

**Recommended Academic Plan for Bachelor of Science Mathematics, Actuarial Mathematics Option (MTHBS
AMATH at University Park) Effective Summer 2008**

Semester 1	Credits	Semester 2	Credits
<i>MATH 140(GQ) Calculus with Analytic Geometry I</i>	4	<i>MATH 141(GQ) Calculus with Analytic Geometry II</i>	4
FOREIGN LANGUAGE	4	MATH 220 (GQ) Matrices	2
NATURAL SCIENCE (GN)	3	NATURAL SCIENCE (GN)	3
<i>SOCIAL and BEHAVIORAL SCIENCE (GS) ECON 002</i>	3	ENGL 15 or 30 (GWS)	3
First-Year Seminar	1	FOREIGN LANGUAGE	4
Total Credits:	15	Total Credits:	16
Semester 3	Credits	Semester 4	Credits
MATH 230 Calculus and Vector Analysis	4	MATH 250 or 251 – Ordinary Differential Equations or Ordinary and Partial Differential Equations	3 - 4
MATH 311W Concepts of Discrete Mathematics	3	MATH 312 Concepts of Real Analysis	3
SOCIAL and BEHAVIORAL SCIENCE (GS) ECON 004	3	CMPS 121 or CMPS 101 or CMPS 201C Introduction to Programming Techniques or Introduction to Algorithmic Processes or Computer Programming for Engineers Using C	3
NATURAL SCIENCE (GN)	3	ARTS(GA) or HUMANITIES (GH)	3
Select 3 credits of supporting courses in consultation with academic adviser	3	Select 3 credits of supporting courses in consultation with academic adviser	3
Total Credits:	16	Total Credits:	15 - 16
Semester 5	Credits	Semester 6	Credits
MATH(STAT) 414 Introduction to Probability Theory	3	MATH(STAT) 415 Introduction to Mathematical Statistics	3
MATH 484 Linear Programs and Related Problems	3	MATH(CMPSC) 451 or MATH 486 Numerical Computations or Mathematical Theory of Games	3
INS 410 Compound Interest and Annuities - Certain	3	INS 411 Life Contingencies I	3
CAS 100 A, B, or C (GWS) Effective Speech	3	ENGL 202C (GWS) Effective Writing: Technical	3
INS 301 Risk and Insurance	3	ARTS(GA) or HUMANITIES (GH)	3
HEALTH AND PHYSICAL ACTIVITY (GHA)	1.5	HEALTH AND PHYSICAL ACTIVITY (GHA)	1.5
Total Credits:	16.5	Total Credits:	16.5
Semester 7	Credits	Semester 8	Credits
STAT 462 Applied Regression Analysis or 400-level MATH course except MATH 401, 405, 406, 441, 470 or 471	3	MATH(STAT) 416 Stochastic Modeling	3
INS 412 Life Contingencies II	3	STAT 460 Intermediate Applied Statistics	3
I E 425 Introduction to Operations Research	3	ARTS(GA) or HUMANITIES (GH)	3
ARTS(GA) or HUMANITIES (GH)	3	Select 3 credits of supporting courses in consultation with academic adviser	3
		Select 1 - 2 credits of supporting courses in consultation with academic adviser	1-2
Total Credits:	12	Total Credits:	13-14

- **Bold type** indicates courses requiring a quality grade of C or better.
- *Italics* indicate courses that satisfy both major and General Education requirements.

- ***Bold Italics*** indicate courses requiring a quality grade of C or better and that satisfy both major and General Education requirements.
- GWS, GHA, GQ, GN, GA, GH, and GS are codes used to identify General Education requirements.
- US, IL, and US;IL are codes used to designate courses that satisfy University United States/International Cultures requirements.
- W is the code used to designate courses that satisfy University Writing Across the Curriculum requirement.

Scheduling patterns: Courses taught fall semester only- INS 410 and INS 412 . Courses taught spring semester only – INS 411and STAT 463.

Notes:

- VEE (Validation by Educational Experience) Courses for the Society of Actuaries, a grade of B- or better must be earned in these courses. The courses are ECON 002, ECON 004, FIN 100, FIN 408, STAT 462, STAT 463 (offered only in the spring semester).
- STAT 462 should be taken during the Spring of the junior year or Fall semester of senior year so that students can take STAT 463 which is only offered in the Spring.
- Students should consider earning a Statistics minor (only STAT 480, a 1 credit course, is needed) and/or an Economics minor.
- Membership in the Actuary Club is recommended so that students can learn about actuarial exams, internships, job opportunities, etc.
- Courses with a US/IL designation may also be used to satisfy a GA/GH/GS/GN requirement. A course with a US and IL designation may not be used to satisfy both US and IL courses.
- A student must earn a total of 120 credits for graduation. Students who choose to use their high school foreign language experience to satisfy the foreign language requirement will need to take additional supporting courses to meet the 120 credit requirement.