

**B. S. in Mathematics**  
**Concentration in Actuarial Science**  
Program for Semesters  
Department of Mathematics and Statistics  
Georgia State University

Mathematics is one of the great unifying themes of our modern culture. It is a language, a science, an art form, and a tool of tremendous power. The Department of Mathematics and Statistics, in its courses for both majors and non-majors, seeks to introduce students to this vast area of knowledge and to show them how mathematics can be used to solve problems.

The Department of Mathematics and Statistics, in cooperation with the actuarial science program in the Department of Risk Management and Insurance, offers the Bachelor of Science degree with a major in mathematics and a concentration in actuarial science. This program provides strong preparation in both mathematics and actuarial science. Students completing this program may request that a suitable annotation be placed on their permanent record.

An actuary is an executive who uses mathematical and statistical skills to define, analyze, and solve problems of society. Actuaries create and manage programs to reduce the adverse financial impact of the expected and unexpected events that happen to people. They are employed in business, industry, and the government.

Students majoring in mathematics should carefully consider the objectives they wish to pursue after graduation. A particular career or educational objective may suggest a special choice for a minor or concentration that would result in better preparation for that objective. It might also suggest that a cooperative experience with a company in that field would be useful; the Office of Cooperative Education can assist students with co-op opportunities. Faculty members who serve as academic advisers for majors can discuss the choices and concentrations that are available to mathematics majors.

As part of the requirements for the Bachelor of Science in mathematics with a concentration in actuarial science, a student must take the following courses:

1. Math 2211, 2212, 2215, and 2420; CSc 2010 and 2310.
2. Math 3000, 3435, 4253, 4435, 4610, 4661, 4662, 4751, 4752, and 4991.
3. Econ 2105 and 2106.
4. AS 4130, 4140, 4230, 4340..
5. One of the following courses: AS 4260 or 4350.

These required courses are placed in Areas A, D, F, G, and H of the curriculum. **(See the back of this flyer for a sample program.)** Majors in this degree program should consult with an academic adviser in the Department of Mathematics and Statistics and with an academic adviser in the Actuarial Science Program to ensure that their course selections are appropriate for the degree program.

**ACADEMIC ADVISEMENT — SEMESTERS**  
**B. S. in Mathematics – Concentration in Actuarial Science**

10/05

(**Required** courses are in **bold** type; electives must be chosen from lists at right.)

**NOTE:** A minimum grade of “C” is required in all mathematics and statistics courses and all upper-level courses that are required in this program. Minimum GPA in all courses is 2.00, with at most 12 hours of “D” grades.

AREA	COURSES	CHOICES AND OPTIONS
<b>Undergraduate Core Curriculum (60 hours)</b>		
A: Essential Skills (9 Hours <sup>†</sup> )	<b>Engl 1101</b> (“C” or higher) <b>Engl 1102</b> (“C” or higher) <b>Math 1113</b> (or higher Math)	<u>Note:</u> Engl 1103 (plus one additional course from the Humanities Elective list in Area C) can replace Engl 1101 & Engl 1102. E.g., Math 2211, Math 2212, or Math 2215.
B: Institutional Options (4 Hours)	Phil 1010 Speech 1000 or Perspectives	<u>Note:</u> Phil 1010 is recommended, but not required; it can be replaced by Speech 1000, Pers 2001, or Pers 2002.
C: Humanities and Fine Arts (6 Hours)	<b>Humanities Elective</b> <b>Fine Arts Elective</b>	Engl 2110, Engl 2120, Engl 2130, Phil 2010, or Spch 2050 AH 1700, AH 1750, AH 1850, Film 2700, MuA 1500, MuA 1900, MuA 1930, or Thea 2040. <u>Note:</u> A Foreign Language – 1002 or higher – can replace one of the above.)
D: Science, Mathematics, and Technology (11 Hours <sup>†</sup> )	<b>Math 2211</b> (or higher Math) <b>Two-course Laboratory Science sequence</b>	E.g., Math 2212 (if Math 2211 is in Area A). Biol 2107K-2108K, Chem 1211K-1212K, Geol 1121K-1122K, Phys 1111K-1112K, or Phys 2211K-2212K. <u>Note:</u> Phys 2211K-2212K is recommended, but not required.
E: Social Science (12 Hours)	<b>Hist 2110</b> <b>PolS 1101</b> <b>Global Economics/Politics and World History Elective</b> <b>Social Science Foundations Elective</b>	<u>Note:</u> Hist 2110 and/or PolS 1101 can be replaced by exams, with additional course(s) chosen from the Social Science Foundations list. Econ 2100, Hist 1111, Hist 1112, PolS 2401.  AAS 2010, Anth 1102, CrJu 2200, Econ 2105, Econ 2106, Geog 1101, AAS/Hist 1140, Psyc 1101, Soci 1101, Soci 1160, WSt 2010.
F: Courses Appropriate to the Major (18 Hours <sup>†</sup> )  <sup>†</sup> See note on rollover hours below.	<b>Math 2212</b> (or higher Math) <b>Math 2215 and Math 2420</b> <b>CSc 2010 and CSc 2310</b> Electives to complete 18 hours (less any “rollover hours” <sup>†</sup> )	E.g., Math 2215 (if Math 2212 is in Area D). If not completed in Area D.  Acct 2101, Acct 2102, Biol 1107K, Biol 1108K, Chem 1211K, Chem 1212K, Chem 2400, CSc 2010, CSc 2301, CSc 2310, CSc 2311, Econ 2105, Econ 2106, Lang 2001, Lang 2002, Phil 1010, Phys 2211K, Phys 2212K.
<b>Major and Additional Courses (60 hours) — at least 45 hours must be at the 3000/4000-level</b>		
G: Major Courses (33 Hours)	<b>Math 3000</b> <b>Math 3435 and Math 4435</b> <b>Math 4253</b> <b>Math 4610</b> <b>Math 4661 and Math 4662</b> <b>Math 4751 and Math 4752</b> <b>Math 4991</b> <b>AS 4130</b>	
H: Additional Courses (27 Hours)	<b>Econ 2105 and Econ 2106</b> <b>AS 4140</b> <b>AS 4230 and AS 4340</b> <b>AS 4260 or AS 4350</b> Electives (any courses to complete 120 total hours*)	If not completed in Area F.  Choose 1 of these 2 courses.  (* <b>Except see Academic Residence Requirements below.</b> )
* <b>Academic Residence Requirements:</b> (1) At least 39 of the 45 hours at the 3000/4000-level must be taken at GSU, with an average grade of “C” or better. (2) At least 11 hours of the courses comprising the major (Area G) must be taken at GSU.		
<b>NOTES:</b> <sup>†</sup> (Rollover Hours) If there is an extra hour in Area A and/or Area D, the hour(s) will reduce the 18 hours required in Area F.		