

TO: Barbara D'Ambrosia, Chair, Faculty Council (FC)  
FROM: Committee on Academic Policies (CAP)  
RE: CAP Report on the Proposal for a Content Area Program in Mathematics for College Credit Plus (CCP) Teachers  
DATE: November 22, 2016  
CC: Margaret Farrar, Dean, College of Arts and Sciences (CAS)  
Graciela Lacueva, Associate Dean for Sciences, Mathematics, and Health  
Jeanne Colleran, Provost and Academic Vice President  
Dennis F. Hareza, Chief Financial Officer  
David Wong, Executive Director of Academic Finance  
Brian Williams, Vice President for Enrollment & Institutional Analytics  
Paul Schick, Chair, Department of Mathematics and Computer Science  
Todd Bruce, Director, Academic Assessment

Charge from FC: FC forwarded the Proposal for a Minor in Actuarial Science (the Proposal) written by Dr. Brendan Foreman of Mathematics and Computer Science Department to CAP, a subcommittee of FC. Furthermore, FC recommended that CAP work with appropriate administrative contact person from CAS, Dr. Graciela Lacueva.

Procedure that CAP followed: CAP used the 'Protocol for Requesting Approval of a New Academic Program' (Protocol), revised on November 22, 2013 as a guideline to review this proposal. As a result, CAP reviewed all the following documents:

1. the Proposal
2. Letters from
  - a. the University Budget Committee (Dennis F. Hareza)
  - b. the Executive Director for Academic Finance (David Wong)
  - c. Enrollment Division (Brian Williams)
3. Letters of Support from
  - a. CAS Dean and Associate Dean' joint letter
  - b. Paul Shick
4. Director of Academic Assessment (Todd Bruce)

More specifically, CAP had first round discussion about the Proposal on 9/28/16; provided written feedback (Appendix 1) to Dr. Foreman; had second round discussion on the Proposal on 10/18/16. During this process, CAS Dean and Associate Dean Dr. Lacueva were informed of our findings. Dr. Lacueva was invited to and joined our discussions both times. CAP had one-hour open hearings for the Proposal in on 10/26/16 and 10/27/16, respectively. Meanwhile, FC organized an online forum on Canvas running until 10/28/16. No one came to the open hearing and no questions were asked online or via email.

CAP highlights a few strengths of the Proposal here.

First, the idea of offering an undergraduate minor in Actuarial Science is timely and may increase the number of majors for MT/CS because of the added value. Second, the department is poised to offer an undergraduate minor in Actuarial Science as it requires no new courses. Third, the proposed minor pairs well not only with a Mathematics Major but also with an Economics Major outside the department.

Major concerns that CAP had, documented in Appendix 1: Feedback from CAP, and those listed in

the Joint letter from the Dean and Associate Dean, were well addressed in the revised proposal. CAP has three further recommendations.

1. The course load for the sample 4-year plan in Physics or Finance seems rather heavy. It is unclear how students will arrange the courses required by the minor with their major and core courses. We recommend that Dr. Foreman work with the chairs of Department of Economics and Finance and Department of Physics and develop a more detailed sample 4-year plan including the Finance and Physics Major courses along with the core.
2. CAP understands that Society of Actuaries (SOA) only publishes the information of people who have passed the exams. It does not publish information of people who have taken but not passed the exams. In addition, SOA does not publish grades. Hence, we recommend changing this text: “The SOA publishes the information of all people who have taken and passed each exam. The coordinator will collect this information regarding the dates and grades of each SOA exam taken by each student in the program.” to “The SOA publishes the information of all people who have passed each exam. The coordinator will collect this information regarding the dates of each SOA exam passed by each student in the program.” In addition, we ask the department to be specific as to which SOA exams they will be tracking such as P or FM. CAP also suggests that the department track the SOA performance of each minor every year for 4 years after they graduate.
3. We ask Dr. Foreman to specify the qualifications to teach MT 225, such as a person’s training and teaching record in local universities.

In summary, the Proposal addresses a need in offering a Minor in Actuarial Science and can be implemented immediately with minimal cost. The major concerns that CAP had initially were well addressed in the revised proposal. The department can easily implement our recommendations listed above. We believe that the Proposal is ready to go out for a vote of the Faculty, if FC wishes to do so.

### **Appendix 1: Feedback from CAP**

October 4, 2016

Dear Dr. Foreman,

Thank you for submitting the Proposal for a Minor in Actuarial Science (AS)! CAP commends you and colleagues in MT/CS for your time and effort for preparing a good proposal. CAP had our first discussion over this proposal on 9/28/16 based on the following documents:

- 1) the proposal dated 8/30/2016 and the budget dated 9/13/16
- 2) Letter from the Executive Director for Academic Finance (David Wong)
- 3) Letter from Enrollment (Brian Williams)
- 4) Letter of Support from
  - a) Joint letter from CAS Dean (Margaret Farrar) and Associate Dean (Graciela Lacueva)
  - b) MT/CS Chair (Paul Shick)

Here we provide our feedback and hope that it may help strengthening your proposal. After receiving your modified proposal and all supporting documents (letters from UBC, Director of Assessment, and chairs from all departments that you will collaborate), CAP will host opening hearings and discuss your proposal again. Finally, CAP will send our report on your proposal to FC.

The joint letter from CAS Dean and Associate Dean listed strength and concerns. CAP recommends

that these concerns be addressed. In particular, only 1 faculty member can teach MT225, have you considered looking into a part-timer that may help? What is your solution?

Furthermore, CAP highlights a few strengths.

Firstly, the idea of offering an undergraduate minor in Actuarial Science is timely and may increase the number of majors for MT because of the added value. Secondly, MT/CS department is ready to offer an undergraduate minor in Actuarial Science as it requires no new courses.

CAP has some questions/concerns:

4. There is a demand of actuary in the US and it is a highly paid job. However, this may not draw more new students to the MT/CS department automatically. As high school teachers and students may not be aware of this new minor at JCU, advertisement/outreach to high schools can be critical. Are there any recruiting, marketing, outreach activities being or that will be developed to promote this new minor? Though not explicitly required in the proposal, this discussion can strengthen your proposal especially if you have consulted with Enrollment and/or Advancement/Marketing and already have plans to address this.
5. Current version of AS makes it easy for a Math major to complete. In order to promote the new minor across campus, it may be advantageous to attract other majors such as Economy and Finance. Is it possible to revise the required courses so that it is feasible for those majors to complete in 4 years? If so, please revise the required courses accordingly and have sample 4-yr plan for a few different majors: Math, Economics and Finance in the proposal. You need to request letters of support from them.
6. In principle, a Math major can get the AS minor with 3 new courses. Will you put some restraint on what courses they have to take if they choose Math major and AS minor? There are extra requirements for Statistics minor, for example.
7. 2 courses (DS100 and CS150) are listed as potential replacement courses. Are they as important as courses such as MT225? It seems that students may suffer substantially by not taking MT225 and some other courses that will help them in their professional exams. Please revise this or provide convincing arguments if you think DS100 and CS150 are essential.
8. Assessment: Performance on SOA exams: when will students take these exams: while at JCU or after they graduate? It may be difficult to gather the data if they take the exam after graduation. Please be specific and offer practical solutions how you gather this info if they take exam after JCU.
9. Letter from University Budget Committee (UBC) is missing. CAP understands that UBC will meet on 10/11/2016. Please have it submit the letter in a timely fashion.

CAP