOL 390: Biomarkers: Analysis of Drug Effect/Tox... 3 _____

PCOL 406: Comprehensive Human Pharmacology 5 _____

PCOL 410: Integrated Medicinal Chemistry 5 _____

PCOL 440: Rigor & Reproducibility 2 _____

PCOL 473: Pharmacogenomics 3 _____

PHCL 460: Designing Drugs: From Chemistry to Cure.. 3 _____

UNIVERSITY REQUIREMENTS:

2.00+ cumulative GPA _____ 2.00+ major GPA _____

120 total units _____ 42 upper division units _____

**Required courses for the BSPS do not add up to 120/42 units. All students need some upper division and general electives.*

MCWA complete _____ 30+ total UA units _____

18+ PCOL units at UA _____

ADDITIONAL REQUIREMENTS FOR MEDICAL AND PHARMACY SCHOOL

Most medical and pharmacy schools require the following additional courses, but individual schools may have even more requirements. Check each school of interest for details.

Pre-Med students should add the following courses to their BSPS plan:

PHYS 103&182 _____ PSY 150A1 (as a Tier I INDV) _____

Stats (MATH 263) _____ Biology II (ECOL 182R+182L) _____

UA Pre-PharmD students must add the following courses to the BSPS plan:

Statistics _____ PSIO 201 + 202 in lieu of PSIO 380 _____

*MATH, CHEM, MCB, and PSIO courses must be completed with minimum C average in order to gain Advanced Standing in the major. Other major requirements apply. Several major courses require Advanced Standing.

**Language proficiency may be fulfilled by successfully completing a course at the 2nd semester level or higher, or by placing into 3rd semester or higher on a *proctored* placement exam.

Bachelor of Science in Pharmaceutical Sciences

Degree Requirements: Spring 2022 through Spring 2023

Sample Four-Year Plan: Version 1A

Recommended for students with math placement of MATH 113 or higher

SEMESTER 1

MATH 113: <i>Elements of Calculus*</i>	3
CHEM 151: <i>General Chemistry*</i>	4
ENGL 101: <i>English Composition I</i>	3
Second Language – 1 st -semester level	4
PCOL 196D: <i>Intro to Pharmaceutical Sciences~</i>	1
Total	15

SEMESTER 2

CHEM 152: <i>General Chemistry II*</i>	4
ENGL 102: <i>English Composition II*</i>	3
Second Language – 2 nd -semester level	4
General Education**	3
UNIV 101: <i>Intro to General Education**</i>	1
Total	15

SEMESTER 3

CHEM 241A+243A: <i>Organic Chemistry I + lab*</i>	4
MCB 181R +181L: <i>Introductory Biology I + lab*</i>	4
PCOL 310: <i>Drug Approval – The 3 Billion Dollar Bet</i>	2
General Education**	3
Total	13

SEMESTER 4

CHEM 241B+243B: <i>Organic Chemistry II + lab*</i>	4
PSIO 380: <i>Fundamentals of Human Physiology*</i>	4
PCOL 440: <i>Rigor & Reproducibility</i>	2
General Education**	3
General Education**	3
Total	16

SEMESTER 5

MIC 205A + 205L: <i>General Microbiology + lab</i>	4
BIOC 384: <i>Foundations in Biochemistry</i>	3
PCOL 305: <i>Scientific Writing for Health Sciences</i>	3
PCOL 406: <i>Comprehensive Human Pharmacology</i>	5
Total	15

SEMESTER 6

PHYS 102 + 181: <i>Introductory Physics I + lab</i>	4
PCOL 350: <i>ADME: How the Body Changes Drugs</i>	3
PCOL 410: <i>Integrated Medicinal Chemistry</i>	5
General Education**	3
Total	15

SEMESTER 7

PCOL 355: <i>Drug Delivery Systems</i>	3
PCOL 390: <i>Biomarkers: Analysis of Drug Effect/Toxicity</i>	3
General Education**	3
General Education**	3
Upper-Division Elective, Research, or Thesis	3
Total	15

SEMESTER 8

PHCL 460: <i>Designing Drugs: From Chemistry to Cure</i>	3
PCOL 473: <i>Pharmacogenomics</i>	3
Upper-Division Elective, Research, or Thesis	3
Elective	6
UNIV 301 – <i>General Education Portfolio**</i>	1
Total	16

Total Units Required: 120 (42 upper-division)

Notes:

- This is a sample plan. Your placement scores, transfer and exam credit, and other personal factors may impact your course sequencing. Other sample plans are available for pre-med and pre-PharmD students. (Additional courses are required for admission to those professional programs.) Official degree requirements can be found in the UA Academic Catalog.
- ~ PCOL 196D is recommended for all incoming first-year students, but it is not a required course.
- * Certain science, math, and English courses must be completed with a minimum C average in order to gain Advanced Standing in the Pharmaceutical Sciences major. Other requirements will apply. Advanced Standing is required in order to access PCOL and PHCL courses in the 6th through 8th semester.
- ** General education requirements include the following courses:
 - UNIV 101 (Intro to General Education) and UNIV 301 (General Education Portfolio)
 - FOUR *Exploring Perspectives* Gen Ed courses (Social Scientist, Humanist, Artist, and Scientist)
 - THREE *Building Connections* Gen Ed courses

Note: Students should work with an advisor to select elective courses that will support whatever professional pathway or advanced degree they are considering.

Bachelor of Science in Pharmaceutical Sciences

Degree Requirements: Spring 2022 - Spring 2023

Sample Four-Year Plan: Version 2A

Recommended for students with math placement of MATH 113 or higher, **Pre-Med Track**

SEMESTER 1

MATH 113: <i>Elements of Calculus*</i>	3
CHEM 151: <i>General Chemistry*</i>	4
ENGL 101: <i>English Composition I*</i>	3
Second Language – 1 st -semester level	4
PCOL 196D: <i>Intro to Pharmaceutical Sciences ~</i>	1
UNIV 101 – Intro to General Education **	1
	16

SEMESTER 2

CHEM 152: <i>General Chemistry II*</i>	4
ENGL 102: <i>English Composition II*</i>	3
Second Language – 2 nd -semester level	4
MCB 181R +181L: <i>Introductory Biology I + lab*</i>	4
	15

SEMESTER 3

CHEM 241A+243A: <i>Organic Chemistry I + lab*</i>	4
PSIO 201: <i>Human Anatomy & Physiology I*</i>	4
PCOL 310: <i>Drug Approval - The 3 Billion Dollar Bet</i>	2
MATH 263: <i>Intro to Statistics and Biostatistics***</i>	3
General Education **	3
	16

SEMESTER 4

CHEM 241B+243B: <i>Organic Chemistry II + lab*</i>	4
PSIO 202: <i>Human Anatomy & Physiology II</i>	4
PCOL 440: <i>Rigor & Reproducibility</i>	2
PSY 150A1: <i>Structure of Mind & Behavior***</i>	3
General Education **	3
	16

SEMESTER 5

PHYS 102+181: <i>Introductory Physics I + lab</i>	4
BIOC 384: <i>Foundations in Biochemistry</i>	3
MIC 205A+205L: <i>General Microbiology + lab</i>	4
PCOL 406: <i>Comprehensive Human Pharmacology</i>	5
	16

SEMESTER 6

PHYS 103+182: <i>Introductory Physics II + lab***</i>	4
PCOL 350: <i>ADME: How the Body Changes Drugs</i>	3
PCOL 410: <i>Integrated Medicinal Chemistry</i>	5
General Education **	3
	15

SEMESTER 7

PCOL 355: <i>Drug Delivery Systems</i>	3
PCOL 390: <i>Biomarkers: Analysis of Drug Effect/Toxicity</i>	3
PCOL 305: <i>Scientific Writing for Health Sciences</i>	3
ECOL 182R+182L: <i>Introductory Biology II + lab***</i>	4
General Education **	3
	16

SEMESTER 8

PHCL 460: <i>Designing Drugs: From Chemistry to Cure</i>	3
PCOL 473: <i>Pharmacogenomics</i>	3
General Education **	3
General Education (upper-division) **	3
Upper-Division MCB course ***	3
UNIV 301: <i>General Education Portfolio **</i>	1
	16

Total Units Required: 120 (42 upper-division)

- This is a sample plan. Your placement scores, transfer and exam credit, and other personal factors may impact your course sequencing. Official degree requirements can be found in the UA Academic Catalog.
- ~ PCOL 196D is recommended for all incoming first-year students, but it is not a required course.
- * Certain science, math, and English courses must be completed with a minimum C average in order to gain Advanced Standing in the Pharmaceutical Sciences major. Other requirements will apply. Advanced Standing is required in order to access PCOL and PHCL courses in the 6th through 8th semester.
- ** General education requirements include the following courses:
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 - THREE *Building Connections* Gen Ed courses
- ***Most med schools require psychology, biostatistics, 2 semesters of physiology + lab, 2 semesters of physics + lab, and introductory biology II. UA -Tucson College of Medicine requires an upper-division MCB course. Individual med schools may have other unique admission requirements; check your schools of interest and incorporate any additional course requirements into your plan.

Bachelor of Science in Pharmaceutical Sciences

Degree Requirements: Spring 2022 – Spring 2023

Sample Four-Year Plan: Version 3A

Recommended for students with math placement of MATH 113 or higher, **Pre-PharmD Track**

SEMESTER 1

MATH 113: <i>Elements of Calculus*</i>	3
CHEM 151: <i>General Chemistry*</i>	4
ENGL 101: <i>English Composition I*</i>	3
Second Language – 1 st -semester level	4
PCOL 196D: <i>Intro to Pharmaceutical Sciences~</i>	1
UNIV 101: <i>Intro to General Education</i>	1
	16

SEMESTER 3

CHEM 241A+243A: <i>Organic Chemistry I + lab*</i>	4
PSIO 201: <i>Human Anatomy & Physiology I*</i>	4
PCOL 310: <i>Drug Approval – The 3 Billion Dollar Bet</i>	2
General Education**	3
General Education **	3
	16

SEMESTER 5

MIC 205A + 205L: <i>General Microbiology + lab</i>	4
BIOC 384: <i>Foundations in Biochemistry</i>	3
PCOL 305: <i>Scientific Writing for Health Sciences</i>	3
PCOL 406: <i>Comprehensive Human Pharmacology</i>	5
	15

SEMESTER 7

PCOL 355: <i>Drug Delivery Systems</i>	3
PCOL 390: <i>Biomarkers: Analysis of Drug Effect/Toxicity</i>	3
General Education**	3
General Education **	3
Upper-Division Elective or Research	3
	15

SEMESTER 2

CHEM 152: <i>General Chemistry II*</i>	4
ENGL 102: <i>English Composition II*</i>	3
MCB 181R +181L: <i>Introductory Biology I + lab*</i>	4
Second Language – 2 nd -semester level	4
	15

SEMESTER 4

CHEM 241B+243B: <i>Organic Chemistry II + lab*</i>	4
PSIO 202: <i>Human Anatomy & Physiology II</i>	4
PCOL 440: <i>Rigor & Reproducibility</i>	2
Statistics (MATH 163 or 263, or PSY 230)***	3
	13

SEMESTER 6

PHYS 102+181: <i>Introductory Physics I + lab</i>	4
PCOL 350: <i>ADME: How the Body Changes Drugs</i>	3
PCOL 410: <i>Integrated Medicinal Chemistry</i>	5
General Education **	3
	15

SEMESTER 8

PHCL 460: <i>Designing Drugs: From Chemistry to Cure</i>	3
PCOL 473: <i>Pharmacogenomics</i>	3
General Education **	3
General Education – Upper-Division **	3
UNIV 301: <i>General Education Portfolio</i>	1
Upper-Division Elective, Research, or Thesis	2
	15

Total Units Required: 120 (42 upper-division)

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** General education requirements include the following courses:

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- THREE *Building Connections* Gen Ed courses

***The courses outlined on this plan fulfill the prerequisite course requirements for UArizona's PharmD program. Other PharmD programs may have additional requirements; check your schools of interest and incorporate any additional course requirements into your plan.