

GEP

Actuarial Science Major Requirements (rev. 10/6/14)

Degree Requirements: 40 courses comprised of A) GEP Signature Core (6 courses), B) Major Requirements (15 courses), C) GEP Integrative Learning Courses (3 courses), D) GEP Variable courses (Maximum 9 courses), E) free electives (Minimum 7 courses), and F) Overlays

A. GEP Signature Core Courses All non-transfer students must take these 6 Courses at SJU.	Semester completed
1. PHL 154 – Moral Foundations	
2. THE 154 – Faith, Justice & the Catholic Tradition	
3. ENG 102 – Texts and Contexts (pre-req: ENG 101)	
4. HIS 154 – Forging the Modern World	
5. First Year Seminar (XXX 150)	
6. Faith and Reason Course (pre-req: THE 154 and PHL 154)	

C. GEP Integrative Learning Courses for Actuarial Science (3 courses)	Semester Completed
1. Math 162 Calculus II	
2. ECN 102 Macroeconomics	
3. Lab Science (one in addition to the GEP NatSci Req. An alternate course may be approved in rare situations - see reverse side for additional info)	

B. Actuarial Science Major Requirements (15 courses)	Semester completed
1. CSC 120 Intro to Computer Programming	
2. MAT 213 Calculus III	
3. MAT 225 Fundamental Ideas of Math	
4. MAT 226 Introduction to Linear Algebra	
5. MAT 321 Probability	
6. MAT 322 Mathematical Statistics	
7. MAT 423 Applied Statistical Methods	
8. FIN 200 Introduction to Finance	
9. FIN 300 Intermediate Finance	
10. RMI 200 Introduction to Insurance	
11. ACC 101 Financial Accounting	
12. ASC 301 Actuarial Probability	
13. ASC 401 Mathematics of Finance	
14. DSS 330 Database Management	
15. One Math elective: MAT 238, MAT 311, MAT 313, MAT 316 or approved by the Actuarial Science Program Director	

D. Variable Course (Maximum 9 courses)	Course(s) required/taken Students may earn AP credit and/or use transfer credits to meet these requirements	Semester Completed
Fine & Performing Arts or Literature	One course	
Mathematics (Beauty)	Math 161 Calculus I required	
Natural Science	One course - any lab-based natural science course intended for majors	
Non-native Language	(1-2) courses at the level the student is placed.	
Social/Behavioral Science	ECN 101 Microeconomics required	
Philosophy (Philosophical Anthropology)	One course (pre-req: PHL 154)	
Theology (Religious Difference)	One course - cannot be used to satisfy the diversity/globalization/non-Western area studies degree requirement	
Writing	ENG 101 Craft of Language or 4 or a 5 on the English Literature or Language AP test.	

E. Free Electives (Minimum 7 courses)	Semester completed
1.	
2.	
3.	
4.	
5.	
6.	
7.	

F. Overlays 3 overlays that may be combined with major courses, GEP variable courses (unless otherwise noted), or free electives.	Semester Completed
1. Writing-Intensive	
2. Ethics-Intensive (pre-req: PHL 154)	
3. diversity/ globalization/non-Western	

See reverse side for the Actuarial Science Typical Course Sequence and additional information



Actuarial Science Major – Typical Course Sequence

See the reverse side for Additional information on Major Requirements

Below is listed the typical curriculum for an actuarial science (ASC) major under the new GEP curriculum, presuming that the student enters as a freshman, without needing special background courses (such as Pre-calculus) or with advanced placement in mathematics or computer science. Students who change their major to actuarial science from a different major should consult the Dr. Deborah Lurie, Program Director, about sequencing of courses. During the first two years, the mathematics courses in ASC coincide with those for a math major with the exception that MAT 180 is not required of ASC majors in Spring of the First-year.

ACTUARIAL SCIENCE TYPICAL COURSE SEQUENCE (2010-11)

Fall	Spring	Fall	Spring
Freshman Year		Junior Year	
ENG 101(Writing)	ENG 102	MAT 322	Mat 423 (VEE) ⁵
MAT 161(Math Beauty)	MAT 162 (ILC)	ASC 301	ELECTIVE
FY Seminar	PHL 154	FIN 200	ASC 401
CSC 120	DSS 330	THE 154	PHL (Phl Anthropology)
LANG (Non-Native)	LANG (Non-Native)	ELECTIVE	THE (Rel Difference)
Sophomore Year		Senior Year	
MAT 213	MAT 226	FIN 300 (VEE) ⁵	ELECTIVE
MAT 225	MAT 321	FAITH & REASON	MAT ELECTIVE ⁴
LAB SCI (NatSci) ¹	LAB SCI (ILC) ²	HIS154	ELECTIVE
ECN 101 (VEE SocSci) ⁵	ECN 102 (VEE ILC) ⁵	FINE ART/LIT	ELECTIVE
ACC 101 and 101 EC	RMI 200	ELECTIVE	ELECTIVE

Note: Students must also complete: (1) one course addressing diversity, globalization, or non-Western area studies, (2) one ethics-intensive course, and (3) one writing-intensive course. Ideally, these requirements overlap with other requirements listed above.

- Laboratory Science – Students must complete a laboratory science course offered at the major level (e.g., University Physics, Cellular Biology, General Chemistry)
- Integrative Learning: The lab science course may be replaced by an alternate course in rare situations in which the student, the student’s advisor, and the Program Director all agree that a different course better fits the student’s educational objectives. The “bar” for allowing this over-ride will be set high. Students who have changed majors (and have already satisfied the Integrating Learning Component in the old major) or who are attempting double majors may be candidates for such an over-ride.
- DSS 210 (Business Statistics) is a prerequisite for FIN 200; however, Actuarial Science majors are permitted to take MAT 2221 concurrently with FIN 200. Similarly for FIN 2541.
- MAT Electives – One course should be chosen from the following list or a course approved by the Actuarial Science program director. Students with a minor in DSS or Finance should consult with the Actuarial Science director for approved courses in those departments that could be used to fulfill this requirement. Approved courses include: MAT 311 Numerical Analysis and Computer Techniques, MAT 238 Differential Equations, MAT 316 Operations Research, and MAT 313 Mathematical Programming.
- Certification requires that students earn a grade of B- or higher in the VEE courses.

Additional Notes:

- ASC majors are not required to participate in the HSB laptop program. However, laptop use facilitates HSB courses and is encouraged. ASC majors also are encouraged to acquire familiarity with the MS Office suite of programs which will facilitate course offerings in HSB.
- ASC majors automatically satisfy the requirements for a math minor and may apply to receive the math minor.
- ASC majors should take the first actuarial exam at the end of their junior year and the second actuarial exam at the end of their senior year.
- Students are encouraged to participate in a summer internship during their junior/senior year. In the past, these internships have proven to be most valuable to students and their subsequent job search.
- Students have the option to pursue a minor in either Insurance and Risk Management or Decisions and System Sciences to enhance their knowledge of the insurance industry and their quantitative skills.