

# 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 ASSUMES A PLACEMENT INTO MTH 201 – CALCULUS I

<b>Year One</b>			
MTH 201 Calculus I Prerequisites: MTH 122 and MTH 123; or MTH 124 or proficiency through math placement WRT 098 (self-placement) <sup>4</sup> or Gen Ed Gen Ed or Language (if BA) Gen Ed	4  3/4 3/4 3	MTH 202 Calculus II Prerequisites: MTH 201 STA 215 Introductory Applied Statistics Prerequisite: MTH 110 or equivalent <b>OR</b> STA 312 Probability and Statistics Prerequisites: MTH 201 Gen Ed or Language (if BA) WRT 150 Strategies in Writing <sup>4</sup>	4  3  3/4 4
<i>Total</i>	<i>13-15</i>	<i>Total</i>	<i>14-15</i>
<b>Year Two</b>			
CIS 161 Computational Science (prerequisite MTH 201) OR CIS 160 Programming with Visual Basic OR CIS 162 Computer Science I Prerequisite: MTH 110 STA 216 Intermediate Applied Statistics Prerequisite: STA 215 or STA 312 Application Cognate – see page 2 for requirements Gen Ed or Language (if BA) Gen Ed or <sup>1</sup> Elective	3/4  3 3 3/4 3	STA 321 Applied Regression (Prereq: STA 216) <b>MTH 204</b> Linear Algebra I (formerly MTH 227) Prerequisites: MTH 122 and 123; or MTH 124; or proficiency through math placement Application Cognate – see page 2 for requirements Gen Ed Gen Ed	3 3 3 3 3
<i>Total</i>	<i>15-16*</i>	<i>Total</i>	<i>15</i>
<b>Year Three</b>			
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 <sup>1</sup> Elective <sup>1</sup> Elective 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>1</sup> Elective	4 3 3 3 3	STA 419 Statistics Project ( <b>SWS</b> ) <sup>3</sup> Prerequisite: STA 216 STA 415 Mathematical Statistics II (Capstone) Prerequisites: STA 412 and MTH 227 STA 425 Actuarial Probability and Statistics Prerequisite: STA 412 <sup>1</sup> Elective	3 4 3 3 3
<i>Total</i>	<i>16*</i>	<i>Total</i>	<i>16*</i>

### Notes and Recommendations:

\* The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15.

<sup>1</sup> Elective refers to any course to help you earn the required 120 credits to graduate.

<sup>2</sup> Students who self-place into WRT 098 should take this course in the fall semester and then take WRT 150 in the winter semester of the first year. Students who self-place into WRT 150 should take this course in the winter semester of the first year. A grade of C or higher is required to fulfill the WRT 150 requirement.

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

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

Your contact person in the CLAS Academic Advising Center is Nick Woodward (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>

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 160, 161, or 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-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 and 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 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 (recommended)</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