

Actuarial Mathematics (Actuarial Science)

2017 Addendum to the CUPM Report

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Background

In the summer of 2016, the Society of Actuaries (SOA) announced sweeping changes to the ASA (Associate of the Society of Actuaries) Curriculum. As we write this January 2017 addendum to the 2014 CUPM report, many of the curriculum changes are still being finalized and some new course syllabi are not yet available. The goal of this addendum is to help university programs anticipate changes they may need to make in actuarial course offerings and in actuarial degree requirements. This report will not offer complete details of the changes; actuarial program directors must focus closely on communications from both the SOA and Casualty Actuarial Society (CAS) as further details of changes continue to be made known.

Three sections of the original CUPM report require significant updates. The main portion of this addendum will focus on actuarial exam changes and changes to the VEE (Validation by Educational Experience) system. We will also mention additional tips for faculty resources and online student resources that were not included in the 2014 report.

While the information provided here is believed to be accurate at the time of its writing, the only source for current information is the websites of the respective societies.

Actuarial exams and credentials: 2017 Update

CAS/SOA exams

Each organization has its own series of examinations and other credentialing procedures leading first to the credential of Associate of that society and then to the credential of Fellow of that society. For details, for the SOA see <http://www.soa.org/Education/Exam-Req/default.aspx> and see <http://www.casact.org/admissions/process/> for the CAS. While several of the initial examinations currently satisfy requirements for both organizations, the pathways to Associate in the two organizations will soon start to further diverge. Most employers will expect a student to have passed one or two of the actuarial exams prior to graduation. It would be wise for students to first focus on exams that apply to either society.

In addition to the website listed above for the SOA, it is very important to note that the SOA will be introducing changes to the ASA pathway in each of the years of 2017, 2018, and 2019. A delineation of these changes together with transition rules can be found at <https://www.soa.org/Education/Exam->

[Req/2016-exam-fm-mfe-summer-change.aspx](#) for 2017 and <https://www.soa.org/curriculum-changes/curriculum-changes-default/> for 2018 and 2019.

New SOA Predictive Analytics Exam The rise of the use of data analytics in actuarial practice and the quantitative business world at large has led the SOA to add a Predictive Analytics Exam to the ASA track. The final syllabus of the exam is still in the planning stages. However, the basic two-fold format of the exam has been described as consisting of an e-Learning module coupled with a computer software assessment and written report.

Validation by Educational Experience (VEE): Changes in 2018 and 2019

Both the CAS and the SOA require knowledge of certain subjects on which they do not offer exams; instead, they are subject to Validation by Educational Experience (VEE) (<http://www.soa.org/education/exam-req/edu-vee.aspx>). The three subjects for which students obtain VEE credit in 2017 are Economics, Corporate Finance, and Applied Statistics. The VEE credits for Applied Statistics will be replaced by new VEE credits in Mathematical Statistics together with Exam SRM (Statistics for Risk Modeling) in 2018. (Note that the CAS does not require the current Applied Statistics VEE in the ACAS Track.) The VEE credit for Corporate Finance will be expanded to a VEE requirement for Finance and Accounting as of 2019. University programs should examine degree plans and determine if accounting courses need to be added to actuarial offerings. Many universities may already require a suitable accounting course as a prerequisite for their corporate finance course. Actuarial Directors also need to watch for announcements delineating VEE criteria for the new courses and apply to the SOA for VEE approval when new course approval forms are available.

The SOA has provided detailed information on the VEE changes (<https://www.soa.org/curriculum-changes/curriculum-changes-default/>). See the VEE pages of SOA website for information on how to get a course approved for VEE credit (<http://www.soa.org/education/exam-req/course-info/edu-vee-evaluation-process.aspx>) and for the list of all currently approved methods of obtaining VEE credit (<https://www.soa.org/Education/Exam-Req/Instructions-for-VEE-Directory.aspx>).

Faculty Training and Resources

To update the information listed in the 2014 CUPM report, we mention two new options available for actuarial faculty members.

CAS Academic Central: <http://www.casact.org/AcademicCentral> The CAS Academic Central program is free for non-CAS-members who are involved in teaching actuarial science, mathematics, economics, business, or related courses, and who have an interest in the activities of the Casualty Actuarial Society. Faculty gain access to numerous benefits, including curriculum guides, case studies, and other course-related materials.

The Society of Actuaries offers faculty support services through its [UCAP](#) (Universities and Colleges with Actuarial Programs) membership and [Centers of Actuarial Excellence](#) program. In addition the SOA launched an online [Community](#) in 2016 and will offer their [Actuarial Teaching Conference \(ATC\)](#) this year on June 26-27, 2017 in Pittsburgh, PA. The ATC offers a chance for actuarial educators to learn and share actuarial teaching ideas, network with other faculty and hear about SOA current events.

Online Student Communities

To supplement the information