From:	Smith, Randy
To:	Holmes, John
Cc:	Sutherland, Sue; Castro, Carlos; Reed, Katie; Smith, Randy; Griffiths, Rob; Greenbaum, Rob; Duffy, Lisa; Hunt, Ryan; Xiu, Dongbin; Vankeerbergen, Bernadette; Martin, Andrew; Olesik, Susan
Subject:	Proposal to revise the Actuarial Science major leading to the Bachelor of Science
Date:	Thursday, May 29, 2025 4:02:17 PM
Attachments:	image001.png

John:

The proposal from the Department of Mathematics to revise the Actuarial Science major leading to the Bachelor of Science degree was approved by the Council on Academic Affairs at its meeting on May 28, 2025. Thank you for attending the meeting to respond to questions/comments.

No additional level of internal review/approval is necessary. This action will be included in the Council's next Annual Activities Report to the University Senate (July 2025).

The Office of the University Registrar will work you with any implementation issues.

Please keep a copy of this message for your file on the proposal and I will do the same for the file in the Office of Academic Affairs.

If you have any questions please contact the Chair of the Council, Professor Sue Sutherland (.43), or me.

I wish you success with this important program development.

Randy

THE OHIO STATE UNIVERSITY

W. Randy Smith, Ph.D.
Vice Provost for Academic Programs
Office of Academic Affairs
University Square South, 15 E. 15th Avenue, Columbus, OH 43201
614-292-5881 Office
smith.70@osu.edu
Assisted by:
Katie Reed
Executive Assistant
(614) 292-5672

From:	Vankeerbergen, Bernadette
To:	Smith, Randy; Reed, Katie
Cc:	Martin, Andrew; Nagar, Ila; Steele, Rachel; Jenkins, Mary Ellen
Subject:	Revision to the Bachelor of Science--Actuarial Science
Date:	Monday, April 7, 2025 4:27:24 PM
Attachments:	Actuarial Science BS Revised Proposal 3-28-25.pdf image001.png Revision BS Actuarial Science Letter of Motion.pdf

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Dear Randy and Katie,

Please find attached a proposal to revise the Bachelor of Science--Actuarial Science. The revisions were approved on Friday, April 4, 2025 by the ASC Curriculum Committee (ASCC).

We are now advancing the proposal for review by CAA. The attached documents are: (1) the actual proposal and (2) the Natural and Mathematical Sciences Subcommittee cover letter to ASCC .

Please use this email as a cover letter indicating that the proposal has been duly reviewed and approved by the appropriate ASC curricular bodies (including the full ASC Curriculum Committee).

Please let me know if you have any questions.

Best regards,
Bernadette

THE OHIO STATE UNIVERSITY

Bernadette Vankeerbergen, Ph.D.
Assistant Dean, Curriculum
College of Arts and Sciences
114F University Hall, 230 North Oval Mall
Columbus, OH 43210
Phone: 614-688-5679
http://asccas.osu.edu

THE OHIO STATE UNIVERSITY

Department of Chemistry and Biochemistry
1118 Newman and Wolfrom Laboratory
100 West 18th Avenue
Columbus, OH 43210-1106

Christopher M. Hadad
hadad.1@osu.edu
614-688-3141

614-292-2251 Phone
614-292-1685 Fax
http://chemistry.osu.edu

April 2, 2025

Chair, Arts and Sciences Curriculum Committee
Ohio State University
CAMPUS

Dear Chair and Members of the Arts and Sciences Curriculum Committee:

On Thursday, November 7, 2024, the Natural and Mathematical Sciences Subcommittee reviewed a revision to the Actuarial Science program as a Bachelor of Science degree. The NMS Subcommittee voted unanimously to approve the request with four contingencies.

The Actuarial Science program has always been highly integrated with the insurance/actuary industry, for which certification exams are required. Moreover, our undergraduate students are heavily sought after for employment and/or internships.

The revised program was designed to better align with current needs of the actuarial science industry and the exams for certification that are required for our graduates with this degree. They proposed an additional option for English 3305 as an advanced writing option and the removal of Math 5632 as a requirement for financial economics – though, this course would still be an elective. Due to changes in the Society of Actuaries exam, this adjustment is better aligned for actuarial certification. Finally, some additional course offerings for additional flexibility by students are added, whereby students can choose three (3) courses from a set of six (6) options in Math (5630, 5631, 5632, 5633, 5634, and 5637). The initial proposal was well received by the NMS Subcommittee, and the revised version was recently received for which all of the contingencies have been addressed.

A revised submission addressing these contingencies was reviewed and approved by myself, Chair of the Natural and Mathematical Sciences Subcommittee, on March 31, 2025.

The revision to the Actuarial Science degree program is now advanced to the ASCC with a motion to approve.

Sincerely,

Christopher M. Hadad
Professor of Chemistry and Biochemistry
Vice Chair for Research and Administration, Department of Chemistry and Biochemistry
Director, Campus Chemical Instrument Center (Nuclear Magnetic Resonance | Mass Spectrometry and Proteomics)
Ohio State University

THE OHIO STATE UNIVERSITY

Natural and Mathematical Sciences
Department of Mathematics
100 Math Tower
231 West 18th Avenue
Columbus, OH 43210
614-292-4975 Phone
math.osu.edu

March 27, 2025

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 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

Major Supporting Courses

***** The following courses are prerequisites and/or corequisites to this major. Some may 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

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

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.

Bachelor of Science
Major: Actuarial Science

DRAFT

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