

# Pharmaceutical Sciences BS

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## Overview

The **Bachelor of Science in Pharmaceutical Sciences** is offered by the Department of Pharmaceutical Sciences at Temple University School of Pharmacy. It is designed to prepare graduates for entry-level positions within the pharmaceutical and biotechnology industries. This program also serves as a pathway to graduate study in pharmaceutical sciences and regulatory affairs or professional programs in pharmacy, medicine, dentistry, and other fields. It provides a solid science foundation and broad liberal arts education while preparing students for careers in the areas of research/laboratory work, quality control, and administration in pharmaceuticals, biotechnology, and healthcare industries. The first two years of study are primarily based in Temple University's Main campus, with the remaining curriculum taught in the School of Pharmacy on the Health Sciences Campus.

This major is open to incoming first-year students. Current Temple students can declare this major if they have been admitted to Temple University and have completed, or are in the process of completing, the undergraduate major requirements.

The BS in Pharmaceutical Sciences is a 4-year, non-licensure, undergraduate bachelor's degree program, and does not qualify the student for state board examination to become a registered pharmacist.

## Concentrations

Students in the BS in Pharmaceutical Sciences **must select one of the following concentrations**:

- Manufacturing and Manufacturing Compliance
- Marketing and Sales
- Research
- Pre-Pharmacy (PharmD)

The **Concentration in Manufacturing and Manufacturing Compliance** focuses on the production, quality control and regulatory adherence of pharmaceutical products. It covers Good Manufacturing Practices (GMP), process validation, quality assurance and regulatory requirements to ensure drug safety and efficacy. Students gain expertise in optimizing production processes while meeting strict industry standards and regulations.

The **Concentration in Marketing and Sales** focuses on strategies for promoting and distributing pharmaceutical products while ensuring compliance with industry regulations. Students learn about market analysis, branding, sales techniques and regulatory frameworks governing pharmaceutical advertising. This concentration prepares graduates for careers in pharmaceutical marketing, sales and product management.

The **Concentration in Research** provides a foundation in drug discovery, development and evaluation through scientific investigation. Students study pharmacology, pharmaceuticals, medicinal chemistry and laboratory techniques to innovate and improve pharmaceutical products. This concentration prepares graduates for careers in biomedical research, drug formulation and pharmaceutical development.

The **Pre-Pharmacy Concentration** is a pathway for high school graduates pursuing the profession of pharmacy to complete the PharmD prerequisites and, at the end of their second year, enter the PharmD program in the School of Pharmacy at Temple, as part of the Early Assurance Program. Students interested in this path complete undergraduate coursework requirements in two years and receive conditional acceptance based on the completion of these requirements. If admitted, students move to the PharmD program after two years of undergraduate coursework in the School of Pharmacy. Students in the Pre-Pharmacy Concentration do not earn a bachelor's degree and instead work toward the PharmD. Learn more about PharmD and the School of Pharmacy at Temple.

**Campus Locations:** Main, Health Sciences

**Program Code:** PH-PS-BS

## Contact Information

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*These requirements are for students who matriculated in academic year 2025-2026. Students who matriculated prior to fall 2025 should refer to the Archives to view the requirements for their Bulletin year.*

## Summary of Requirements for the Degree

### 1. University Requirements (120-127 total s.h.)

- Students must complete all University requirements including those listed below.
- All undergraduate students must complete at least two writing-intensive courses for a total of at least six credits at Temple as part of their major. The specific writing-intensive course options for this major are:

Code	Title	Credit Hours
SCTC 2396	Writing for Science and Technology (WI)	3
PS 3896	(Introduction to Medical Writing)	3

- Students must complete the General Education (GenEd) requirements.
  - See the General Education section of the *Undergraduate Bulletin* for the GenEd curriculum.
  - Students will satisfy the Quantitative Literacy (GQ) and Science and Technology (ST) requirements with required Math (Calculus) and Science (Biology and Chemistry) coursework.
- Students must satisfy general Temple University residency requirements.

### 2. School Requirements

All Pharmacy courses (PP and PS) must be completed at Temple.

## Math and Science Requirements

Code	Title	Credit Hours
<b>Chemistry</b>		
Select one of the following:		4
CHEM 1031 & CHEM 1033	General Chemistry I and General Chemistry Laboratory I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I and Honors Chemical Science Laboratory I (F)	
Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	
CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II (S)	
Select one of the following:		4
CHEM 2201 & CHEM 2203	Organic Chemistry I and Organic Chemistry Laboratory I	
CHEM 2921 & CHEM 2923	Organic Chemistry for Honors I and Organic Honors Laboratory I (F)	
Select one of the following:		4
CHEM 2202 & CHEM 2204	Organic Chemistry II and Organic Chemistry Laboratory II	
CHEM 2922 & CHEM 2924	Organic Chemistry for Honors II and Organic Honors Laboratory II (S)	

**Biology**

BIOL 1111	Introduction to Organismal Biology	4
or BIOL 1911	Honors Introduction to Organismal Biology	

Select one of the following: 4

BIOL 1112	Introduction to Biomolecules, Cells and Genomes
or BIOL 1912	Honors Introduction to Biomolecules, Cells and Genomes

BIOL 2112	Introduction to Cellular and Molecular Biology
or BIOL 2912	Honors Introduction to Cellular and Molecular Biology

**Mathematics**

Select one of the following: 4

MATH 1031	Differential and Integral Calculus
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MATH 1041	Calculus I
or MATH 1941	Honors Calculus I

**Physics**

Select one of the following: 4

PHYS 1021	Introduction to General Physics I
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PHYS 1061	Elementary Classical Physics I
or PHYS 1961	Honors Elementary Classical Physics I

PHYS 2021	General Physics I
or PHYS 2921	Honors General Physics I

**Anatomy and Physiology**

Select one of the following: 3-4

KINS 1221	Principles of Anatomy and Physiology I
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KINS 1223	Human Anatomy and Physiology I
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Select one of the following: 3-4

KINS 1222	Principles of Anatomy and Physiology II
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KINS 1224	Human Anatomy and Physiology II
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**Science and Technology**

SCTC 2396	Writing for Science and Technology (WI)	3
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**Total Credit Hours** 41-43

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

**Pharmacy Requirements**

Code	Title	Credit Hours
PS 3011	Introduction to Pharmaceutical Sciences I	1
PS 3012	Introduction to Pharmaceutical Sciences II	1
PS 3145	Immunology/Biotechnology	3
PS 3151	Medicinal Chemistry I	4
PS 3161	Pharmaceutics I	3
PS 3162	Pharmaceutics II	3
PS 3164	Pharmacology I	4
PS 3265	Pharmacology II	3
PS 3318	Clinical Drug Development	3
PS 3896	(Introduction to Medical Writing)	3
PP 4254	(Biostatistics and Medical Literature Evaluation)	2

**Total Credit Hours** 30

## Required Concentrations in Manufacturing and Manufacturing Compliance, Marketing and Sales, and Research

Select one of the following concentrations (24-28 credits):

### Manufacturing and Manufacturing Compliance Concentration

Code	Title	Credit Hours
PS 3476	Toxicology and Good Laboratory Practices in Drug Development	3
PS 3477	Current Good Manufacturing Practices	3
PS 4261	Concepts in Pharmacogenomics	3
PS 4469	(Quality Systems and Operations)	3
PS 4512	(Microbiological Concepts in Pharmaceutical Manufacturing)	3
PS 4474	(Process Validation)	3

#### Concentration Electives

Select two of the following: 6

PS 4003	(Preformulation - Small Molecules)	
PS 4004	(Solid Dosage Forms: Small Molecules)	
PS 4128	(Drug Discovery)	
PS 4262	Pharmacokinetics	
PS 4578	(High Purity Water Systems)	
PS 4622	(Unit Operations)	
PS 4629	(Process Monitoring)	
PS 4471	(Biotechnology: Bioprocess Basics)	

**Total Credit Hours**

**24**

### Marketing and Sales Concentration

Code	Title	Credit Hours
PS 3472	(Pharmaceutical Marketing)	3
PS 3529	(Food and Drug Law)	3
PS 3532	(Global Labeling Regulations: Principles and Practices)	3
PS 3533	(Requirements for Product Labeling and Advertising)	3
PS 3611	(Regulation of Advertising and Promotions)	3
PP 4352	(Economics of Pharmacy Practice)	3

#### Concentration Electives

Select two of the following: 6

PS 3408	(Pharmacoeconomics)	
PS 4003	(Preformulation - Small Molecules)	
PS 4004	(Solid Dosage Forms: Small Molecules)	
PS 4128	(Drug Discovery)	
PS 4261	Concepts in Pharmacogenomics	
PS 4262	Pharmacokinetics	
PS 4512	(Microbiological Concepts in Pharmaceutical Manufacturing)	

**Total Credit Hours**

**24**

### Research Concentration

Code	Title	Credit Hours
PS 3002	(Pharmaceutical Analysis)	3
PS 4007	(Biopharmaceutics)	3
PS 4128	(Drug Discovery)	3
PS 4129	(Introduction to Research and Research Ethics)	2
PS 4201	(Pharmaceutical Sciences Department Seminar Series I)	1

PS 4202	(Pharmaceutical Sciences Department Seminar Series II)	1
PS 4261	Concepts in Pharmacogenomics	3
PS 4262	Pharmacokinetics	3
PS 4391	(Research)	2
PS 4512	(Microbiological Concepts in Pharmaceutical Manufacturing)	3

**Concentration Elective**

Select one of the following:		3-4
PS 3152	Medicinal Chemistry II	
PS 4003	(Preformulation - Small Molecules)	
PS 4004	(Solid Dosage Forms: Small Molecules)	

**Total Credit Hours****27-28****Suggested Academic Plan****Bachelor of Science in Pharmaceutical Sciences****Suggested Plan for New Students Starting in the 2025-2026 Academic Year****Years 1-2: All Concentrations**

Year 1		Credit Hours
<b>Fall</b>		
Select one of the following:		4
CHEM 1031 & CHEM 1033	General Chemistry I and General Chemistry Laboratory I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I and Honors Chemical Science Laboratory I (F)	
Select one of the following:		4
MATH 1031	Differential and Integral Calculus	
MATH 1041 or MATH 1941	Calculus I or Honors Calculus I	
ENG 0802 or ENG 0902	Analytical Reading and Writing [GW] or Honors Analytical Reading and Writing [GW]	4
GenEd Breadth Course		3
<b>Credit Hours</b>		<b>15</b>
<b>Spring</b>		
BIOL 1111 or BIOL 1911	Introduction to Organismal Biology or Honors Introduction to Organismal Biology	4
Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	
CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II (S)	
IH 0851 or IH 0951	Intellectual Heritage I: The Good Life [GY] or Honors Intellectual Heritage I: The Good Life [GY]	3
GenEd Breadth Course (GA)		3-4
<b>Credit Hours</b>		<b>14-15</b>
<b>Year 2</b>		
<b>Fall</b>		
Select one of the following:		4
BIOL 1112 or BIOL 1912	Introduction to Biomolecules, Cells and Genomes or Honors Introduction to Biomolecules, Cells and Genomes	
BIOL 2112 or BIOL 2912	Introduction to Cellular and Molecular Biology or Honors Introduction to Cellular and Molecular Biology	
Select one of the following:		4
CHEM 2201 & CHEM 2203	Organic Chemistry I and Organic Chemistry Laboratory I	

CHEM 2921 & CHEM 2923	Organic Chemistry for Honors I and Organic Honors Laboratory I (F)	
Select one of the following:		3-4
KINS 1221	Principles of Anatomy and Physiology I	
KINS 1223	Human Anatomy and Physiology I	
SCTC 2396	Writing for Science and Technology [WI]	3
IH 0852 or IH 0952	Intellectual Heritage II: The Common Good [GZ] or Honors Intellectual Heritage II: The Common Good [GZ]	3
<b>Credit Hours</b>		<b>17-18</b>
<b>Spring</b>		
Select one of the following:		4
CHEM 2202 & CHEM 2204	Organic Chemistry II and Organic Chemistry Laboratory II	
CHEM 2922 & CHEM 2924	Organic Chemistry for Honors II and Organic Honors Laboratory II (S)	
Select one of the following:		4
PHYS 1021	Introduction to General Physics I	
PHYS 1061 or PHYS 1961	Elementary Classical Physics I or Honors Elementary Classical Physics I	
PHYS 2021 or PHYS 2921	General Physics I or Honors General Physics I	
Select one of the following:		3-4
KINS 1222	Principles of Anatomy and Physiology II	
KINS 1224	Human Anatomy and Physiology II	
GenEd Breadth Course		3
<b>Credit Hours</b>		<b>14-15</b>
<b>Total Credit Hours</b>		<b>60-63</b>

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

**Years 3-4: Manufacturing and Manufacturing Compliance Concentration**

Year 3		Credit Hours
Fall		
PS 3011	Introduction to Pharmaceutical Sciences I	1
PS 3145	Immunology/Biotechnology	3
PS 3151	Medicinal Chemistry I	4
PS 3161	Pharmaceutics I	3
PS 3318	Clinical Drug Development	3
GenEd Breadth Course		3
<b>Credit Hours</b>		<b>17</b>
Spring		
PS 3012	Introduction to Pharmaceutical Sciences II	1
PS 3162	Pharmaceutics II	3
PS 3164	Pharmacology I	4
PS 3476	Toxicology and Good Laboratory Practices in Drug Development	3
PS 3477	Current Good Manufacturing Practices	3
<b>Credit Hours</b>		<b>14</b>
Year 4		
Fall		
PS 3265	Pharmacology II	3
PS 4261	Concepts in Pharmacogenomics	3

PS 4474	Process Validation	3
Concentration Elective		3
GenEd Breadth Course		3
<b>Credit Hours</b>		<b>15</b>
<b>Spring</b>		
PS 3896	Introduction to Medical Writing	3
PP 4254	Biostatistics and Medical Literature Evaluation	2
PS 4469	Quality Systems and Operations	3
PS 4512	Microbiological Concepts in Pharmaceutical Manufacturing	3
Concentration Elective		3
<b>Credit Hours</b>		<b>14</b>
<b>Total Credit Hours</b>		<b>60</b>

### Years 3-4: Marketing and Sales Concentration

<b>Year 3</b>		
<b>Fall</b>		<b>Credit Hours</b>
PS 3011	Introduction to Pharmaceutical Sciences I	1
PS 3145	Immunology/Biotechnology	3
PS 3151	Medicinal Chemistry I	4
PS 3161	Pharmaceutics I	3
PS 3318	Clinical Drug Development	3
GenEd Breadth Course		3
<b>Credit Hours</b>		<b>17</b>
<b>Spring</b>		
PS 3012	Introduction to Pharmaceutical Sciences II	1
PS 3162	Pharmaceutics II	3
PS 3164	Pharmacology I	4
PS 3532	Global Labeling Regulations: Principles and Practices	3
GenEd Breadth Course		3
<b>Credit Hours</b>		<b>14</b>
<b>Year 4</b>		
<b>Fall</b>		
PS 3265	Pharmacology II	3
PS 3529	Food and Drug Law	3
PS 3611	Regulation of Advertising and Promotions	3
PP 4352	Economics of Pharmacy Practice	3
Concentration Elective		3
<b>Credit Hours</b>		<b>15</b>
<b>Spring</b>		
PS 3472	Pharmaceutical Marketing	3
PS 3533	Requirements for Product Labeling and Advertising	3
PS 3896	Introduction to Medical Writing	3
PP 4254	Biostatistics and Medical Literature Evaluation	2
Concentration Elective		3
<b>Credit Hours</b>		<b>14</b>
<b>Total Credit Hours</b>		<b>60</b>

### Years 3-4: Research Concentration

<b>Year 3</b>		
<b>Fall</b>		<b>Credit Hours</b>
PS 3011	Introduction to Pharmaceutical Sciences I	1
PS 3145	Immunology/Biotechnology	3

PS 3151	Medicinal Chemistry I	4
PS 3161	Pharmaceutics I	3
PS 3318	Clinical Drug Development	3
GenEd Breadth Course		3
<b>Credit Hours</b>		<b>17</b>
<b>Spring</b>		
PS 3002	Pharmaceutical Analysis	3
PS 3012	Introduction to Pharmaceutical Sciences II	1
PS 3162	Pharmaceutics II	3
PS 3164	Pharmacology I	4
GenEd Breadth Course		3
<b>Credit Hours</b>		<b>14</b>
<b>Year 4</b>		
<b>Fall</b>		
PS 3265	Pharmacology II	3
PS 4007	Biopharmaceutics	3
PS 4128	Drug Discovery	3
PS 4129	Introduction to Research and Research Ethics	2
PS 4201	Pharmaceutical Sciences Department Seminar Series I	1
PS 4261	Concepts in Pharmacogenomics	3
<b>Credit Hours</b>		<b>15</b>
<b>Spring</b>		
PS 3896	Introduction to Medical Writing	3
PS 4202	Pharmaceutical Sciences Department Seminar Series II	1
PP 4254	Biostatistics and Medical Literature Evaluation	2
PS 4262	Pharmacokinetics	3
PS 4391	Research	2
PS 4512	Microbiological Concepts in Pharmaceutical Manufacturing	3
Concentration Elective		3-4
<b>Credit Hours</b>		<b>17-18</b>
<b>Total Credit Hours</b>		<b>63-64</b>

## Pre-Pharmacy Program

The Pre-Pharmacy concentration provides a clear pathway for students interested in the PharmD to complete the prerequisite courses as Temple undergraduate students followed by the professional curriculum in as little as 6 years. This is part of the PharmD Early Assurance Program (EAP). A minimum of 60 credit hours of prerequisites are required to enter the PharmD program.

*These requirements are for students who matriculated in academic year 2025-2026. Students who matriculated prior to fall 2025 should refer to the Archives to view the requirements for their Bulletin year.*

## Summary of Requirements

The Doctor of Pharmacy (PharmD) degree may be conferred upon a student by recommendation of the faculty upon completion of the 140 credit hours of professional courses. To enter the PharmD program, students must complete a minimum of 60 credit hours of prerequisite courses. Overall GPA and science GPA must be at least 2.7 (on a 4.0 scale). All prerequisite courses must be completed with a minimum grade of C- on the first attempt. General Education requirements, with the exception of ENG 0802, are waived. However, students must complete a minimum of 18 credit hours of electives, which may consist of General Education courses, and include courses in Intellectual Heritage, Anthropology, Criminal Justice, Geography, History, Political Science, Psychology, Religion, Sociology, Literature/Classics, Architecture, Fine Arts/Performing Arts, Languages, Literature, Philosophy, Communication/Public Speaking, and/or Statistics. Please confer with the advising staff and review your DARS for further information.

## Prerequisite Requirements

Code	Title	Credit Hours
<b>English</b>		
ENG 0802	Analytical Reading and Writing	4



or ENG 0812	Analytical Reading and Writing: ESL	
or ENG 0902	Honors Analytical Reading and Writing	

**Chemistry**

Select one of the following: 4

CHEM 1031  
& CHEM 1033      General Chemistry I  
and General Chemistry Laboratory I

CHEM 1951  
& CHEM 1953      Honors General Chemical Science I  
and Honors Chemical Science Laboratory I (F)

Select one of the following: 4

CHEM 1032  
& CHEM 1034      General Chemistry II  
and General Chemistry Laboratory II

CHEM 1952  
& CHEM 1954      Honors General Chemical Science II  
and Honors Chemical Science Laboratory II (S)

Select one of the following: 4

CHEM 2201  
& CHEM 2203      Organic Chemistry I  
and Organic Chemistry Laboratory I

CHEM 2921  
& CHEM 2923      Organic Chemistry for Honors I  
and Organic Honors Laboratory I (F)

Select one of the following: 4

CHEM 2202  
& CHEM 2204      Organic Chemistry II  
and Organic Chemistry Laboratory II

CHEM 2922  
& CHEM 2924      Organic Chemistry for Honors II  
and Organic Honors Laboratory II (S)

**Biology**

BIOL 1111 4

or BIOL 1911      Introduction to Organismal Biology  
Honors Introduction to Organismal Biology

Select one of the following: 4

BIOL 1112      Introduction to Biomolecules, Cells and Genomes  
or BIOL 1912      Honors Introduction to Biomolecules, Cells and Genomes

BIOL 2112      Introduction to Cellular and Molecular Biology  
or BIOL 2912      Honors Introduction to Cellular and Molecular Biology

**Mathematics**

Select one of the following: 4

MATH 1031      Differential and Integral Calculus

MATH 1041      Calculus I  
or MATH 1941      Honors Calculus I

**Physics**

Select one of the following: 4

PHYS 1021      Introduction to General Physics I

PHYS 1061      Elementary Classical Physics I  
or PHYS 1961      Honors Elementary Classical Physics I

PHYS 2021      General Physics I  
or PHYS 2921      Honors General Physics I

**Anatomy and Physiology**

Select one of the following: 3-4

KINS 1221      Principles of Anatomy and Physiology I  
KINS 1223      Human Anatomy and Physiology I

Select one of the following: 3-4

KINS 1222      Principles of Anatomy and Physiology II  
KINS 1224      Human Anatomy and Physiology II

**Social Sciences and Humanities Electives**

Select 6 courses for a minimum of 18 credits as follows: <sup>1</sup> 18

**Social Sciences**

Select at least 2 courses (6 credits minimum) from at least two different departments:

Anthropology

Criminal Justice

Geography

History

Political Science

Psychology

Religion

Sociology

#### Humanities

Select at least 2 courses (6 credits minimum) from at least two different departments:

Architecture

Classics

Philosophy

Communication/Public Speaking

Fine Arts

Intellectual Heritage

Languages

Literature

Philosophy

**Total Credit Hours**

**60-62**

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

<sup>1</sup> It is recommended that students select courses that will satisfy General Education requirements. Please see your academic advisor for assistance with course selections.

## Suggested Academic Plan

### Bachelor of Science in Pharmaceutical Sciences with Concentration in Pre-Pharmacy

#### Suggested Plan for New Students Starting in the 2025-2026 Academic Year

##### Years 1 and 2:

##### Year 1

Fall	Credit Hours
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Select one of the following:

4

CHEM 1031 & CHEM 1033  
General Chemistry I  
and General Chemistry Laboratory I

CHEM 1951 & CHEM 1953  
Honors General Chemical Science I  
and Honors Chemical Science Laboratory I (F)

Select one of the following:

4

MATH 1031  
Differential and Integral Calculus

MATH 1041  
or MATH 1941  
Calculus I  
or Honors Calculus I

ENG 0802  
or ENG 0812  
or ENG 0902  
Analytical Reading and Writing [GW]  
or Analytical Reading and Writing: ESL [GW]  
or Honors Analytical Reading and Writing [GW]

4

Social Sciences Elective <sup>1</sup>

3

**Credit Hours**

**15**

##### Spring

BIOL 1111 or BIOL 1911	Introduction to Organismal Biology or Honors Introduction to Organismal Biology	4
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4

Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	
CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II (S)	
Social Sciences Elective <sup>1</sup>		3
Humanities Elective <sup>1</sup>		3
	<b>Credit Hours</b>	<b>14</b>
<b>Year 2</b>		
<b>Fall</b>		
Select one of the following:		4
BIOL 1112 or BIOL 1912	Introduction to Biomolecules, Cells and Genomes or Honors Introduction to Biomolecules, Cells and Genomes	
BIOL 2112 or BIOL 2912	Introduction to Cellular and Molecular Biology or Honors Introduction to Cellular and Molecular Biology	
Select one of the following:		4
CHEM 2201 & CHEM 2203	Organic Chemistry I and Organic Chemistry Laboratory I	
CHEM 2921 & CHEM 2923	Organic Chemistry for Honors I and Organic Honors Laboratory I (F)	
Select one of the following:		3-4
KINS 1221	Principles of Anatomy and Physiology I	
KINS 1223	Human Anatomy and Physiology I	
Humanities Elective <sup>1</sup>		3
Social Sciences or Humanities Elective <sup>1</sup>		3
	<b>Credit Hours</b>	<b>17-18</b>
<b>Spring</b>		
Select one of the following:		4
CHEM 2202 & CHEM 2204	Organic Chemistry II and Organic Chemistry Laboratory II	
CHEM 2922 & CHEM 2924	Organic Chemistry for Honors II and Organic Honors Laboratory II (S)	
Select one of the following:		4
PHYS 1021	Introduction to General Physics I	
PHYS 1061 or PHYS 1961	Elementary Classical Physics I or Honors Elementary Classical Physics I	
PHYS 2021 or PHYS 2921	General Physics I or Honors General Physics I	
Select one of the following:		3-4
KINS 1222	Principles of Anatomy and Physiology II	
KINS 1224	Human Anatomy and Physiology II	
Social Sciences or Humanities Elective <sup>1</sup>		3
	<b>Credit Hours</b>	<b>14-15</b>
	<b>Total Credit Hours</b>	<b>60-62</b>

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

<sup>1</sup> It is recommended that students select courses that will satisfy General Education requirements. Please see your academic advisor for assistance with course selections.