

# MATHEMATICS, BACHELOR OF SCIENCE WITH A CONCENTRATION IN ACTUARIAL SCIENCE (B.S.)

## Freshman Year

| 1st Semester                                                                                                                                                                                                           | Credit Hours |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| ENGL 110 Composition I                                                                                                                                                                                                 | 3            |
| MATH 260 Calculus I                                                                                                                                                                                                    | 4            |
| CSCI 150 Programming I                                                                                                                                                                                                 | 3            |
| CSCI 151 Programming 1 Lab                                                                                                                                                                                             | 1            |
| GE Science Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gescienceelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gescienceelectivestext</a> ) | 4            |
| <b>Credit Hours</b>                                                                                                                                                                                                    | <b>15</b>    |

## 2nd Semester

|                                                                                                                                                                                                                                                             |           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| GE History Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gehistoryelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gehistoryelectivestext</a> )                                      | 3         |
| ENGL 111 Composition II                                                                                                                                                                                                                                     | 3         |
| MATH 261 Calculus II                                                                                                                                                                                                                                        | 4         |
| MATH 284 Discrete Mathematics I                                                                                                                                                                                                                             | 3         |
| GE Science Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gescienceelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gescienceelectivestext</a> )<br>BIOL/CHEM/PHYS Laboratory Science | 4         |
| <b>Credit Hours</b>                                                                                                                                                                                                                                         | <b>17</b> |

## Sophomore Year

| 1st Semester                                                                                                                                                                                                                              | Credit Hours |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| MATH 325 Linear Algebra                                                                                                                                                                                                                   | 3            |
| MATH 360 Calculus III                                                                                                                                                                                                                     | 4            |
| GE Literature Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gelifiteratureelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gelifiteratureelectivestext</a> )       | 3            |
| GE Humanities Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#geselectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#geselectivestext</a> )                             | 3            |
| Unrestricted Elective or Minor Related Course                                                                                                                                                                                             | 3            |
| <b>Credit Hours</b>                                                                                                                                                                                                                       | <b>16</b>    |
| 2nd Semester                                                                                                                                                                                                                              | Credit Hours |
| STAT 330 Probability and Statistics I                                                                                                                                                                                                     | 3            |
| GE Social Science Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gesocialscienceelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gesocialscienceelectivestext</a> ) | 3            |
| Unrestricted Elective or Minor Related Course                                                                                                                                                                                             | 3            |
| Restricted Elective MATH/STAT Course                                                                                                                                                                                                      | 3            |
| GE Wellness/Health Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gewellnesshealthtext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gewellnesshealthtext</a> )                | 2            |
| GE Global Studies Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#geglobalstudiestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#geglobalstudiestext</a> )                   | 3            |
| <b>Credit Hours</b>                                                                                                                                                                                                                       | <b>17</b>    |

## Junior Year

| 1st Semester                                  | Credit Hours |
|-----------------------------------------------|--------------|
| MATH 350 Differential Equations               | 3            |
| Unrestricted Elective or Minor Related Course | 3            |
| Restricted Elective MATH/STAT Course          | 3            |
| MATH 300 Foundation of Mathematics            | 3            |
| Unrestricted Elective or Minor Related Course | 3            |
| <b>Credit Hours</b>                           | <b>15</b>    |
| 2nd Semester                                  | Credit Hours |
| MATH 400 Advanced Calculus I                  | 3            |
| Unrestricted Elective or Minor Related Course | 3            |
| Restricted Elective MATH/STAT Course          | 3            |
| Restricted Elective MATH/STAT Course          | 3            |

| Unrestricted Elective or Minor Related Course | 3              |
|-----------------------------------------------|----------------|
| <b>Credit Hours</b>                           | <b>15</b>      |
| Senior Year                                   | Credit Hours   |
| 1st Semester                                  | Credit Hours   |
| MATH 425 Abstract Algebra I                   | 3              |
| Unrestricted Elective or Minor Related Course | 3              |
| Restricted Elective MATH/STAT Course          | 3              |
| Unrestricted Elective or Minor Related Course | 3              |
| <b>Credit Hours</b>                           | <b>12</b>      |
| 2nd Semester                                  | Credit Hours   |
| MATH 495 Senior Project                       | 1-3            |
| Unrestricted Elective or Minor Related Course | 3              |
| Unrestricted Elective or Minor Related Course | 3              |
| Unrestricted Elective or Minor Related Course | 3              |
| <b>Credit Hours</b>                           | <b>10-12</b>   |
| <b>Total Credit Hours</b>                     | <b>117-119</b> |

## General Education Requirements for the B.S. Degree

| Code                                                                                                                                                                                                                                      | Title | Credit Hours |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------|
| GE English Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#geenglishselectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#geenglishselectivestext</a> )                  |       |              |
| GE Global Studies Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#geglobalstudiestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#geglobalstudiestext</a> )                   |       |              |
| GE History Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gehistoryelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gehistoryelectivestext</a> )                    |       |              |
| GE Humanities Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#geselectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#geselectivestext</a> )                             |       |              |
| GE Literature Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gelifiteratureelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gelifiteratureelectivestext</a> )       |       |              |
| GE Science Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gescienceelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gescienceelectivestext</a> )                    |       |              |
| GE Social Science Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gesocialscienceelectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gesocialscienceelectivestext</a> ) |       |              |
| GE Wellness/Health Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gewellnesshealthtext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gewellnesshealthtext</a> )                |       |              |
| GE Mathematics Electives ( <a href="http://catalog.vsu.edu/undergraduate/general-education-programs/#gemathematicselectivestext">http://catalog.vsu.edu/undergraduate/general-education-programs/#gemathematicselectivestext</a> )        |       |              |

### Total Requirements Semester Hours: 33

*A single course may simultaneously fulfill a general education requirement and a departmental or major/minor requirement. A single course cannot be used to fulfill more than one general education requirement. Department or major/minor areas may opt to exceed the minimum credit hour requirements above.*

| Code     | Title                     | Credit Hours |
|----------|---------------------------|--------------|
| MATH 260 | Calculus I                | 4            |
| MATH 261 | Calculus II               | 4            |
| MATH 284 | Discrete Mathematics I    | 3            |
| MATH 300 | Foundation of Mathematics | 3            |
| MATH 325 | Linear Algebra            | 3            |
| MATH 350 | Differential Equations    | 3            |
| MATH 360 | Calculus III              | 4            |
| MATH 400 | Advanced Calculus I       | 3            |

|             |                                                                              |     |
|-------------|------------------------------------------------------------------------------|-----|
| MATH 425    | Abstract Algebra I                                                           | 3   |
| MATH 495    | Senior Project <small>MATH 395 for Secondary Education concentration</small> | 1-3 |
| STAT 330    | Probability and Statistics I                                                 | 3   |
| or STAT 340 | Probability Stat Cmptr Scienti                                               |     |

|                           |              |
|---------------------------|--------------|
| <b>Total Credit Hours</b> | <b>34-36</b> |
|---------------------------|--------------|

| Code                      | Title                              | Credit Hours |
|---------------------------|------------------------------------|--------------|
| Science Course & Lab      | <small>AGRI/BIOL/CHEM/PHYS</small> | 4            |
| CSCI 150                  | Programming I                      | 3            |
| CSCI 151                  | Programming 1 Lab                  | 1            |
| MATH 294                  | Mathematics of Finance I           | 3            |
| MATH 295                  | Mathematics Of Finance II          | 3            |
| MATH 380                  | Seminar in Actuarial Science       | 3            |
| <b>Total Credit Hours</b> |                                    | <b>17</b>    |

| Code                      | Title | Credit Hours |
|---------------------------|-------|--------------|
| Restricted Electives      |       | 15-18        |
| Unrestricted Electives    |       | 18           |
| <b>Total Credit Hours</b> |       | <b>33-36</b> |

| Code                             | Title | Credit Hours   |
|----------------------------------|-------|----------------|
| General Education                |       | 33             |
| Core Requirements                |       | 17             |
| Major/Concentration Requirements |       | 36             |
| Electives                        |       | 33-36          |
| <b>Total Credit Hours</b>        |       | <b>119-122</b> |