

May 2010

DRAFT: Bachelor of Science in Actuarial Science Central Washington University Moderate Degree Change Proposal

Introduction

Central Washington University (CWU) offers a Bachelor of Science in Mathematics with a Specialization in Actuarial Science. CWU seeks approval of a Moderate Degree Change proposal to convert this specialization into a Bachelor of Science in Actuarial Science degree. The program would accommodate 16 FTE students beginning fall 2010, increasing to 25 FTE students by fall 2015. Like the B.S. in Mathematics, the B.S. in Actuarial Science would be housed in CWU's Department of Mathematics. No other institution offers a comparable program in Washington.

Proposed Change Description and Rationale

The B.S. in Actuarial Science would include three courses (11 credits total) that the current specialization lacks and delete three courses (15 credits) currently required.¹ These proposed curricular changes respond to external reviewer suggestions and would align the program's curriculum with the recently revised Society of Actuaries (SOA) professional qualification process. No other aspect of the program would change except for its name and CIP code.²

The change is needed to bring the program into compliance with CWU's curricular policies concerning specialization, adopted in 2008. Over time, the Actuarial Science specialization evolved away from the mathematics major in such a way that it did not satisfy the definition of specialization. As a result, the Faculty Senate Curriculum Committee requested that the department consider converting the specialization to a major.

¹ The post-conversion program's curriculum would add Time Series Analysis (MATH 414 – 3 credits), Financial Mathematics III (MATH 418C – 3 credits), and Mathematical Theory of Financial Economics (MATH 440 – 5 credits). It would delete Intermediate Microeconomics (ECON 401 – 5 credits), Intermediate Macroeconomics (ECON 402 – 5 credits), and Introduction to Stochastic Processes (MATH 413 – 5 credits). This would result in a net decrease of credits needed to complete the program from 108 to 104. MATH 414 and MATH 418C already exist, but MATH 414 would be a new course.

² CIP stands for Classification of Instructional Programs developed by the National Center for Education Statistics.

The conversion is based on recommendations from CWU's Faculty Senate Curriculum Committee and Associate Vice President for Undergraduate Studies. The conversion has been approved by the department, department chair, dean, Faculty Senate Curriculum Committee, Faculty Senate, and Provost's Council.

Students currently enrolled in the specialization would have a choice of either completing it or opting into the new program. The specialization would be phased out by June 2012. Program planners consulted with current students and found most students would prefer to see the actuarial science degree differentiated from the traditional mathematics major.

External Review

The proposal was reviewed by Dr. Stuart Klugman, Principal Financial Group Professor of Actuarial Science at Drake University. Dr. Klugman has taught actuarial science since 1974 and served as vice president of the Society of Actuaries (SOA) from 2001-2003. He also co-chaired the committee that re-designed the Society's qualification process in 2005, and co-authored one of the loss modeling textbooks used at CWU.

Dr. Klugman focused his review on the curriculum's alignment with SOA and Casualty Actuarial Society (CAS) qualification requirements, making several specific curricular suggestions to which CWU responded. Although he did not make a direct statement regarding the appropriateness of the degree title or the program's design, he did indicate it would meet the curricular requirements for the SOA's Center of Actuarial Excellence (CAE) designation. Program planners plan to apply for CAE status in the future when the number of graduates reaches the required threshold.

Staff Analysis

The existing specialization has an established track record of enrolling and graduating students. Program faculty and the mode of delivery would remain the same. Start-up costs would be limited to developing one new course, and the curricular changes are not substantial enough to require a full new degree proposal. Thus, the proposed conversion meets the eligibility criteria for a Moderate Degree Change.

The proposed conversion would benefit both students and employers by clearly communicating the program's academic focus. It would benefit the community by enhancing CWU's ability to attract students interested in Actuarial Science. Furthermore, the change would support the *Strategic Master Plan for Higher Education* by enabling CWU to maintain and perhaps expand educational attainment in a STEM-related field.

Staff Recommendation

After careful review of the proposal and supporting materials, staff recommends approval of the Bachelor of Science in Actuarial Sciences at Central Washington University.

RESOLUTION NO. 10-08

WHEREAS, Central Washington University proposes to offer a Bachelor of Science in Actuarial Science; and

WHEREAS, The degree would result from the conversion of an existing Actuarial Science specialization within the Bachelor of Science in Mathematics; and

WHEREAS, The conversion meets the eligibility criteria for a Moderate Degree Change; and

WHEREAS, The consolidation would align the program with Central Washington University's academic policies; and

WHEREAS, The consolidation would benefit students and employers by clearly indicating the program's academic focus; and

WHEREAS, The conversion would benefit the community by enhancing CWU's ability to attract students interested in Actuarial Science; and

WHEREAS, The proposed program would support the *Strategic Master Plan*;

THEREFORE, BE IT RESOLVED, That the Higher Education Coordinating Board approves the Bachelor of Science in Actuarial Sciences effective May 13, 2010.

Adopted:

May 13, 2010

Attest:

Jesús Hernandez, Chair

Roberta Greene, Secretary