

**Smeal College of Business Recommended Academic Plan (Sample Schedule)**  
**Program Year 2011 (Students entering their major Summer/Fall 2011 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
§ ENGL 015 or 030 (GWS) - Composition		3	§ <b>SCM 200 or STAT 200 (GQ) – Statistics</b>		4
§ <b>MATH 140 (GQ) – Calculus and Analytic Geometry I</b>		4	§ <b>MATH 141 – Calculus and Analytic Geometry II</b>		4
§ ECON 102 (GS) - Microeconomics		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 ENGL 202D (GWS) – Business Writing		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 <a href="#">Global Awareness</a> (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		3	<b>R M 320W – Risk Management and Insurance</b>		3
<b>INS (R M) 410 – Compound Interests and Annuities</b>		3	<b>R M (INS) 411 – Actuarial Mathematics I</b>		3
ENGL 202D (GWS) – Business Writing or SCM 301 – Supply Chain Management		3	<a href="#">Global Awareness</a> (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 (INS) 401 – Fundamentals of Private Pensions</b>		3
<b>R M 430 – Life and Health Insurance</b>		3	Related Area – See Department List		3
<b>R M (INS) 412 – Actuarial Mathematics II</b>		3	Natural Science (GN)		3
Health Science/KINES (GHA)		1.5	General Education (GA/GH/GS)		3
<a href="#">Global Awareness</a> (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.

### **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 prefixes are being changed from Insurance (INS) to Risk Management (R M). This will occur incrementally over the 2011-12 academic year.
- INS (R M) 410 and INS (R M) 412 are offered in the fall semester only.
- INS (R M) 411 is offered in the spring semester only.
- 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.
- INS 320 is offered Fall 2011 and will change to R M 430 starting Fall 2012. Students can take either version.
- 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-req/edu-asa-req.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 2011

The degree requirements outlined below are based on course adjustments being 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. Take one of the following:
    - i. [INS 320](#) (3) Life Insurance [Prerequisite: INS 301 or R M 301] *Ending Fall 2011*
    - ii. [R M 430](#) (3) Life and Health Insurance [Prerequisite: R M 320W] *Beginning Fall 2012*
  
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. [INS 401 or 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. [INS \(R M\) 410](#) (3) Compound Interests and Annuities [Prerequisite or Concurrent: STAT (MATH) 141; Prerequisite: R M 301]
  - b. [R M \(INS\) 411](#) (3) Actuarial Mathematics I [Prerequisite: R M 410; STAT (MATH) 414]
  - c. [R M \(INS\) 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*)