# BACHELOR OF SCIENCE DEGREE

## ACTUARIAL SCIENCE

**COORDINATE MAJOR**

**FOR ADDITIONAL INFORMATION, PLEASE CONTACT THE** DEPARTMENT OF MATHEMATICS

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### (1) UNIVERSITY REQUIREMENTS

**Writing Requirement**
- Tier I: LB 133 4
- Tier II: Satisfied by completing the Lyman Briggs College History, Philosophy and Sociology of Science and Senior requirements listed below.

**Integrative Studies in Arts & Humanities (IAH)**
- IAH 201-210* 4
- IAH 211-241* † 4

**Integrative Studies in Social, Behavioral & Economic Sciences (ISS)**
- ISS 200-level course* 4
- ISS 300-level course*‡ 4

*National, International, & Multicultural Diversity

Students must include at least one "N" course and one "I" course in their Integrative Studies programs. A "D" course may meet either an "N" or an "I" requirement, but not both.

†Beginning Summer 2013, LB 331, 333, and 336 will fulfill the IAH "B" university requirement (IAH 211 or higher). Please consult your LBC advisor for specific details for your program.

‡Beginning Summer 2013, LB 332, 334, and 335 will fulfill the ISS 300-level university requirement. Please consult your LBC advisor for specific details for your program.

**Mathematics, Biological and Physical Sciences**
Satisfied by the Lyman Briggs College requirements in Mathematics, Biological and Physical Sciences (see below).

Minimum number of credits required: 120
Minimum cumulative and major grade point average: 2.0

### (2) LYMAN BRIGGS COLLEGE REQUIREMENTS

**Biological Sciences (9 cr.)**
- Complete ONE of the following groups of courses
  1. LB 144 & 145 9
  2. BS 161, 162, 171 & 172 10

**Chemistry (8-9 cr.)**
- Complete ONE of the following groups of courses
  1. LB 171, 171L, 172, & 172L 9
  2. CEM 141, 142, & 161 8
  3. CEM 151, 152, & 161 8

**Physics (8-10 cr.)**
- Complete ONE of the following groups of courses
  1. LB 273, 274 8
  2. PHY 183 & 184 8

**Mathematics (6-7 cr.)**
- Complete ONE of the following groups of courses
  1. LB 118 & 119 8
  2. MTH 132 & 133 7

**History, Philosophy & Sociology of Science (11-12 cr.)**
- LB 133 4
- LB 330-336, 355, 490E; ENG 473A; HST 425; SOC 368 7-8

**Senior Seminar (4 cr.)**
- LB 492* 4

*Students may consult with a Lyman Briggs advisor regarding a possible substitution for the Lyman Briggs Senior Seminar for this major.
MAJOR REQUIREMENTS
Complete sections A through H

A. Complete ONE of the following courses (3 or 4 cr.)
   LB  220  Calculus III  4
   MTH 234  Multivariable Calculus  4
   MTH 254H Honors Multivariable Calculus  3

B. Complete ONE of the following courses (3 cr.)
   MTH 235  Differential Equations  3
   MTH 255H Honors Differential Equations  3
   MTH 340  Ordinary Differential Equations I  3

C. Complete ONE of the following courses (1 cr.)
   MTH 490  Directed Studies  1
   MTH 491B  Teamwork Experience  1

D. Complete ALL of the following courses (21 cr.)
   MTH 309  Linear Algebra I  3
   MTH 360  Theory of Mathematical Interest  3
   MTH 458  Financial Mathematics for Actuaries  3
   STT 441  Probability & Statistics I: Probability  3
   STT 455  Actuarial Models I  3
   STT 456  Actuarial Models II  3
   STT 459  Construction and Evaluation of Actuarial Models  3

E. Complete ONE of the following courses (3 cr.)
   MTH 457  Introduction to Financial Mathematics  3
   STT 442  Probability & Statistics II: Statistics  3

F. Complete ONE of the following courses (3 cr.)
   MTH 491A  Actuarial Internship  3
   MTH 496  Capstone in Mathematics  3

G. Complete ALL of the following courses (18 cr.)
   ACC 230  Survey of Accounting Concepts  3
   EC 201  Introduction to Microeconomics  3
   EC 202  Introduction to Macroeconomics  3
   FI 311  Financial Management  3
   FI 321  Theory of Investments  3
   FI 379  Financial Derivatives (D)  3

H. Complete ONE of the following courses (3 or 4 cr.)
   CSE 131  Technical Computing and Problem Solving  3
   CSE 231  Introduction to Programming I  4

IMPORTANT: These guidelines are presented for planning purposes only. Students MUST consult a department advisor for reliable and exact determination of individual's course requirements.