

**Program Map: Mathematics – Applied Statistics Concentration**  
**Mathematics Department, 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 F	Calculus I Pre-requisite: MATH 1113	4		
CSCI 1130 Area T	Computer Applications	3	HIST 2111/HIST 2112 Area P	U.S. History	3		
AFRS 1501 Area I	African-American History	2	MATH 1401 Area F	Elem Statistics Pre-requisite: MATH 1111	3		
POLS 1101 Area P	American Government	3	HUMN 1201 Area I	Critical Thinking & Communication Pre-requisite: ENGL 1102 OR ENGL 109	3		
COST 1103 Area F	COST Freshman Year Experience	2					
<b>Fall Milestones</b>		<b>Total</b>	<b>Spring Milestones</b>		<b>Total</b>		
		16			16		

Sophomore	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	MATH 2111 Area F	Calculus II Pre-requisite: MATH 2101	4	MATH 2121 Area F	Calculus III Pre-requisite: MATH 2111	4	
MATH 2301 Major	Intro to Discrete Math Pre-requisite: MATH 1113	3	MATH 2401 Major	Intro. Mathematical Software Pre-requisite: MATH 1113	3		
Area S Social Sci. Option	Social Science		MATH 3211 Major	Foundations of Higher Math Pre-requisite: MATH 2111	3		
Area F	Either CSCI 1301 or DATA 2225	3	Area A	Humanities/Fine Arts & Ethics	3		
AREA T Lab*	Natural Sciences, Math & Technology	4	Area T Lab*	Complete the Science Sequence Selected: BIOL 1103/1104, CHEM 121/1212L, PHYS 1112K/PHSC 1012K	4		
<b>Fall Milestones</b>		<b>Total</b>	<b>Spring Milestones</b>		<b>Total</b>		
Student should know their career track.		17	Student should have completed a job shadowing experience relevant to their career track		17		

Junior	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	MATH 3101 Major	Linear Algebra Pre-requisite: MATH 2111	3	MATH 3201 Major	Probability & Statistics Pre-requisite: MATH 2111	3	
MATH 3301 Major	Differential Equations Pre-requisite: MATH 2111	4	MATH ELEC Major	Choose One Math Elective	3		
MATH ELEC Major	Choose One Math Elective	3	MATH ELEC Major	Choose One Math Elective	3		
AREA A	Humanities/Fine Arts & Ethics	3	ELEC	Free Elective	3		
AREA S	Social Science	3	ELEC	Free Elective 2000-4000 Level	3		
Student should have completed an internship or research experience relevant to their career track.		16	Students should have completed any required admissions testing for their career track (GRE, MCAT, PCAT, DAT)		15		

Senior	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	MATH 4201 Major	Analysis I Pre-requisite: MATH 3211	3	MATH 4901 Major	Senior Seminar	1	
MATH ELEC Major	Choose one Math Elective	3	MATH ELEC Major	Choose One Math Elective	3	Does this Degree Program Require a Minor? <u>No</u>	
MATH ELEC Major	Choose one Math Elective	3	MATH ELEC Major	Choose One Math Elective	3	Total Hours Required for this Degree Program: <u>120</u>	
ELEC	Free Elective 2000-4000 Level	3	ELEC	Free Elective	2		
			ELEC	Free Elective	3		
<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
- ii. HUMN 1201 Critical Thinking & Communication 3 hrs

Area C – Communications in Writing 6 hrs.

- i. ENGL 1101 English Composition I 3 hrs.
- ii. ENGL 1102 English Composition II 3 hrs.

Area M – Mathematics and Quantitative Skills 3 hrs.

- i. MATH 1001 Quantitative Reasoning 3 hrs.
- ii. MATH 1111 College Algebra 3 hrs.
- iii. MATH 1401 Elementary Statistics 3 hrs.
- iv. **MATH 1113 Pre-Calculus 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 10 hrs

1. Select one of the following:

- i. BIOL 1107 Principles of Biology I 3 hrs
- ii. BIOL 1108 Principles of Biology II 3 hrs
- iii. CHEM 1211 Principles of Chemistry I 3 hrs
- iv. CHEM 1212 Principles of Chemistry II 3 hrs
- v. CISM 1130 Computer Applications 3 hrs
- vi. **CSCI 1130 Computer Applications 3 hrs**
- vii. **CSCI 1301 Computer Science I 3 hrs**
- viii. ENV5 1140 Environmental Issues 3 hrs

2. Select two of the following lab sciences:

- i. BIOL 1107/1107L Principles of Biology I 4 hrs
- ii. BIOL 1108/1108L Principles of Biology II 4 hrs
- iii. CHEM 1211/1211L Principles of Chemistry 4 hrs
- iv. CHEM 1212/1212L Principles of Chemistry 4 hrs
- v. **PHYS 1111K Introductory Physics I 4 hrs**
- vi. **PHYS 1112K Introductory Physics II 4 hrs**
- vii. **PHYS 2211K Principles of Physics I 4 hrs**
- viii. **PHYS 2212K Principles of Physics II 4 hrs**

Area P – Social Science and U.S. History 6 hrs.

- i. POLS 1101 American Government 3 hrs

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

Select two of the following:

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

**Distinctive Courses in this Major**

**Math Electives – 21 hrs Select 12 hrs**

MATH 3000 Intro to Bio Statistics 3 hrs  
MATH/DATA 3115 Mathematical Data Analysis 3 hrs MATH 3311  
Mathematical Finance & Interest Theory 3 hrs MATH 3501 Numerical  
Analysis I 3 hrs  
MATH 4311 Probability & Statistics II 3 hrs MATH 4411  
Statistical Methods 3 hrs  
MATH 4421 Regression Analysis 3 hrs

**Select 3 hrs**

MATH 4902 Senior Research/Intern 3 hrs  
MATH 4904 Special topics (Applied Stat contents) 3hrs

**Select 6 hrs**

DATA 3010 Business Intelligence 3hrs  
CILS/DATA 3109 Intro to Data Analytics and Mining 3 hrs  
CILS/DATA 3111 Applied Statistics for Data Science 3 hrs  
MSCI/DATA 3560 Big Data Analysis in the Sciences 3 hrs  
ENGT/DATA 3190 Data Visualization 3 hrs