

## B.S. Pharmaceutical Product Development

Course Name	Course #	Credits	Course Name	Course #	Credits
<b>Year 1</b>					
General Biology	BIO110	3	Genetics	BIO230	3
General Chemistry I	CHE103	3	General Chemistry II	CHE104	3
General Chemistry I Lab	CRL103	1	General Chemistry II Lab	CRL104	1
Effective Writing I	WRT120	3	Critical Writing	WRT204-8	3
Statistics I	MAT121	3	Humanities I		3
			Student Elective I		3
	Total	13		Total	16
<b>Year 2</b>					
Organic Chemistry I	CHE231	4	Cell Physiology (W)	BIO220	3
Organic Chemistry I Lab	CRL231	2	Organic Chemistry II	CHE232	3
Technical Writing (W)	ENG371	3	Statistical Computing	STA311	3
General Microbiology	BIO214	4	Recombinant DNA	BIL333	2
General Education - Art		3	Drug Design I	PPD481	3
	Total	16		Total	14
<b>Summer Session</b>					
Pharmaceutical Internship I	PPD484	1			
<b>Year 3</b>					
Human Physiology	BIO469	4	Organic Chemistry II Lab	CRL232	2
General Physics I	PHY130	4	Physiology of Drug Interaction	BIO367	3
Drug Design II	PPD482	3	Drug Design III	PPD483	3
Calculus I	MAT161	3	General Physics II	PHY140	4
or Brief Calculus	MAT 108	3	Social Science I		3
	Total	14		Total	15
<b>Summer Session</b>					
Pharmaceutical Internship II	PPD485	1			
<b>Year 4</b>					
Biochemistry I	CHE476	3	Bus. & Prof. Speech Comm.	SPK230	3
Biomedical Ethics	PHI371	3	Student Elective III		3
Economics II (Micro) (S.S.II)	ECO112	3	PPD Electives		6 or 7
Student Elective II		3	General Ed. Diversity		3
Humanities II		3			
	Total	15		Total	15 or 16
<b>Total Credits</b>		<b>120 or 121</b>			

## PPD Major Core Courses:

General Chemistry I	CHE103	Physiology of Drug Interaction	BIO367
General Chemistry I Lab	CRL103	Human Physiology	BIO469
General Chemistry II	CHE104	General Physics I	PHY130
General Chemistry II Lab	CRL104	General Physics II	PHY140
Organic Chemistry I	CHE231	Brief Calculus	MAT108
Experimental Organic Chemistry I (Lab)	CRL231	Calculus I	MAT161
Organic Chemistry II	CHE232	Intro to Statistical Computing & Data Mgmt	STA311
Biochemistry	CHE471	Technical Writing	ENG371
General Biology	BIO110	Drug Design I	PPD481
General Microbiology	BIO214	Drug Design II	PPD482
Cell Physiology	BIO220	Drug Design III	PPD483
Genetics	BIO230	Pharmaceutical Internship I	PPD484
Intro to Recombinant DNA Methodology	BIL333	Pharmaceutical Internship II	PPD485

## PPD Electives:

These are to be chosen from the following list of courses with advisement:

### Biology

BIO217 General Zoology  
BIO307 Pathophysiology  
BIO314 Diagnostic Bacteriology  
BIO334 Microbial Genetics  
BIO357 Comparative Vertebrate Anatomy  
BIO421 Cellular and Molecular Biology  
BIO428 Animal Histology  
BIO430 Human Genetics  
BIO431 Molecular Genetics  
BIO454 Mycology  
BIO456 Virology  
BIO464 Microbial Physiology  
BIO465 Immunology  
BIO467 Endocrinology  
BIO484 Epidemiology

### Chemistry

CRL232 Organic Chemistry II Lab  
CHE300 Fundamentals of Radioisotope Technology  
CHE321 Analytical Chemistry I  
CRL321 Analytical Chemistry Laboratory  
CHE333 Advanced Organic Chemistry

CHE345 Fundamentals of Physical Chemistry  
CHE381 Clinical Chemistry  
CHE403 Foundations of Nutrition  
CHE424 Advanced Analytical Chemistry  
CRL424 Advanced Analytical Chemistry Laboratory  
CHE436 Polymer Chemistry  
CRL436 Polymer Chemistry Laboratory  
CRL471 Experimental Biochemistry Laboratory  
CRL472 Experimental Biochemistry Laboratory  
CHE479 Chemical Toxicology

### Marketing

BLA201 The Legal Environment of Business  
MKT200 Survey of Marketing

### Mathematics

MAT122 Statistics II  
MAT162 Calculus II  
MAT221 Applied Statistics  
MAT261 Calculus III  
MAT421 Mathematical Statistics I  
MAT422 Mathematical Statistics II

**Academic Foundations:**

English - Effective Writing WRT120 is required. WRT 208 or WRT220 are recommended.

Math - Statistics MAT121 is required.

Interdisciplinary ("I") - Philosophy - Biomedical Ethics PHI370 is required.

Communications - Business and Professional Speech Communication SPK230 is required.

Diverse Communities ("J") – one 3 credit course.

**Liberal Arts Requirements (Humanities, Behavioral and Social Sciences, the Arts):**

No course that carries the Interdisciplinary attribute ("I") may be used to fulfill any of these requirements.

**Humanities (6 credits):**

Courses must be selected from at least 2 of the following areas:

Literature (LIT/CLS)

History (HIS)

Philosophy (PHI)

**Behavioral and Social Sciences (6 credits):**

Principles of Economics II (Micro) ECO112 is required.

An additional course must be selected from the following areas:

Anthropology (ANT)

Psychology (PSY)

Sociology (SOC)

Geography (GEO)

Government (PSC)

**The Arts (3 credits):**

Any course in:

Art

Cinematography

Dance

Music

Photography

Theatre