THE OHIO STATE UNIVERSITY

Natural and Mathematical Sciences

Department of Mathematics

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To Whom it May Concern:

I am writing to provide a revision to our proposed changes to the Actuarial Science degree program that we believe will better align the curriculum with industry needs (i.e., the SOA exams) and provide more flexibility for our students.

I appreciate the feedback I recieved from the Natural and Mathematical Sciences Subcommittee of the ASC Curriculum Committee in November 2024 and have addressed the four contingencies in these revised materials.

I list the proposed changes below.

Addition of English 3305 as an option alongside English 3304

We propose adding English 3305 as an option alongside English 3304. **Specifically, we are requesting to add English 3305 to the list of courses that fulfill the Advanced Writing Embedded Literacy requirement.** English 3305 emphasizes the style, organization, and conventions of technical and research reports, proposals, memoranda, and professional correspondence. As actuaries regularly engage in preparing technical reports and communicating complex ideas clearly, this course is as appropriate as English 3304 which focuses on business writing.

Removal of Math 5632: Financial Economics for Actuaries

We recommend removing Math 5632 from the required course list; it would become an elective as described below. This course was originally tied to the Society of Actuaries (SOA) exam on Financial Economics. The SOA no longer offers an exam corresponding to this course, so it is no longer necessary for students pursuing actuarial certification.

Revised Course Flexibility

The current two-course sequence was originally designed to align with the SOA exams, which historically focused on separate exams for loss models and life contingencies. However, since these topics are now combined into a single exam, it makes more sense for students to take courses in both life contingencies and loss models. We propose offering students greater flexibility by allowing them to choose any three courses from the following list:

- Math 5630: Life Contingencies
- Math 5631: Life Contingencies II

- Math 5632: Financial Mathematics for Actuaries (offered but no longer required)
- Math 5633: Loss Models
- Math 5634: Loss Models II
- Math 5637: Topics in Risk Modeling

I look forward to your feedback.

Sincerely,

Jim Fowler
Vice-Chair for Undergraduate
Studies
Department of Mathematics

Bachelor of Science
Major: Actuarial Science

Students in this major will complete a minimum of 121 hours outlined as follows.

General Education Requirements

Requirement	Course Options	Hours
GE Launch Seminar	*General Education Seminar*	1
Writing and Information Literacy	*Student Choice**	3
Mathematical & Quantitative Reasoning/Data Analysis	*Student Choice**	4-5
Literary, Visual and Performing Arts	*Student Choice*	3
Historical & Cultural Studies	*Student Choice*	3
Natural Science	*Student Choice*	4-5
Social & Behavioral Sciences	*Student Choice**	3
Race, Ethnic and Gender Diversity	*Student Choice*	3
Theme: **Citizenship for a Diverse & Just World** [a]	*Student Choice*	4-6
Theme: **Student Choice** [a]	*Student Choice*	4-6
GE Reflection	*Understanding a Diverse & Just World*	1
General Education Credit Hours:		**32-39**

Major Supporting Courses

* The following courses are prerequisites and/or corequisites to this major and can also fulfill certain GE Requirements above.

Course (hrs)	GE Category or Course Title
Math 1151 & 1152 (10)	Mathematical & Quantitative Reasoning/Data Analysis
Econ 2001 & 2002 (6)	Social & Behavioral Sciences
CSE 2111 or CSE 1222 or 1223 (3)	Spreadsheets and Databases or Computer Programming in C++/Java
ACCTMIS 2000 (3)	Foundations of Accounting/Intro to Accounting I & II
Comm 2367 or Comm 2110 or Comm 2131 (3)	Persuasive Communication Principles of Effective Public Speaking Business and Professional Speaking
Math 1295 (1)	Math Seminar

College/Degree Requirements

Requirement	Course Options	Hours
World Language*	**1101**	4
	1102 or 1155	4
	1103	4
ASC 1100.xx	**University Survey**	1
*Based upon student's language placement	**Credit Hours:**	**1-13**

Major Coursework

Course	Title	Hours
Math 2153	Calculus III	4
Math 2568	Linear Algebra	3
Choose 1 course: Math 4530 Stat 4201	Probability Statistics I	3-4
Stat 4202	Statistics II	4
Math 3588	Practicum in Actuarial Science	3
Math 3618	Theory of Interest	3
BusFin 3120	Foundations of Finance	3
Choose 1 course: English 3304 English 3305	Business and Professional Writing Technical Writing	3
Choose 3 courses: Math 5630 Math 5631 Math 5632 Math 5633 Math 5634 Math 5637	Life Contingencies Life Contingencies Financial Mathematics for Actuaries Loss Models Loss Models Topics in Risk Modeling	9
Credit Hours:		35-36

General Education	**32-39**
College/Degree Requirements	**1-13**
*Major Pre-Requisite Courses	**15**
Major	**35-36**
Open Electives	**19-37**
Minimum Total Credit Hours	**121**

Embedded Literacies:
- Math 3618 Theory of Interest – embedded technology
- English 3304 Business and Professional Writing or English 3305 Technical Writing – embedded writing
- Stat 4202 Statistics II – embedded data

[a] Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course, one course in each GE Theme area may double count in the GE and major hours. Theme courses are identified with a ❖ symbol.

Bachelor of Science
Major: Actuarial Science

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Students in this major will complete a minimum of 121 hours outlined as follows.

General Education Requirements

Requirement	Course Options	Hours
GE Launch Seminar	*General Education Seminar*	1
Writing and Information Literacy	*Student Choice**	3
Mathematical & Quantitative Reasoning/Data Analysis	*Student Choice**	5
Literary, Visual and Performing Arts	*Student Choice*	3
Historical & Cultural Studies	*Student Choice*	3
Natural Science	*Student Choice*	4-5
Social & Behavioral Sciences	*Student Choice**	3
Race, Ethnic and Gender Diversity	*Student Choice*	3
Theme: **Citizenship for a Diverse & Just World** [a]	*Student Choice*	4-6
Theme: **Student Choice** [a]	*Student Choice*	4-6
GE Reflection	*Understanding a Diverse & Just World*	1
General Education Credit Hours:		**33-39**

Major Supporting Courses

* The following courses are prerequisites and/or corequisites to this major and can also fulfill certain GE Requirements above.

Course (hrs)	GE Category or Course Title
Math 1151 & 1152 (10)	Mathematical & Quantitative Reasoning/Data Analysis
Econ 2001 & 2002 (6)	Social & Behavioral Sciences
CSE 2111 or CSE 1222 or 1223 (3)	Spreadsheets and Databases or Computer Programming in C++/Java
ACCTMIS 2000 (3)	Foundations of Accounting/Intro to Accounting I & II
Comm 2367 or Comm 2110 or Comm 2131 (3)	Persuasive Communication Principles of Effective Public Speaking Business and Professional Speaking
Math 1295 (1)	Math Seminar

College/Degree Requirements

Requirement	Course Options	Hours
World Language*	**1101**	4
	1102 or 1155	4
	1103	4
ASC 1100.xx	**University Survey**	1
*Based upon student's language placement	**Credit Hours:**	**1-13**

[a] Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course, one course in each GE Theme area may double count in the GE and major hours. Theme courses are identified with a ❖ symbol.

Major Coursework

Course	Title	Hours
Math 2153	Calculus III	4
Math 2568	Linear Algebra	3
Math 4530/Stat 4201	Probability/Statistics I	3/4
Stat 4202	Statistics II	4
Math 3588	Practicum in Actuarial Science	3
Math 3618	Theory of Interest	3
Math 5632	Financial Economics for Actuaries	3
BusFin 3120	Foundations of Finance	3
English 3304	Business and Professional Writing	3
Choose 1 sequence: Math 5630 & 5631 Math 5633 & 5634	Life Contingencies Loss Models	6
Credit Hours:		35-36

General Education	**33-39**
College/Degree Requirements	**1-13**
*Major Pre-Requisite Courses	**15**
Major	**35-36**
Open Electives	**19-37**
Minimum Total Credit Hours	**121**

Embedded Literacies:
- Math 3618 Theory of Interest – embedded technology
- English 3304 Business and Professional Writing – embedded writing
- Stat 4202 Statistics II – embedded data