Statistics-BA or BS with Actuarial Sciences Emphasis

This is a **general** curriculum guide and is not applicable to every student. It is important to meet with your advisor.
This guide is for students who are starting in MTH 110

Year One				
MTH 110 Algebra	4	MTH 124 Precalculus: Functions and Models		5
Gen Ed or [1]WRT 120 (self-placement)	3/4	Prerequisite: MTH 110 or proficiency through math placement		
Gen Ed or Language (if BA)	3/4	**SEE NOTE BELOW REGARDING OPTIONS FOR THIS COURSE**		
Gen Ed	3	STA 215 Introductory Applied Statistics		3
Gen Ed	3	Prerequisite: MTH 110 or equivalent		
		Gen Ed or Language (if BA)		3/4
		[1]WRT 130 or 150		3/4
		[2]Elective (if necessary)		1
Total	13-16*	*Total*		14/15
Year Two				
MTH 201 Calculus I	4	MTH 202 Calculus II (prerequisite MTH 201)		4
Prerequisites: MTH 122 and MTH 123; MTH 124 or proficiency through math placement		CIS 161 Computational Science (prerequisite MTH 201)		3/4
STA 216 Intermediate Applied Statistics	3	OR CIS 160 Programming with Visual Basic		
Prerequisite: STA 215 or STA 312		OR CIS 162 Computer Science I		
Gen Ed or Language (if BA)	3/4	Prerequisite: MTH 110		
ECO 210 Introductory Macroeconomics	3	ECO 211 Introductory Microeconomics		3
CIS 221 Excel Concepts and Applications 1	1.5	Gen Ed		3
		[2]Elective		3
Total	14.5/15.5*	*Total*		14/16*
Year Three				
STA 321 Applied Regression (Prereq: STA 216)	3	STA 311 Introduction to Survey Sampling (Prereq: STA 216)		3
STA 318 Statistical Computing (Prereq: STA 215)	3	Application Cognate – see page 2 for requirements		3
OR		Application Cognate – see page 2 for requirements		3
STA 418 Statistical Computing w/R		Gen Ed		3
Prereq: STA 215 or STA 220 or STA 312 AND STA 216 or CIS 162 or CIS 261		Issue		3
MTH 204 Linear Algebra I	3			
Prerequisites: MTH 122 and 123; or MTH 124; or proficiency through math placement				
Gen Ed	3			
Issue	3			
Total	15	*Total*		15
Year Four				
STA 412 Mathematical Statistics I	4	[3]STA 419 Statistics Project **(SWS)**		3
Prerequisites: STA 215 or STA 312, and MTH 202		Prerequisite: Prerequisites: Gen Ed Foundations – Writing, STA 216, and 2 of STA 301, STA 310, STA 311, STA 314, STA 315, STA 317, STA 318, and STA 321.		
Application Cognate – see page 2 for requirements	3			
Application Cognate – see page 2 for requirements	3	STA 415 Mathematical Statistics II (Capstone)		4
[2]Elective	3	Prerequisites: STA 412 and MTH 227		
[2]Elective	3	STA 425 Actuarial Probability and Statistics		3
		Prerequisite: STA 412		3
		[2]Elective		3
Total	16*	*Total*		16*

* The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15.
MTH 124 is designed for calculus-bound students as a replacement for MTH 122 & 123. While students can still fulfill the MTH 201 prerequisite by taking MTH 122 & 123, MTH 124 is strongly recommended.

Students who are interested in taking the first actuarial exams between third and fourth year, should consult with their Statistics faculty advisor to determine appropriate courses to take in the third year in preparation for the exams.

Bachelor of Arts/Bachelor of Science Degree Requirements

Statistics students can pursue a Bachelor of Arts or Bachelor of Science degree. Students who wish to obtain a BA must fulfill 3rd semester proficiency in a foreign language (201 level). The BS requirements are incorporated into the major requirements and include CIS 162, MTH 201, and MTH 202.

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Declaring the Statistics Major:
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1. Log into myBanner from the GVSU homepage
2. Once logged in, select "Student," "Student Records," and then "Change Major"
3. Click on the "Change Major 1/Program" box
4. Click on the down arrow in the box next to "New Major 1/Program"
5. From here scroll down and choose "Statistics-Actuarial Emphasis-BA **OR** BS" depending on your degree.
6. Click "Submit" and then click "Change to New Program"

General Education Overlap

General Education Categories fulfilled by the Statistics Major:
Mathematical Sciences: MTH 122 or MTH 123 or MTH 124 or MTH 201 or STA 215
Social Behavioral Sciences: option of ECO 210 or ECO 211 (for Actuarial Science Emphasis)

Application Cognates All Students Must Complete 15 – 18 Credit Hours
ACC 212 – Principles of Financial Accounting (3)
FIN 320 – Managerial Finance (3)   Prerequisite: ACC 212, CIS 221, and MTH 110 or 122 or 201
FIN 321 – Investments (3)   Prerequisite: FIN 320 and STA 215
FIN 331 – Risk and Insurance (3)   Prerequisite: Junior Standing

Choose one Economics Option from:
    ECO 200 – Business Economics (3)
    Prerequisite: MTH 110, 122 or 201 and sophomore standing

OR Both
    ECO 210 – Macroeconomics (3)
    Prerequisite: MTH 110, 122 or 201 and sophomore standing
    AND
    ECO 211 – Microeconomics (3)
    Prerequisite: MTH 110, 122 or 201 and sophomore standing