

# BIOMEDICAL SCIENCE (PHARMACEUTICAL SCIENCES CONCENTRATION), BACHELOR OF SCIENCE

## SUMMARY

Code	Title	Hours
Core Curriculum Requirements ( <a href="https://catalog.tsu.edu/undergraduate/general-education-core-curriculum/">https://catalog.tsu.edu/undergraduate/general-education-core-curriculum/</a> ) <sup>1</sup>		42
<b>Major Requirements (30 hours)</b>		
BIOM 331	Principles of Biomedical Research	3
BIOM 332	Biomedical anatomy & Physiology	3
BIOM 333	Biomedical Genetics	3
BIOM 334	Biomedical Writing	3
BIOM 335	Health Disparities	3
BIOM 430	Medical Calculations	3
BIOM 410	Medical Calculations Lab	1
BIOM 420	Introduction to Pathophysiology	2
BIOM 432	Biomedical Biochemistry	3
BIOM 411	Biomedical Biochemistry Lab	1
BIOM 436	Biostatistics	3
BIOM 421	Introduction to Pharmacology	2
<b>Major Elective Requirements (13 hours)</b>		
BIOM 437	Drug Discovery and Development	3
BIOM 440	Pharmaceutical Sciences Research Capstone	4
HSCR 260	Biomedical Ethics	3
Select 3 hours from the following:		3
HSCR 360	Princ Of Disease	
HSOA 332	Intro Commun & Population Hlth	
BIOM 431	Biopharmaceutics	
<b>Other Requirements (35 hours)</b>		
Biological Science Core (16 hours)		
BIOL 1306 & BIOL 111	Biological Science I and Biological Science Lab I	4
BIOL 132 & BIOL 112	Biological Science II and Biological Science Lab II	4
BIOL 245	Human Anatomy & Physiology (BIOL 2401 or BIOL 2402 also allowed)	4
BIOL 347	Microbiology (BIOL 2420 or BIOL 2421 also allowed)	4
Biochemistry Core (10 hours)		
CHEM 111	Chemistry I Lab	1
CHEM 112	Chemistry II Lab	1
CHEM 211	Organic Chem I Lab	1
CHEM 212	Organic Chem II Lab	1
CHEM 231	Organic Chem I	3
CHEM 232	Organic Chem II	3
Physics Core (4 hours)		
PHYS 1301	College Physics I	3
PHYS 213	College Phys Lab I (PHYS 1401 also allowed)	1

Mathematics Core (4 hours)

MATH 2413	Calculus & Analytic Geomtry I (MATH 2313 plus a free MATH elective is also allowed)	4
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First Time Freshman (1 hour)<sup>2</sup>

FS 102	Freshman Seminar/ first Year Experience	1
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**Total Hours** 120

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Suggestions in the Core Curriculum

### Mathematics (020)

MATH 2312 Precalculus Math (3 s.h.)

### Life and Physical Science (030)

CHEM 1311 Chemistry I (3 s.h.) and CHEM 1312 Chemistry II (3 s.h.)

### Institutional Option (090)

Speech Option and MATH 1342 Elementary Statistics (3 s.h.)

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FS 102 can be substituted with a free elective for transfer students only.

Course	Title	Hours
<b>First Year</b>		
<b>First Semester</b>		
BIOL 1306	Biological Science I	3
BIOL 111	Biological Science Lab I	1
CHEM 1311	Chemistry I	3
CHEM 111	Chemistry I Lab	1
ENGL 1301	Freshman English I	3
MATH 2312	Precalculus Math	3
FS 102	Freshman Seminar/ first Year Experience	1
<b>Hours</b>		<b>15</b>
<b>Second Semester</b>		
BIOL 132	Biological Science II	3
BIOL 112	Biological Science Lab II	1
CHEM 1312	Chemistry II	3
CHEM 112	Chemistry II Lab	1
ENGL 1302	Freshman English II	3
Social/Behavioral Science Elective		3
Visual & Performing Arts Elective		3
<b>Hours</b>		<b>17</b>
<b>Second Year</b>		
<b>Third Semester</b>		
BIOL 245	Human Anatomy & Physiology	4
BIOL 245L	Human Anat & Phys Lab	0
CHEM 231	Organic Chem I	3
CHEM 211	Organic Chem I Lab	1
MATH 2413	Calculus & Analytic Geomtry I	4
HIST 1301	Soc & Pol Hist US to 1877	3
POLS 2305	American Government	3
<b>Hours</b>		<b>18</b>
<b>Fourth Semester</b>		
English 2XXX		3
CHEM 232	Organic Chem II	3
CHEM 212	Organic Chem II Lab	1
COMM 1321 or COMM 1315	Business & Professional Comm or Public Address	3

HIST 1302	Soc & Pol Hist US Since 1877	3
POLS 2306	Texas Government	3
<b>Hours</b>		<b>16</b>

**Third Year****Fifth Semester**

BIOL 347	Microbiology	4
BIOL 347L	Microbiology Lab	0
PHYS 1301	College Physics I	3
PHYS 213	College Phys Lab I	1
HSCR 260	Biomedical Ethics	3
MATH 1342	Elementary Statistics	3
<b>Hours</b>		<b>14</b>

**Sixth Semester**

BIOM 331	Principles of Biomedical Research	3
BIOM 332	Biomedical anatomy & Physiology	3
BIOM 333	Biomedical Genetics	3
BIOM 334	Biomedical Writing	3
BIOM 335	Health Disparities	3
<b>Hours</b>		<b>15</b>

**Fourth Year****Seventh Semester**

BIOM 430	Medical Calculations	3
BIOM 410	Medical Calculations Lab	1
BIOM 420	Introduction to Pathophysiology	2
BIOM 432	Biomedical Biochemistry	3
BIOM 411	Biomedical Biochemistry Lab	1
BIOM 437	Drug Discovery and Development	3
<b>Hours</b>		<b>13</b>

**Eighth Semester**

BIOM 436	Biostatistics	3
BIOM 421	Introduction to Pharmacology	2
BIOM 440	Pharmaceutical Sciences Research Capstone	4
Electives		3
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>120</b>