

Curricular Affairs Committee of the Faculty Senate

To: The UVM Faculty Senate

From: Curricular Affairs Committee of the Faculty Senate, Laura Almstead, Chair

Date: April 5, 2018

Re: Approval of a proposal for a new Certificate of Graduate Study in Community Resilience and Planning submitted by the College of Agriculture and Life Sciences in conjunction with the Graduate College

At its meeting on April 5, 2018, the Curricular Affairs Committee approved the actions recommended in the following memo.

The Curricular Affairs Committee approved a proposal for a new Certificate of Graduate Study in Community Resilience and Planning from the College of Agriculture and Life Sciences, Department of Community Development and Applied Economics, in conjunction with the Graduate College. Christopher Koliba and Asim Zia will co-direct the proposed program. If approved by the Faculty Senate and Board of Trustees, the program will be offered beginning January 2019.

Program Description and Rationale

Future generations of community development experts, planners, civil and government leaders, and community entrepreneurs need to be prepared to anticipate and respond to threats from natural disasters, climate change, economic collapses, and other threats to critical infrastructures. The proposed Certificate of Graduate Studies in Community Resilience and Planning (GCS-CRP) is designed to help masters, doctoral, and certificate-only students develop the skills and knowledge needed to lead and guide communities through periods of change brought on by natural, economic, social and political shocks and disruptions. Students completing this certificate will have a deep understanding of the current threats and opportunities facing communities within Vermont, the United States, and across the globe. With a core set of courses that survey the community resilience and sustainability field, a foundation in community economic development and research methods, and a capstone experience focusing on system dynamics and strategic management and planning, the CGS-CRP will prepare students to lead and assist communities through times of crisis and transition. The central learning objective for students enrolled in the proposed certificate is to develop the knowledge, skills and tools to design and implement public policies and plans at all scales of the governance (international, national, state to regional and local levels) that promote community resilience.

Justification and Evidence for Demand

Across the fields of hazard mitigation, community economic development, and public health, a strong emphasis is now being placed on the development of workforce for community resilience. For example, the National Associate of County and City Health Officials, the Vermont-based Institute for Sustainable Communities, international consulting firm Tetra Tech, and the RAND Corporation have all invested resources in building community resilience in recent years. The Department of Community Development and Applied

Economics (CDAE) has positioned itself as the location on the UVM campus where the complex dynamics facing local communities are studied, and where resilient communities are the focus.

Certificate organizers have had several inquiries from current students matriculated in CDAE graduate programs (six so far) about the certificate. They plan to market the certificate to regional planning commissions and through the Academic Resilience Collaborative, led by Norwich University.

Curriculum

Completion of the newly proposed CGS-CRP will require 18 credits comprised of four required core courses and two electives (see table below; all required courses are 3 credits). The curriculum is designed to include research and fieldwork, in addition to classroom study. Electives can be drawn from select courses in “Domains of Application” or “Methods.” The list of elective options provided in the proposal includes courses from Natural Resources, Geography, Civil Engineering, Public Health, Food Systems, Education, and Transportation, as well as CDAE and Public Administration. Students will conduct original or support existing research on community resilience in several courses, including the capstone course (PA 317) and the research methods course. In at least two of the core courses, students will be required to conduct field work in the form of applied projects undertaken for specific community clients (PA 303/CDAE 351 and PA 317).

Required Courses	
CDAE 260/PA 260	Smart Resilient Communities
CDAE 326/PA 326	Community Economic Development
CDAE 351/PA 303	Research and Evaluation Methods
PA 317	System Dynamics and Strategic Management for Community Resilience (capstone)

Relationship to Existing Programs

CDAE currently offers two masters degrees: the Master of Science and the Master of Public Administration. The proposed CGS-CRP will be available as an additional credential to students in these graduate programs, as well as other masters and doctoral programs in complementary fields. Two required courses in the proposed certificate (CDAE 351/PA 303 and PA 326/CDAE 326) also count as core courses for the masters degrees. Students in these programs will be required to take a second research methods course and three, instead of two, courses from the program elective list in order to ensure that there is value added to their degree with the completion of the CRP certificate.

UVM offers several other Certificates of Graduate Study in related areas: Ecological Economics (Gund Institute), Complex Systems (CEMS), and Public Health (LCOM). The newly proposed CGS-CRP’s theoretical perspective, while built on social ecological systems theory, is broader and inclusive of rapidly advancing socio-technological systems and cyberinfrastructure, which are not covered by the Ecological Economics certificate. The Certificate in Complex Systems provides students with skills and knowledge in modeling of complex systems, with a focus exclusively on quantitative methods of analysis. Thus, this certificate appeals to a different audience than the proposed certificate. Although public health concerns are often of interest in resilient communities, the epidemiological dimensions of the public health field focus on disease threats and health hazards, and ways of mitigating them, and thus the Certificate in Public Health has a much narrower focus than the proposed CGS-CRP.

Admission Requirements and Process

Requirements for admission will follow Graduate College policies. Potential students will be required to submit transcripts as evidence of completion of a Bachelor's degree, and to provide evidence that they have taken at least one college-level course in statistics and economics. International students must meet UVM's minimum English proficiency requirements. Matriculated students in existing UVM graduate programs will be required to have their program advisor approve of their enrollment in the proposed CGS-CRP. Admission will happen on a rolling basis. Decisions will be made by a committee comprised of core faculty affiliates.

Advising and Assessment Plan

Advising of CRP certificate students will be handled by the core faculty and support staff (Julia Starr, CDAE Graduate Student Program Coordinator).

Assessment will be annual. Every year at the conclusion of the spring semester, faculty will meet to review program details, to process student feedback, and to adjust program activities as needed. Additionally, the certificate will be evaluated as part of the CDAE internal review cycle. As part of the review, students will be surveyed, and the curriculum comprehensively reviewed.

Anticipated Enrollment and Impact on Current Programs

The prospers conservatively anticipate that the certificate program will have at least six students enrolled per semester, taking one or two courses each semester in pursuit of the certificate. Of these six, it is anticipated that two will be CDAE MS or MPA students, two will be drawn from non-CDAE graduate programs, and two will be certificate-only students.

The certificate program will impact CDAE's MS and MPA programs to the extent that new certificate-only students and non-CDAE graduate students pursuing the certificate will enroll in the certificate's core courses, which are CDAE/PA courses. The CGS-CRP certificate will also have a smaller impact on enrollments in the elective courses offered by departments/programs beyond CDAE and Public Administration (PA), which include Civil and Environmental Engineering (CEMS), Food Systems (CALs), Natural Resources (RSENr), Public Health (LCoM), Transportation Research Center (CEMS), Geography (CAS), and EDFs (CESS).

Staffing Plan, Resource Requirements, and Budget

A detailed budget with a five-year projection was submitted with the proposal. The only anticipated costs for the program indicated are funds for the teaching of one additional elective course and marketing materials. Funds will be set aside for teaching that course and an estimated \$1000 per year will be earmarked from the CDAE operating budget for publicity materials.

Evidence of Support

The proposed CRP certificate program has received unanimous votes of support from members of the CALS Curriculum Committee and CALS faculty, and it has the formal support of the CALS Dean, Thomas Vogelmann. The proposal has also been approved by the Graduate College Executive Committee and endorsed by the Dean of the Graduate College. Additionally, the proposal included emails of support or neutrality from the following administrators and faculty from other units on campus:

- Kimberly F. Wallin, Rubenstein School Associate Dean for Research and Graduate Programs

- Taylor Ricketts, Gund Institute Director
- Jan K. Carney, LCOM Associate Dean for Public Health
- Susan Roche, CESS Director of MSW Program
- Lisa Aultman-Hall, CEMS Professor, Civil and Environmental Engineering
- Lesley-Ann Dupigny-Giroux, CAS Chair of Geography
- Mandar Dewoolkar, CEMS Chair of the Civil and Environmental Engineering Department

Summary

The proposed Certificate of Graduate Study in Community Resilience and Planning takes advantage of UVM's strength in this area to provide a unique graduate curriculum for current students and an incentive for new students to initiate graduate study. The program will be of interest to a variety of professionals who want to understand the threats, risks and opportunities that face communities and develop the knowledge and skills to guide community response. With a well-developed curriculum that incorporates research and fieldwork in addition to classroom study, it will be a valuable addition to the Certificates of Graduate Studies offered by UVM.