

PHARMACEUTICAL SCIENCES, B.S.

The purpose of the B.S. in Pharmaceutical Sciences (B.S.P.S.) program is to prepare students for targeted industries requiring B.S.-level pharmaceutical sciences skills in pharmaceutical, biomedical and other health care fields. Pharmaceutical sciences encompass a wide range of sciences that link to the discovery and development of new drugs and therapies to improve people's lives. The B.S.P.S. program trains students for diverse positions in industrial, academic, or other research environments within the areas of drug discovery, development, and commercialization. Students will also have the option of completing an internship in the pharmaceutical industry.






The program is also offered as part of an accelerated 3 + 4 program in conjunction with the Doctor of Pharmacy degree (3 years B.S. + 4 years Pharm.D.). The first 3 years of the B.S.P.S. program include all prerequisite courses that are required for matriculation into the Pharm.D. program as well as all university core requirements for a B.S. The coursework in the fourth year of the B.S.P.S. program is synonymous with the coursework in the first year of the Pharm.D. program. This allows both degrees to be completed within 7 (3 + 4) years.

Semester Plan







 - General Education Course

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

First Year

First Semester		Credit Hours
BSC 120  & BSC 120L 	Principles of Biology I and Principles of Biology I Lab	4
CHM 211 	Principles of Chemistry I	3
CHM 217 	Principles of Chem Lab I	2
ENG 101 	Beginning Composition	3
FYS 100	First Yr Sem Critical Thinking	3
UNI 100	Freshman First Class	1
Credit Hours		16




Second Semester

BSC 121  & BSC 121L 	Principles of Biology and Prin of Biology II Lab	4
CHM 212 	Principles Chemistry II	3
CHM 218 	Principles of Chem Lab II	2
ENG 201 	Advanced Composition	3
STA 225 	Introductory Statistics (CT)	3
BSPS 201	Intro to Pharmaceutical Sci	2
Credit Hours		17

Second Year



First Semester

CHM 355	Organic Chemistry I	3
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BSC 227 & BSC 227L	Human Anatomy and Human Anatomy Lab	4
MTH 140 	Applied Calculus	3
BSPS 202	Drug Regulatory Affairs	3
PHY 201 	College Physics I	3
PHY 202 	General Physics I Laboratory	1

Credit Hours 17

Second Semester

CHM 356	Organic Chemistry II	3
CHM 361	Intro Organic Chm Lab	3
BSC 228  & BSC 228L 	Human Physiology and Human Physiology Lab	4
BSC 304	Microbiology Lab	2
BSC 302	Principles of Microbiology	3

Credit Hours 15

Third Year

First Semester

Multicultural/International	3	
Core II Social Science	3	
Core II Fine Arts	3	
BSPS 447	Pharmaceutical Chemistry	4
Core II Humanities (Writing Intensive)	3	

Credit Hours 16

Second Semester

Free Elective: select an elective with the critical thinking attribute	3	
BSPS 303	Drug Regulatory Affairs	3
BSPS Elective	3	
BSPS Elective	3	
BSPS 333	Pharmacology	3

Credit Hours 15

Fourth Year

First Semester

Free Elective	3	
BSPS Elective	3	
Core II Communications	3	
Free Elective	3	
BSPS 442	Seminar	1

Credit Hours 13

Second Semester

BSPS 471	Capstone	4
BSPS 444	Princ fo Disease Drug Act	4
BSPS Elective	3	
BSPS 442	Seminar (repeated for credit)	1

Credit Hours 12

Total Credit Hours 121

BSPS Electives

Code	Title	Credit Hours
BSPS 350	Pharmacology of Illicit Drugs	3
BSPS 340	Immunotherapeutics	3

BSPS 320	Pharmaceutical Analysis	3
BSPS 302	Cardiovascular Pharmacology	3
BSPS 330	Introduction to Cancer Biology	3
BSPS 360	Prin of Infectious Diseases	4
BSPS XXX	Pharmaceutical Biotechnology	3
BSPS XXX	Methods in Pharmaceutical Chemistry	3
BSPS 485	Independent Study	1-3
BSPS 486	Problem Report	1-3
BSPS 499	Special Topics	1-3