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August 21, 2014

To: Lisa J. Graumlich, Dean, College of the Environment

From: David L. Eaton, Vice Provost and Dean Rebecca Aanerud, Associate Dean for Academic Affairs

RE: Review of the Program on Climate Change (2013-2014)

This memo outlines the recommendations from the review of the Program on Climate Change in the College of the Environment. The review included the initial, five-year review of the Graduate Certificate in Climate Science as well as a review of the Undergraduate Minor in Climate Science. Detailed comments on the review can be found in the documents that were part of the following formal review proceedings:

- Charge meeting between review committee, program, and administrators (May 13, 2013)
- Program on Climate Change self-study (November 4, 2013)
- Site visit (January 30-31, 2014)
- Review committee report (February 25, 2014)
- Graduate and Professional Student Senate report (March 6, 2014)
- Program on Climate Change response to the review committee report (March 28, 2014)
- Graduate School Council consideration of review (May 15, 2014)

The review committee consisted of:

Ka-Kit Tung, Professor, UW Department of Applied Mathematics (Committee Chair) Sarah E. Reichard, Professor, UW School of Environmental and Forest Sciences Jonathan T. Overpeck, Professor, Department of Geosciences and Department of Atmospheric Sciences, University of Arizona

The Program on Climate Change was established in 2001 with University Initiatives Funding, and it initially brought together three academic units from two colleges to offer an array of integrated courses with the goal of exploring a holistic and dynamic understanding of climate science. The Graduate Certificate in Climate Science was approved in 2007, and the Undergraduate Minor was approved in 2010. This was the first review of these programs.

A subcommittee of the Graduate School Council presented findings and recommendations to the full Council at its meeting on May 15, 2014. After discussion, the Council recommended a ten year review (2023-2024) for both the Graduate Certificate in Climate Science and the Undergraduate Minor. Specific comments and recommendations regarding the program include the following.

Graduate Certificate in Climate Science Program Strengths

The Review Committee found the Program on Climate Change to be a great program with enthusiastic support from students, faculty and department chairs. It fulfills its original purpose of offering interdisciplinary education on climate science and furthering collaboration across campus on climate research. The committee viewed as impressive the program's accomplishments under severe budget constraints. Specific strengths include:

- <u>Teaching and Learning</u>. True interdisciplinary teaching and learning, with team-taught courses that assure multiple perspectives are brought to the topics.
- <u>Students</u>. Engaged and enthusiastic students who value the unique pedagogy of the program and who foster collaborative relationships across departments. There is a nucleus of fellowship-supported students who champion the program and help recruit new students.
- <u>Faculty</u>. Engaged and enthusiastic junior faculty along with outstanding senior faculty.
- <u>Leadership</u>. Strong and dedicated leadership in spite of more than 50% cut in funding in 2008.
- <u>Program Support</u>. Support from the chairs of the initial three departments who expressed continued support for jointly taught courses; strong support from faculty and students.
- <u>Reputation</u>. The program supports UW as a premier "brand" in the national climate science community.

Graduate Certificate in Climate Science Challenges & Risks

- <u>Resources</u>. Funding cuts have reduced the number of student fellowships, leading to a dwindling student "nucleus" in the program. The program has a relatively small number of students in relation to the current investment in interdisciplinary courses.
- <u>Student Identity</u>. There is some lack of clarity between membership in the Program on Climate Change and graduate students registered in the certificate program.
- <u>Communication</u>. Some communication challenges exist with regard to certain academic requirements; the website needs updating.
- <u>Program Growth</u>. In the face of strong potential for program growth, there exists a current lack of consensus across the levels of program leadership, faculty, and the broader UW community on what the vision for the future of climate science at UW should be.

Undergraduate Minor

• <u>Size</u>. The minor, currently in its second year, serves a significantly smaller number of students than initially forecast. Better outreach and streamlined advising may boost enrollment.

• <u>Faculty Involvement</u>. The minor requires minimal faculty or advising effort, but also has limited faculty engagement.

Review Committee Recommendations

In general, the committee encouraged broader thinking by program stakeholders on the health and potential for the Program on Climate Change. Specific recommendations included:

- <u>Student Support</u>. If funding allows, the college should restore funding for student fellowships to the original level.
- <u>Instruction</u>. The team-taught interdisciplinary courses should be continued.
- <u>Undergraduate Minor</u>. The current minor's enrollment target should be adjusted to about 20 students, and it should be the subject of active advertisement and recruitment. Greater faculty involvement would strengthen the program. In addition, the program should explore the possibility of augmenting the current minor with another that is suited to a broader range of students across campus.
- <u>Communication</u>. The website and listservs should be updated.

Program Response

The director welcomed the committee's recommendations and will work to address the items raised. There is broad alignment between the committee's recommendations and the program's response, which includes the following points:

- <u>Student Support</u>. Agreement that support for students is a vital aspect to the health of the program and a priority for additional funding.
- <u>Courses</u>. Team-taught courses are a key component of the program's success, and there is no threat to these courses at the present time.
- <u>Undergraduate Minor Enrollment</u>. The program will reach out to departmental advisors in targeted departments to work on increasing enrollment. Moving from current 5-6 minors to 20 minors is a reasonable goal.
- <u>Additional Undergraduate Minor</u>. The program notes that additional resources would be required for this and plans instead to continue working with the Program on the Environment to establish a "Climate Pathway" as a more modest approach that serves in the same spirit as a broader minor. This could provide a basis for an additional minor if funding became available.
- <u>Website</u>. The program will be updating the website over the next year and has ideas for improved communications and fostering community cohesion.
- <u>Broad Impacts</u>. The program is considering enhancing the advisory board with a goal of creating a new vision for the Program on Climate Change.

Graduate School Council Recommendations

The Graduate School Council recommended continuing status for the programs under review, with next review of the Graduate Certificate in Climate Science and Undergraduate Minor in ten years (2023-2024).

We concur with the Council's comments and recommendations.

 c: Ana Mari Cauce, Provost and Executive Vice President, Office of the Provost Patricia Moy, Associate Vice Provost for Academic and Student Affairs, Office of the Provost
Julia Parrish, Associate Dean, Academic Affairs and Diversity, College of the Environment
LuAnne Thompson, Director, Program on Climate Change
Members of the Program Review Committee
Members of the Graduate School Council
David Canfield-Budde, Academic Program Specialist, The Graduate School GPSS President