

**Smeal College of Business Recommended Academic Plan (Sample Schedule)**  
**Program Year 2012 (Students entering their major Summer/Fall 2012 at University Park)**

*actual sequence/selection will vary*

**Actuarial Science (ACTSC) Effective Summer 2010**

Actuarial Science is an academically controlled major. Please refer to our [Entrance to Major Requirements](#) for further details.

1 <sup>st</sup> SEMESTER		Credits	2 <sup>nd</sup> SEMESTER		Credits
PSU 006 – First Year Seminar		1	§ <b>MGMT 301 – Basic Management Concepts</b>		3
§ <i>ENGL 015 or 030 (GWS) - Composition</i>		3	§ <i>SCM 200 or STAT 200 (GQ) – Statistics</i>		4
§ <b>MATH 140 (GQ) – Calculus and Analytic Geometry I</b>		4	§ <b>MATH 141 – Calculus and Analytic Geometry II</b>		4
§ <i>ECON 102 (GS) - Microeconomics</i>		3	Natural Science (GN)		3
Foreign Language 002		4	Foreign Language 003		4
<b>TOTAL</b>		<b>15</b>	<b>TOTAL</b>		<b>18</b>
3 <sup>rd</sup> SEMESTER			4 <sup>th</sup> SEMESTER		
§ <b>MKTG 301 – Principles of Marketing</b>		3	§ <b>FIN 301 – Corporation Finance</b>		3
§ <b>ACCTG 211 – Financial/Managerial Accounting</b>		4	SCM 301 – Supply Chain Management or <i>ENGL 202D (GWS) – Business Writing</i>		3
Natural Science (GN)		3	CAS 100 (GWS) – Speech Communication		3
MATH 220 – Matrices		2	MATH 230 – Calculus and Vector Analysis		4
ECON 104 – Macroeconomics or General Education (GH/GS/GA)		3	STAT (MATH) 414 – Probability Theory or General Education (GA/GH/GS)		3
<b>TOTAL</b>		<b>15</b>	<b>TOTAL</b>		<b>16</b>
5 <sup>th</sup> SEMESTER			6 <sup>th</sup> SEMESTER		
R M 301 – Risk and Decisions (fall only)		3	<b>R M 320W – Risk Management and Insurance (spring only)</b>		3
<b>R M 410 – Compound Interests and Annuities (fall only)</b>		3	<b>R M 411 – Actuarial Mathematics I (spring only)</b>		3
<i>ENGL 202D (GWS) – Business Writing</i> or SCM 301 – Supply Chain Management		3	General Education (GH/GS/GA) or ECON 104 - Macroeconomics		3
General Education (GA/GH/GS) or STAT (MATH) 414 – Probability Theory		3	STAT (MATH) 415 – Mathematical Statistics		3
MIS 204 – Business Information Systems		3	B A 342 – Business Ethics		3
B LAW 341 – Business Law I		3	Health Science/KINES (GHA)		1.5
<b>TOTAL</b>		<b>18</b>	<b>TOTAL</b>		<b>16.5</b>
7 <sup>th</sup> SEMESTER			8 <sup>th</sup> SEMESTER		
B A 411 – Analyzing Business and Industry		3	<b>R M 420 – Property and Casualty Insurance or R M 401 – Fundamentals of Private Pensions (spring only)</b>		3
<b>R M 430 – Life and Health Insurance (fall only)</b>		3	Related Area – See Department List		3
<b>R M 412 – Actuarial Mathematics II (fall only)</b>		3	Natural Science (GN)		3
Health Science/KINES (GHA)		1.5	General Education (GA/GH/GS)		3
General Education (GA/GH/GS)		3	Elective		3
General Education (GA/GH/GS)		3			
<b>TOTAL</b>		<b>16.5</b>	<b>TOTAL</b>		<b>15</b>

Courses in **Bold** require a grade of 'C' or higher.

Courses in *Italics* satisfy general education and degree requirements.

§ -Entrance-to-Major Requirement

Advising Notes:

- It is highly recommended that students at University Park take SCM 301 in their 4<sup>th</sup> semester.
- It is highly recommended that students at campuses that do not offer SCM 301 take ENGL 202D in their 4<sup>th</sup> semester.
- GWS, GQ, GA, GH, GS, and GHA 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. All students are required to take one IL and one US course before graduation. A course designated as US;IL may be used as a US OR an IL, not both.
- W suffix signifies the course satisfies the University *Writing Across the Curriculum* requirement.

*The Smeal College requires that all upper division courses within the department sponsoring the major be completed in-residence at University Park under the instruction of Smeal College faculty. Upper division courses offered within the department sponsoring the major which are completed at other campuses or locations will not be credited toward completion of the major at the Smeal College. This may necessitate repeating certain courses.*

### **Department Notes for the Actuarial Science (ACTSC) major:**

The Insurance and Real Estate Department, home to the Actuarial Science major, has been approved for reorganization effective July 1, 2011. The department name has been changed to **The Department of Risk Management (R M)** along with the introduction of a new major, course additions and course changes. The following bullets will assist students in navigating through these changes towards degree fulfillment in the Actuarial Science degree and towards preparation for the professional actuarial exams:

- Course prefix changes from Insurance (INS) to Risk Management (R M) are occurring over the 2011-12 academic year. Follow the notes below to properly schedule the proper course for the ACTSC major.
- R M 301 & R M 320W replace INS 301 & INS 310W as degree requirements.
- R M 301 should be taken in the fall semester of the junior year.
- R M 320W should be taken in the spring semester of the junior year.
- R M 410 and R M 412 are offered in the fall semester only. These courses replace INS 410 and INS 412.
- R M 401 and R M 420 are offered in the spring semester only. These courses replace INS 401 and INS 305.
- R M 411 is offered in the spring semester only and replaces INS 411.
- R M 430 replaces INS 320 starting Fall 2012.
- INS 401 is replaced with either R M 420 or R M 401 depending on the student's area of actuarial interest.
- Students pursuing an actuarial career should take all the VEE courses listed in <http://www.soa.org/education/exam-reg/edu-asa-reg.aspx> before graduation. The Actuarial Science degree requirements meet the VEE requirements for Corporate Finance and Economics, but not for Applied Statistics. **Students must earn a B- or better in all VEE courses.**
- Students should take MATH 230 and STAT (MATH) 414 before the 5<sup>th</sup> semester, in order to sit for the Society of Actuaries Probability Exam as quickly as possible. Math 220 can be delayed into the junior year (if desired) in order to take STAT 414.

## Actuarial Science (ACTSC) Degree Requirements -- Program Year 2012

The degree requirements outlined below are based on course adjustments made during the 2011-12 academic year. The Smeal College will adjust degree audits to reflect these changes so students can properly monitor their progress towards degree completion.

1. **Take the following Mathematics courses** (14 credits) - *Grade of "C" or higher is required in MATH 140 and MATH 141.*
  - a. [MATH 140](#) (4) Calculus with Analytic Geometry I
  - b. [MATH 141](#) (4) Calculus with Analytic Geometry II
  - c. [MATH 220](#) (2) Matrices
  - d. [MATH 230](#) (4) Calculus and Vector Analysis
  
2. **Take the following Insurance (Risk Management) courses** (9 credits) - *A grade of "C" or higher is required.*
  - a. [R M 301](#) (3) Risk and Decisions
  - b. [R M 320W](#) (3) Risk Management and Insurance [Prerequisite: R M 301]
  - c. [R M 430](#) (3) Life and Health Insurance [Prerequisite: R M 320W]
  
3. **Select one of the following Insurance (Risk Management) Courses** (3 credits) - *A grade of "C" or higher is required.*
  - a. [R M 420](#) (3) Property and Casualty Insurance [Prerequisite: R M 320W]
  - b. [R M 401](#) (3) Fundamentals of Private Pensions [Prerequisite: R M 320W]
  
4. **Take the following Actuary courses** (9 credits) - *A grade of "C" or higher is required.*
  - a. [R M 410](#) (3) Compound Interests and Annuities [Prerequisite or Concurrent: STAT (MATH) 141; Prerequisite: R M 301]
  - b. [R M 411](#) (3) Actuarial Mathematics I [Prerequisite: R M 410; STAT (MATH) 414]
  - c. [R M 412](#) (3) Actuarial Mathematics II [Prerequisite: R M 411]
  
5. **Take the following Statistics courses** (6 credits)
  - a. [STAT \(MATH\) 414](#) (3) Introduction to Probability Theory
  - b. [STAT \(MATH\) 415](#) (3) Introduction to Mathematical Statistics
  
6. **Select 3 credits from the Department List** (3 credits)
  - a. [FIN 305](#) (3) Financial Management of the Business Enterprise
  - b. [FIN 408](#) (3) Financial Markets and Institutions
  - c. [R M 415](#) (3) Modeling for Actuarial Science (*spring semester only*)
  - d. [STAT 462](#) (3) Applied Regression Analysis