

# 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

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

\* 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.**

It is imperative to meet with your faculty advisor and an advisor in the CLAS Academic Advising Center regularly.

Your academic advisor in the CLAS Academic Advising Center is Nick Woodward ([woodwani@gvsu.edu](mailto:woodwani@gvsu.edu))

The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585.

Online at: <http://www.gvsu.edu/clasadvising>

<sup>1</sup> Students who self-place into WRT 120 should take this course in the fall semester and then take WRT 130 in the winter semester of their first year. Students who self-place into WRT 150 can take in either semester during their first year. Students will not need to take WRT 150 if they have earned credit for the course through AP/Dual Enrollment. A grade of C or better is required in WRT 130 or 150 in order to satisfy the WRT requirement at GVSU.

<sup>2</sup> Elective refers to any course to help you earn the required 120 credits to graduate.

<sup>3</sup> Students must complete a total of two courses with an SWS attribute. One SWS course should be outside the major.

**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 3<sup>rd</sup> 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.

#### **Declaring the Statistics Major:**

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**

<b>General Education Categories fulfilled by the Statistics Major:</b>
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)

<b>Application Cognates</b>
<b>All Students Must Complete 15 – 18 Credit Hours</b>
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
<b>Choose one Economics Option from:</b>
ECO 200 – Business Economics (3) Prerequisite: MTH 110, 122 or 201 and sophomore standing
<b>OR Both</b>
ECO 210 – Macroeconomics (3) Prerequisite: MTH 110, 122 or 201 and sophomore standing
<b>AND</b>
ECO 211 – Microeconomics (3) Prerequisite: MTH 110, 122 or 201 and sophomore standing