

**Program Map: (ACS Certified) Pre-Med Track**  
**Department of Chemistry and Forensic Science**  
**College of Sciences and Technology**

**Name:** \_\_\_\_\_ **SID:** \_\_\_\_\_ **Advisor:** \_\_\_\_\_  
**Start Date:** \_\_\_\_\_ **Catalog Date:** \_\_\_\_\_ **Expected Graduation Date:** \_\_\_\_\_

Freshman	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	ENGL 1101* Area C	Composition I Pre-requisite:	3	ENGL 1102* Area C	Composition II Pre-requisite: ENGL 1101	3	
MATH 1113* Area M	Pre-Calculus Pre-requisite: MATH 1111	3	MATH 2101* Area T	Calculus I Pre-requisite: MATH 1113	4		
CHEM 1211* Major	Principles of Chemistry I* Pre-requisite: None	3	CHEM 1212* Major	Principles of Chemistry II Pre-requisite: CHEM 1211	3		
CHEM 1211L* Major	Principles of Chemistry I Lab* Pre-requisite: None	1	CHEM 1212L* Major	Principles of Chemistry II Lab Pre-requisite: CHEM 1211	1		
BIOL 1107* Area T	Principles of Biology I Pre-requisite: None	3	BIOL 1108* Area T	Principles of Biology II Pre-requisite: BIOL 1107	3		
BIOL 1107L* Area T Lab	Principles of Biology I Lab Pre-requisite: None	1	BIOL 1108L* Area T Lab	Principles of Biology II Lab Pre-requisite: BIOL 1107L	1		
COST 1103 Field of Study	COST First Year Experience	2					
<b>Fall Milestones</b>			<b>Total</b>	<b>Spring Milestones</b>			<b>Total</b>
Student should meet with their Faculty advisor			16	Student should discuss career track with their Faculty advisor			15

Sophomore	Fall Courses			Spring Courses			Notes	
	Course	Name	Hours	Course	Name	Hours		
	MATH 2111* Area T	Calculus II Pre-requisite: MATH 2101	4	CHEM 2601K* Major	Chemistry Research Methods Pre-requisite: CHEM 1212	2		*A grade of a C or better must be earned for this course
HUMN 1201 Area I	Critical Thinking & Communication	3	PHYS 2212K* Major Requirement	Principles of Physics II Pre-requisite: PHYS 2211K	4			
PHYS 2211K* Major Requirement	Principles of Physics I Pre-requisite: MATH 2101	4	CHEM 2511* Major	Organic Chemistry II Pre-requisite: CHEM 2501	3			
CHEM 2501* Major	Organic Chemistry I Pre-requisite: CHEM 1212	3	CHEM 2511L* Major	Organic Chemistry II Lab Pre-requisite: CHEM 2501L	1			
CHEM 2501L* Major	Organic Chemistry I Lab Pre-requisite: CHEM 1212L	1	BIOL 3301* Major	Genetics or other Pre-Med Electives Pre-requisite: BIOL 1108	3			
Areas A, S Option		3	AFRS 1501 Area I	Survey of African American Experience	2			
<b>Fall Milestones</b>			<b>Total</b>	<b>Spring Milestones</b>			<b>Total</b>	
Student should know their career track			18	Student should have completed a job shadowing experience relevant to their career track			15	

Junior	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	CHEM 3101K* Major	Analytical Chemistry Pre-requisite: CHEM 1212/1212L	4	CHEM 3411K* Major	Physical Chemistry II Pre-requisite: CHEM 3401	4	
CHEM 3401K* Major	Physical Chemistry I Pre-requisite: CHEM 1212/1212L	4	CHEM 3111K* Major	Instrumental Analysis Pre-requisite: CHEM 310K	4		
CHEM 3201K* Major	Inorganic Chemistry Pre-requisite: CHEM 1212/1212L	4	MATH 3101* Major	Linear Algebra Pre-requisite: MATH 2111	3		
CHEM 3522L* Major	Advanced Synthesis Pre-requisite: CHEM 2511/2511L	2	POLS 1101 Area P	American Government	3		
HIST 2111/2112 Area P	U.S. History	3	Area I, P, A, S Elective		3		
Student should have completed an internship or research experience relevant to their career track.			17	Students should have completed any required admissions testing for their career track (GRE, MCAT, PCAT, DAT)			17

Senior	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	CHEM 3801* Major	Biochemistry Pre-requisite: CHEM 2511/BIOL 1108	3	Area I, P, A, S Elective		3	
CHEM 3602K* Major	Research & Internship Pre-requisite: CHEM 2601K; CHEM 2511	2	Core Area C Option		3		
CHEM 4XXX* Major	Chemistry Major Electives Pre-requisite:	3	Area D (non-lab)*		3		
CHEM 4XXX* Major	Chemistry Major Electives Pre-requisite:	3	CHEM 4XXX* Major	Chemistry Major Electives Pre-requisite:	3		
CHEM 4901* Major	Chemical Seminar Pre-requisite: Junior or Senior	1	Optional additional courses				
<b>Fall Milestones</b>			<b>Total</b>	<b>Spring Milestones</b>			<b>Total</b>
Application completed for further professional educational programs relative to your career track**			12				12

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**Core Curriculum (Programmed Preferred Options in Bold)**

**Area I – Institutional Options 5 hrs**

- i. AFRS 1501 Survey of African-American Experience 2 hrs

Select one of the following:

- ii. HUMN 1201 Critical Thinking & Communication 3 hrs  
iii. DATA 1501 Introduction to Data Science 3 hrs

**Area A – Humanities/Fine Arts, and Ethics 6 hrs**

1. Select one of the following:

- i. ENGL 2111 World Literature I 3 hrs  
ii. ENGL 2112 World Literature II 3 hrs  
iii. ENGL 2121 British Literature I 3 hrs  
iv. ENGL 2122 British Literature II 3 hrs  
v. ENGL 2131 American Literature I 3 hrs  
vi. ENGL 2132 American Literature II 3 hrs  
vii. ENGL 2222 African American Literature 3 hrs  
viii. PHIL 2010 Introduction to Philosophy 3 hrs  
ix. PHIL 2030 Introduction to Ethics 3 hrs

2. Select one of the following:

- i. ARTS 1101 Introduction to Visual Art 3 hrs  
ii. DNCE 2010 Dance Appreciation 3 hrs  
iii. ENGL 2521 Introduction to Film 3 hrs  
iv. HUMN 2011 Humanities 3 hrs  
v. MUSC 1101 Introduction to Music 3 hrs  
vi. THEA 2101 Introduction to Theatre 3 hrs

**Area T – Natural Sciences, Math & Technology 11 hrs**

- i. BIOL 1107/1107L Principles of Biology I 4 hrs  
ii. BIOL 1108/1108L Principles of Biology II 4 hrs  
iii. PHYS 2211K Principles of Physics I 4 hrs  
iv. PHYS 2212K Principles of Physics II 4 hrs

And select one of the following:

- v. CSCI 1130 Computer & Its Applications 3 hrs  
vi. CSCI 1301 Computer Science I 3 hrs  
vii. ENVS 1140 Environmental Issues, 3hrs

**Area P - Social Science 6 hrs**

1. POLS 1101 American Government 3 hrs

And select one of the following:

- i. HIST 2111 U.S. History to the Post-Civil War Period 3 hrs  
ii. HIST 2112 U.S. History from the Post-Civil War to Pre 3 hrs

**Area S - Social Science 6 hrs**

1. POLS 1101 American Government 3 hrs

2. Select one of the following:

- i. HIST 2111 U.S. History to the Post-Civil War Period 3 hrs  
ii. HIST 2112 U.S. History from the Post-Civil War to Pre 3 hrs

3. Select two of the following:

- i. AFRS 2000 Introduction to Africana Studies 3 hrs  
ii. ANTH 1101 Introduction to Anthropology 3 hrs  
iii. ECON 2105 Principles of Macro-Economics 3 hrs  
iv. GEOG 1101 Introduction to Human Geography 3 hrs  
v. HIST 1111 World Hist to Early Modern Times 3 hrs  
vi. HIST 1112 World History Early Modern Times to Pres 3 hrs  
vii. POLS 2401 Global Issues 3 hrs  
viii. PSYC 1101 Intro to General Psychology 3 hrs  
ix. PSYC 2103 Human Growth & Development 3 hrs  
x. SOCI 1101 Introduction to Sociology 3 hrs  
xi. SOCI 1160 Social Problems 3 hrs

Chemistry Major, Pre-Med Track Electives 12 hrs

1. Select one of the following:

- i. BIOL 3301 Genetics 3 hrs  
ii. BIOL 3701 Bioethics 3 hrs  
iii. CHEM 4532 Medicinal Chemistry 3 hrs

2. Select three of the following:

- i. CHEM 4211 Advanced Inorganic Chemistry 3 hrs  
ii. CHEM 4411 Advanced Physical Chemistry 3 hrs  
iii. CHEM 4531 Advanced Organic Chemistry 3 hrs  
iv. CHEM 4601 Polymer Chemistry 3 hrs  
v. CHEM 4801 Advanced Biochemistry 3 hrs  
vi. CHEM 4811 Bioanalytical Chemistry 3 hrs  
vii. CHEM 4902 Special Topics in Chemistry 3 hrs

Possible Career Opportunities

1. Medical School: MD degree or MD/PhD dual degrees or MS degree

- i. Medical Doctor  
ii. Clinical Research Scientist  
iii. Medicinal Chemist  
iv. Medical Research Scientist  
v. Physician Assistant  
vi. Occupational Therapist  
vii. Medical Massage Therapist  
viii. Coroner

2. Pharmacy School: PharmD degree or PharmD / PhD dual degrees

- i. Pharmacist  
ii. Hospital Drug Coordinator  
iii. Pharmacy Manager  
iv. Pharmaceutical Scientist  
v. Medicinal Chemist  
vi. Clinical Pharmacist  
vii. Drug Inspector  
viii. Consultant Pharmacist  
ix. Drug Design Synthetic Chemist

3. Dental School: DDS, MS

- i. Dentist  
ii. Dental Hygienist

NOTE:

This BS Chemistry Pre-Med Track gives students the minimum requirements to be admitted into medical and pharmacy schools in addition to passing MCAT and PCAT exams. Each student should check with every institution for any additional requirements. In addition, students are encouraged to maintain a competitive GPA of 3.0 and above.