

# Actuarial Science BBA

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## Overview

Located in the Department of Risk, Actuarial Science, and Legal Studies, the **Bachelor of Business Administration in Actuarial Science** provides students the opportunity to develop a strong foundation in mathematics and statistics while being exposed to a wide range of business disciplines. Temple's Actuarial Science major is one of only a few programs designated as a Center of Actuarial Excellence by the Society of Actuaries.

Actuaries specialize in the evaluation of insurance and financial risks. They hold positions of responsibility with insurance companies, consulting firms, investment banks, government regulatory organizations and government insurance programs. Actuaries must also pass a series of professional exams, administered by the Society of Actuaries and Casualty Actuarial Society, to receive the credential of Associate or Fellow. For more information, see the Licensure/Certification section below.

**Campus Location:** Main

**Program Code:** BU-AS-BBA

## Student Professional Organization

Students should meet with the Program Director as soon as they enter the Actuarial Science program. In addition to their coursework and professional examinations, students are strongly encouraged to become active in the Sigma chapter of **Gamma Iota Sigma** (GIS), Temple's national award-winning professional student organization in Risk Management, Insurance, and Actuarial Science. The organization hosts numerous guest speakers from the industry, sponsors a variety of career development seminars, and maintains a widely-distributed résumé book. For more information, please contact the GIS President at 215-204-9368 or visit [www.sigmachapter.org](http://www.sigmachapter.org).

## Licensure/Certification

Being credentialed as an actuary is important for advancement in the actuarial profession and to become qualified to offer professional judgement on financial statements. These credentials of Associate and Fellow are national credentials and are recognized internationally as well. There is no state-specific actuarial credentialing or state-specific actuarial exams.

Actuaries must pass a series of professional exams administered by the Society of Actuaries and Casualty Actuarial Society which test the candidate's knowledge in probability, statistics, financial mathematics, insurance contractual design, and insurance company financial operations. Candidates completing a certain set of exams receive the designation of Associate under either society. Beyond that set, candidates completing an additional set of exams receive the designation of Fellow of either society.

Coursework in Temple's Actuarial Science program helps prepare students for several Associateship-level actuarial exams. Students can self-study for additional exams.

An additional component to becoming credentialed as an Associate is completing Validation by Educational Experience (VEE) requirements. Candidates can satisfy these requirements by completing an external course or taking college courses which have been approved by the Society of Actuaries and receiving a minimum grade of B-. Courses in Temple's Actuarial Science curriculum are approved by the Society of Actuaries as satisfying these VEE (Validation by Educational Experience) requirements.

<https://www.soa.org/education/exam-req/edu-asa-req/>

## Contact Information

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Learn more about the Bachelor of Business Administration in Actuarial Science.

*These requirements are for students who matriculated in academic year 2023-2024. Students who matriculated prior to fall 2023 should refer to the Archives to view the requirements for their Bulletin year.*

## Summary of Requirements

### University Requirements

All new students are required to complete the university's General Education (GenEd) curriculum.

Note that students not continuously enrolled who have not been approved for a Leave of Absence or study elsewhere must follow University requirements current at the time of re-enrollment.

## College Requirements

Students are strongly encouraged to take the professional actuarial exams immediately after completing the relevant coursework. Students must meet the College Graduation Requirements for the Bachelor of Business Administration including the requirements of the major listed below. Students must attain a 2.0 cumulative GPA and 2.0 in the major to graduate with the Actuarial Science major.

## Major Requirements

Students must follow the Major Requirements and College Requirements current at the time of declaration. Students not continuously enrolled who have not been approved for a Leave of Absence or study elsewhere must follow University, College, and Major requirements current at the time of re-enrollment.

### Requirements of Actuarial Science Major

| Code                                 | Title   | Credit Hours |
|--------------------------------------|---|--------------|
| AS 2502                              | Theory of Interest  | 3            |
| AS 2503                              | Actuarial Corporate Finance <sup>1</sup>  | 3            |
| AS 3501                              | Long-Term Actuarial Modeling  | 3            |
| AS 3503                              | Short-Term Actuarial Modeling <sup>2</sup>  | 3            |
| AS 3596<br>or AS 3597                | Actuarial Practice: Property and Liability<br>Actuarial Practice: Group & Health Benefits | 3            |
| Select two of the following courses: |   | 6            |
| AS 3502                              | Advanced Long-Term Actuarial Modeling   |              |
| AS 3580                              | Special Topics: Actuarial Science <sup>3</sup>  |              |
| AS 4503                              | Advanced Short-Term Actuarial Modeling <sup>3</sup>                                       |              |
| AS 4504                              | Advanced Actuarial Analytics <sup>3</sup>   |              |
| RMI 3567                             | Managing International Risk   |              |

**Total Credit Hours** **21**

<sup>1</sup>  
AS 2503 replaces FIN 3101 in the upper-division foundation. This course is not calculated in the major GPA.

<sup>2</sup>  
This is the major capstone, and all prerequisites must be met.

<sup>3</sup>  
Course only offered in Spring term.

### Non-Business Required Courses

| Code      | Title                              | Credit Hours |
|-----------|------------------------------------|--------------|
| MATH 1041 | Calculus I <sup>1</sup>            | 4            |
| MATH 1042 | Calculus II <sup>1</sup>           | 4            |
| AS 1501   | Actuarial Probability <sup>2</sup> | 3            |
| AS 2505   | Actuarial Statistics <sup>2</sup>  | 3            |
| AS 3504   | Actuarial Analytics <sup>2</sup>   | 3            |

**Total Credit Hours** **17**

<sup>1</sup>  
MATH 1041 & MATH 1042 replace the STAT 1001 & STAT 1102 requirements listed in the Fox School of Business & Management foundation course requirements. MATH 1041 also satisfies the Quantitative Literacy (GQ) General Education requirement.

<sup>2</sup>  
These courses replace STAT 2103 in the Fox School of Business & Management foundation course requirements.

## Suggested Academic Plan

### Bachelor of Business Administration in Actuarial Science

#### Suggested Plan for New Students Starting in the 2023-2024 Academic Year

Please note that this plan is suggested only, ensuring prerequisites are met.

| <b>Year 1</b>                             |   | <b>Credit Hours</b> |
|---|---|---------------------|
| <b>Fall</b>                               |   |                     |
| MATH 1041                                 | Calculus I  | 4                   |
| ECON 1101                                 | Macroeconomic Principles                                | 3                   |
| HRM 1101                                  | Leadership and Organizational Management                | 3                   |
| ENG 0802                                  | Analytical Reading and Writing                          | 4                   |
| or ENG 0812                               | or Analytical Reading and Writing: ESL                  |                     |
| or ENG 0902                               | or Honors Writing About Literature                      |                     |
| GenEd Breadth Course                      |   | 3                   |
| <b>Credit Hours</b>                       |   | <b>17</b>           |
| <b>Spring</b>                             |   |                     |
| MATH 1042                                 | Calculus II   | 4                   |
| ECON 1102                                 | Microeconomic Principles                                | 3                   |
| BA 1103                                   | Legal and Ethical Reasoning in Business                 | 3                   |
| AS 1501                                   | Actuarial Probability                                   | 3                   |
| IH 0851                                   | Intellectual Heritage I: The Good Life                  | 3                   |
| or IH 0951                                | or Honors Intellectual Heritage I: The Good Life        |                     |
| <b>Credit Hours</b>                       |   | <b>16</b>           |
| <b>Year 2</b>                             |   |                     |
| <b>Fall</b>                               |   |                     |
| ACCT 2103                                 | Financial and Managerial Accounting for Decision Making | 4                   |
| AS 2502                                   | Theory of Interest                                      | 3                   |
| AS 2505                                   | Actuarial Statistics                                    | 3                   |
| RMI 2101                                  | Introduction to Risk Management                         | 3                   |
| IH 0852                                   | Intellectual Heritage II: The Common Good               | 3                   |
| or IH 0952                                | or Honors Intellectual Heritage II: The Common Good     |                     |
| Free Elective <sup>1</sup>                |   | 1                   |
| <b>Credit Hours</b>                       |   | <b>17</b>           |
| <b>Spring</b>                             |   |                     |
| AS 2503                                   | Actuarial Corporate Finance                             | 3                   |
| AS 3504                                   | Actuarial Analytics                                     | 3                   |
| BA 2101                                   | Professional Development Strategies                     | 1                   |
| BA 2196                                   | Business Communications                                 | 3                   |
| MKTG 2101                                 | Marketing Management                                    | 3                   |
| MIS 2101                                  | Digital Systems   | 3                   |
| <b>Credit Hours</b>                       |   | <b>16</b>           |
| <b>Year 3</b>                             |   |                     |
| <b>Fall</b>                               |   |                     |
| MSOM 3101                                 | Operations Management                                   | 3                   |
| Select one of the following: <sup>2</sup> |   | 3                   |
| BA 2501                                   | Turning Numbers into Knowledge: Visualizing Data        |                     |
| BA 2502                                   | Business Analytics: Modern Data Science Techniques      |                     |
| AS 3501                                   | Long-Term Actuarial Modeling                            | 3                   |
| Business Elective <sup>3</sup>            |   | 3                   |
| GenEd Breadth Course                      |   | 3                   |
| <b>Credit Hours</b>                       |   | <b>15</b>           |

|   |   |            |
|---|---|------------|
| <b>Spring</b>   |   |            |
| AS 3503   | Short-Term Actuarial Modeling                       | 3          |
| Business Elective <sup>3</sup>                            |   | 3          |
| Free Elective   |   | 3          |
| Free Elective   |   | 2          |
| Free Elective   |   | 2          |
| <b>Credit Hours</b>                                       |   | <b>13</b>  |
| <b>Year 4</b>   |   |            |
| <b>Fall</b>   |   |            |
| BA 4102   | Strategic Management                                | 3          |
| Select one of the following:                              |   | 3          |
| AS 3596   | Actuarial Practice: Property and Liability          |            |
| AS 3597   | Actuarial Practice: Group & Health Benefits         |            |
| GenEd Breadth Course                                      |   | 3          |
| GenEd Breadth Course                                      |   | 3          |
| AS Major Elective #1: choose among the following courses: |   | 3          |
| AS 3502   | Advanced Long-Term Actuarial Modeling               |            |
| AS 3580   | Special Topics: Actuarial Science <sup>4</sup>      |            |
| AS 4503   | Advanced Short-Term Actuarial Modeling <sup>4</sup> |            |
| AS 4504   | Advanced Actuarial Analytics <sup>4</sup>           |            |
| RMI 3567  | Managing International Risk                         |            |
| <b>Credit Hours</b>                                       |   | <b>15</b>  |
| <b>Spring</b>   |   |            |
| Business Elective <sup>3</sup>                            |   | 3          |
| GenEd Breadth Course                                      |   | 3          |
| GenEd Breadth Course                                      |   | 3          |
| GenEd Breadth Course                                      |   | 3          |
| AS Major Elective #2: choose among the following courses: |   | 3          |
| AS 3502   | Advanced Long-Term Actuarial Modeling               |            |
| AS 3580   | Special Topics: Actuarial Science <sup>4</sup>      |            |
| AS 4503   | Advanced Short-Term Actuarial Modeling <sup>4</sup> |            |
| AS 4504   | Advanced Actuarial Analytics <sup>4</sup>           |            |
| RMI 3567  | Managing International Risk                         |            |
| <b>Credit Hours</b>                                       |   | <b>15</b>  |
| <b>Total Credit Hours</b>                                 |   | <b>124</b> |

1

AS 1601 is highly recommended in this semester.

2

Please check with your departmental advisor on which course is most appropriate for the major.

3

2000-3999 electives can be selected from: ACCT, AS, BA, ECON, FIN, HRM, IB, LGLS, MIS, MKTG, RE, RMI, STAT, SCM, SGM. Please see your advisor for elective suggestions that match your career objectives.

4

Course only offered in Spring term.