

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* Core Area A	Composition I Pre-requisite:	3	ENGL 1102* Core Area A	Composition II Pre-requisite: ENGL 1101	3	
MATH 1113* Core Area A	Pre-Calculus Pre-requisite: MATH 1111	3	MATH 2101* Area F	Calculus I Pre-requisite: MATH 1113	4		
CHEM 1211* Area F	Principles of Chemistry I* Pre-requisite: None	3	CHEM 1212* Area F	Principles of Chemistry II Pre-requisite: CHEM 1211	3		
CHEM 1211L* Area F	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 D	Principles of Biology I Pre-requisite: None	3	BIOL 1108* Area D	Principles of Biology II Pre-requisite: BIOL 1107	3		
BIOL 1107L* Area D Lab	Principles of Biology I Lab Pre-requisite: None	1	BIOL 1108L* Area D Lab	Principles of Biology II Lab Pre-requisite: BIOL 1107L	1		
COST 1103 Area F	COST First Year Experience	2					
Fall Milestones			Total	Spring Milestones		Total	
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 F	Calculus II Pre-requisite: MATH 2101	4	CHEM 2601K* Major	Chemistry Research Methods Pre-requisite: CHEM 1212	2	
HUMN 1201 Core Area B	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		
Area E Social Sci. Option		3	AFRS 1501 Core Area B	Survey of African American Experience	2		
Fall Milestones			Total	Spring Milestones		Total	
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 Core Area E	American Government	3		
HIST 2111 or 2112	U.S. History	3	Core Area C Option		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 E Social Sci. Option		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				
Fall Milestones			Total	Spring Milestones		Total	
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 B – Institutional Options 5 hrs

- i. AFRS 1501 Survey of African-American Experience 2 hrs
- ii. HUMN 1201 Critical Thinking & Communication 3 hrs

Area C – 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 D – 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

And select one of the following:

- iii. CSCI 1130 Computer & Its Applications 3 hrs
- iv. CSCI 1301 Computer Science I 3 hrs
- v. ENVS 1140 Environmental Issues, 3hrs
- vi. FSCI 1101 Intro to Mol. Forensic Sci. 3hrs

Area E - Social Science 12 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

Major Required Courses for ACS 8hrs

- i. PHYS 2211K Principles of Physics I 4 hrs
- ii. PHYS 2212K Principles of Physics II 4 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.