

## Geneseo Curriculum Map for: B.S. in Applied Mathematics

| Program Learning Outcomes (one per row):  | These courses introduce material necessary for outcome achievement. (e.g., PSYC 100) | These courses reinforce material necessary for outcome achievement. | These courses provide coverage necessary for mastery of the outcome.             |  |  |
|---|--|---|--|--|--|
| 1) Students will be able to analyze problems and formulate appropriate mathematical models in a variety of areas of Mathematics.                            | MATH 221<br>MATH 222<br>MATH 223   | MATH 230<br>MATH 233  | MATH 326<br>MATH 328<br>MATH 332<br>MATH 338<br>MATH 340                         | MATH 341<br>MATH 345<br>MATH 346<br>MATH 350<br>MATH 360                         | MATH 361<br>MATH 371<br>MATH 372<br>MATH 382                         |
| 2) Students will be able to select and utilize appropriate mathematical technology with which to analyze mathematical problems in a wide variety of areas.  | MATH 221<br>MATH 222<br>MATH 223   | MATH 230<br>MATH 233  | MATH 326<br>MATH 328<br>MATH 332<br>MATH 340                                     | MATH 341<br>MATH 345<br>MATH 346<br>MATH 360                                     | MATH 361<br>MATH 372<br>MATH 382                                     |
| 3) Students will be able to make rigorous mathematical arguments including how to both prove and disprove conjectures.                                      | MATH 221<br>MATH 222   | MATH 233<br>MATH 239  | MATH 301<br>MATH 302<br>MATH 319<br>MATH 324                                     | MATH 325<br>MATH 330<br>MATH 333<br>MATH 338                                     | MATH 350<br>MATH 360<br>MATH 371                                     |
| 4) Students will critically read mathematics.   | MATH 221<br>MATH 222   | MATH 239  | MATH 301<br>MATH 302   | MATH 319<br>MATH 324   | MATH 325<br>MATH 350   |
| 5) Students will be able to use the concepts of Analysis in solving problems. The fundamental concepts include sets, numbers, functions, and convergence.   | MATH 221<br>MATH 222   | MATH 223<br>MATH 239  | MATH 324<br>MATH 325<br>MATH 330   | MATH 345<br>MATH 346<br>MATH 350   | MATH 360<br>MATH 371   |
| 6) Students will be able to use the concepts of Algebra in solving problems. The fundamental concepts include equations, numbers, and algebraic structures. | MATH 233   | MATH 239  | MATH 319<br>MATH 330   | MATH 333<br>MATH 371   |  |
| 7) Students will be able to express themselves in writing in an articulate, sound and well-organized fashion.   | MATH 221<br>MATH 222<br>MATH 223   | MATH 233<br>MATH 239  | MATH 301<br>MATH 302<br>MATH 319<br>MATH 324                                     | MATH 325<br>MATH 330<br>MATH 333<br>MATH 345                                     | MATH 346<br>MATH 350<br>MATH 371                                     |
| 8) Students will be able to express themselves orally in an articulate, sound and well-organized fashion.   | MATH 221<br>MATH 222<br>MATH 223   | MATH 233<br>MATH 239  | MATH 301<br>MATH 302<br>MATH 319<br>MATH 324<br>MATH 325<br>MATH 330<br>MATH 332 | MATH 333<br>MATH 340<br>MATH 341<br>MATH 345<br>MATH 346<br>MATH 348<br>MATH 350 | MATH 350<br>MATH 360<br>MATH 361<br>MATH 371<br>MATH 372<br>MATH 382 |