



## Mathematics Major Requirements

(for the Classes of 2014, 2015, 2016 & transfer students under the GEP)

**Degree Requirements: 40 courses comprised of** A) GEP Signature Core, B) Major Requirements, C) GEP Variable courses, D) GEP Integrative Learning Courses, E) Free Electives, and F) Overlays

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A. GEP Signature Core Courses (6 Courses)	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-reqs: THE 154 and PHL 154)* <i>Please see page 2 for additional information on this requirement.</i>	

B. Actuarial Science Major Requirements (15 courses)	Semester Completed
1. CSC 110 or 120 Computer Science I or II	
2. MAT 162 Calculus II	
3. MAT 180 Theory of Numbers	
4. MAT 213 Calculus III	
5. MAT 225 Fundamental Ideas of Math or CSC 140 (with Departmental permission)	
6. MAT 226 Introduction to Linear Algebra	
7. MAT 403 Abstract Algebra	
8. MAT 409 Real Analysis	
9. One elective from the following: MAT 404, 410, 415 or 418	
10. MAT Elective*	
11. MAT Elective*	
12. MAT Elective*	
13. MAT Elective*	
14. MAT Elective*	
15. MAT Elective*	

**\*Math Electives include:** MAT 238 Differential Equations, MAT 233 History of Mathematics, MAT 311 Numerical Analysis and Computer Techniques, MAT 232 Chaos, Fractals and Dynamical Systems, MAT 332 Geometry (non-Euclidean), MAT 313 Mathematical Programming, MAT 321-322 Probability and Mathematical Statistics, MAT 423 Applied Statistical Methods, MAT 336 Logic and the Foundations of Mathematics, MAT 334 Combinatorics and Graph Theory, and MAT 316 Operations Research, MED 551, 554, or 559. Additional possibilities for math electives include Independent Study, Directed Readings, Research, and Internships.

C. Variable Course (Maximum 9 courses)	Course(s) Required/Taken Please note 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 placement level; AP credit may be given. <i>Please Note:</i> only one course is required if placed at the 301 level (or higher). If placed lower than 301, two courses are required.	1	2
Social/Behavioral Science	One course		
Philosophy (Philosophical Anthropology)	One course		
Theology (Religious Difference)	One course - cannot be used also to satisfy the diversity/globalization/non-Western area studies overlay requirement		
Writing	ENG 101 Craft of Language or 4 or a 5 on the English Literature or Language AP test.		



## Mathematics Major – Typical Course Sequence

(for the Classes of 2014, 2015, 2016 & transfer students under the GEP)

D. GEP Integrative Learning Courses for Actuarial Science (3 courses)		Semester Completed
1.	One semester of any lab-based natural science course	
2-3	Two Additional CAS courses that relate to the major. Classes in Actuarial Science, Economics, Computer Science, Biology, Chemistry, Physics, or any lab-based science course.	

E. Free Electives (Minimum 7 courses)			
Note that the number of free electives may vary depending on AP credits earned and number of courses required for the non-native language requirement.			
	Semester Completed		Semester Completed
1.		5.	
2.		6.	
3.		7.	
4.			

F. Overlays (3 overlays that may be combined with other requirements above, unless otherwise noted) <i>*Please see below for an additional note.</i>		Semester Completed
1.	Writing-Intensive (pre-req: ENG 101)	
2.	Ethics-Intensive (pre-req: PHL 154)	
3.	Diversity/Globalization/Non-Western	

**Note regarding Three Overlays and the Faith & Reason Requirement:** As noted above, in addition to the 40 courses outlined, students must complete: (1) one course certified in diversity, globalization, or non-Western studies, (2) one ethics-intensive course, and (3) one writing-intensive course. An elective, major course, select GEP courses, a minor course, or an elective may be used to fulfill these overlays. Below are specific guidelines for each class with regard to overlay requirements and the Faith & Reason signature core course:

**Class of 2014:** Of the four GEP requirements, Faith Reason and the three overlay requirements, students in the class of 2014 need to satisfy two of the four requirements. With respect to these four components of the GEP, this means that students in the class of 2014 would have to complete (1) a Faith and Reason course and one overlay requirement OR (2) two overlay requirements.

**Class of 2015:** Of the four GEP requirements, Faith Reason and the three overlay requirements, students in the class of 2015 need to satisfy three of the four. Students in the class of 2015 would have to complete (1) a Faith and Reason course and two overlay requirements OR (2) all three overlay requirements.

**Class of 2016:** Must complete all four requirements - Faith Reason and the three overlay requirements.