



Board of Regents Program Action Request
University of Alaska
Proposal to Add, Change, or Discontinue a Program of Study

1a. UA University UAF	1b. School or College Graduate School	1c. Department or Program Resilience and Adaptation Program
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2. Complete Program Title Resilience and Adaptation Graduate Certificate

3. Type of Program

Undergraduate Certificate
 Associate
 Baccalaureate
 Post-Baccalaureate Certificate
 Master's
 Graduate Certificate
 Doctorate

4. Type of Action <input checked="" type="checkbox"/> Add <input type="checkbox"/> Change <input type="checkbox"/> Discontinue	5. Implementation date (semester, year) <input type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Summer Year 2018
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6. Projected Revenue and Expenditure Summary (not required if the requested action is discontinuation). Provide information for the 5th year after program change approval if a baccalaureate or doctoral degree program; for the 3rd year after program approval if a master's or associate degree program; or for the 2nd year after program approval if a graduate or undergraduate certificate. If information is provided for another year, specify (1st) and explain in the program summary attached. Note that revenues and expenditures are not always entirely new; some may be current (see 7d.)

Projected Annual Revenues in FY 19		Projected Annual Expenditures in FY 19	
Unrestricted		Salaries & benefits (faculty and staff)	\$8,415
General Fund	\$13,145	Other (commodities, services, etc.)	\$5,000
Student Tuition & Fees	\$65,658	TOTAL EXPENDITURES	\$13,145
Indirect Cost Recovery	\$	One-time Expenditures to Initiate Program (if >\$250,000)	
TVEP or Other (specify):	\$	(These are costs in addition to the annual costs, above.)	
Restricted		Year 1	\$
Federal Receipts	\$	Year 2	\$
TVEP or Other (specify):	\$	Year 3	\$
TOTAL REVENUES	\$78,803	Year 4	\$

Page # of attached summary where the budget is discussed, including initial phase-in: 5

7. Budget Status. Items a., b., and c. indicate the source(s) of the general fund revenue specified in item 6. If any grants or contracts will supply revenue needed by the program indicate amount anticipated and expiration date, if applicable.

Revenue source	Continuing	One-time
a. In current legislative budget request	\$	\$
b. Additional appropriation required	\$	\$
c. Funded through new internal UA university redistribution	\$	\$
d. Funds already committed to the program by the UA university ¹	\$13,145	\$
e. Funded all or in part by external funds, expiration date	\$	\$
f. Other funding source (specify type):	\$	\$

8. Facilities. New or substantially (>\$25,000 cost) renovated facilities will be required. Yes No

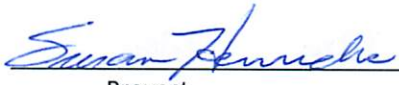
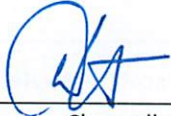
If yes, discuss the extent, probable cost, and anticipated funding source(s), in addition to those listed in sections 6 and 7 above.

9. Projected Enrollments (headcount of majors). If this is a program discontinuation request, project the teach-out enrollments.

Year 1: 15	Year 2: 20	Year 3: 30	Year 4: 30
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Page number of attached summary where demand for this program is discussed: 1

¹Sometimes the courses required by a new degree or certificate program are already being taught by a UA university, e.g., as a minor requirement. Similarly, other program needs like equipment may already be owned. 100% of the value is indicated even though the course or other resource may be shared.

<p>10. Number² of new TA or faculty hires anticipated (or number of positions eliminated if a program discontinuation):</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Graduate TA</td><td style="text-align: center;">0</td></tr> <tr><td>Adjunct</td><td style="text-align: center;">0</td></tr> <tr><td>Term</td><td style="text-align: center;">0</td></tr> <tr><td>Tenure track</td><td style="text-align: center;">0</td></tr> </table>	Graduate TA	0	Adjunct	0	Term	0	Tenure track	0	<p>11. Number² of TAs or faculty to be reassigned:</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Graduate TA</td><td style="text-align: center;">0</td></tr> <tr><td>Adjunct</td><td style="text-align: center;">0</td></tr> <tr><td>Term</td><td style="text-align: center;">0</td></tr> <tr><td>Tenure track</td><td style="text-align: center;">0</td></tr> </table> <p>Former assignment of any reassigned faculty: For more information see page N/A of the attached summary.</p>	Graduate TA	0	Adjunct	0	Term	0	Tenure track	0
Graduate TA	0																
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Tenure track	0																
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<p>12. Other programs affected by the proposed action, including those at other campuses (please list):</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:25%;">Program Affected</th> <th>Anticipated Effect</th> </tr> </thead> <tbody> <tr> <td>None</td> <td></td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table> <p>Page number of attached summary where effects on other programs are discussed:</p>		Program Affected	Anticipated Effect	None													
Program Affected	Anticipated Effect																
None																	
<p>13. Specialized accreditation or other external program certification needed or anticipated. List all that apply or 'none': None</p>	<p>14. Aligns with University or campus mission, goals, core themes, and objectives (list): The RAP certificate aligns well with UAF's mission to integrate teaching, research and public service with an emphasis on the circumpolar North and its diverse peoples. In particular, it addresses the UAF Core Themes of Educate, Research , and Connect.</p> <p>Page in attached summary where alignment is discussed: 2</p>																
<p>15. Aligns with Shaping Alaska's Future themes: The RAP Certificate aligns with the themes Student Achievement and Attainment, Productive Partnerships with Public Entities and Private Industries, and Research and Development and Scholarship to Enhance Alaska's Communities and Economic Growth. It also addresses Accountability to the People of Alaska, both because the program makes efficient use of its resources and because its students and graduates help Alaska's communities adapt to change.</p> <p>Page in attached summary where alignment is discussed: 3-4</p>																	
<p>16. State needs met by this program (list): Graduates will fill research, management, and leadership positions across the state. They will help communities adapt to changes in climate and the economic and social environment.</p> <p>Page in the attached summary where the state needs to be met are discussed: 4-5</p>	<p>17. Program is initially planned to be: (check all that apply)</p> <p><input checked="" type="checkbox"/> Available to students attending classes at UAF Fairbanks campus(es).</p> <p><input type="checkbox"/> Available to students via e-Learning</p> <p><input checked="" type="checkbox"/> Partially available to students via e-Learning</p> <p>Page # in attached summary where e-Learning is discussed: 1</p>																
<p>Submitted by the University of Alaska Fairbanks.</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  _____ Provost </div> <div style="text-align: center;"> / <u>8/3/17</u> / Date </div> <div style="text-align: center;">  _____ Chancellor </div> <div style="text-align: center;"> / <u>8/3/17</u> / Date </div> </div>																	
<p><input checked="" type="checkbox"/> Consensus support of SAC <input type="checkbox"/> Not supported by SAC</p> <p><input type="checkbox"/> Recommend approval by VPAAR</p> <p><input type="checkbox"/> Recommend disapproval by VPAAR</p> <p style="text-align: center;">_____/_____ UA Vice President for Academic Affairs & Research Date</p>																	

²Net FTE (full-time equivalents). For example, if a faculty member will be reassigned from another program, but his/her original program will hire a replacement, there is one net new faculty member. Use fractions if appropriate. Graduate TAs are normally 0.5 FTE. The numbers should be consistent with the revenue/expenditure information provided.



Resilience and Adaptation Graduate Certificate PROGRAM SUMMARY

Introduction

The request for a graduate certificate in Resilience and Adaptation Studies grows out of the highly successful Resilience and Adaptation Program (RAP). RAP began with financial support from a NSF funded IGERT grant, under the direction of Dr. Terry Chapin, in 2002. RAP was designed to promote regional sustainability research via team-taught multidisciplinary courses and internships, as well as research collaboration among departments. In 2012, after NSF funding ended, RAP was institutionalized by the University with support from the State of Alaska.

Under Dr. Lawrence Duffy's direction, the program continues to adapt, evolve, and improve to meet new challenges and take advantage of new opportunities. Educating students to meet the state of Alaska's needs is of paramount importance. Although RAP courses have been taught for fifteen years now, and students can use them to fulfill requirements of several programs, including doctoral and master's degrees in biological sciences, wildlife biology and conservation, anthropology, natural resources management, and natural resources and sustainability, as yet they have not been able to earn a credential that recognizes their accomplishments and expertise in this field. As with all graduate certificates, the RAP certificate can either be earned as a stand-alone credential, or can be part of a master's or doctoral program of study.

Demand for the Program

Demand for RAP admission remains extremely competitive. RAP affiliated faculty members select a small cohort each year from UAF graduate student applicants. A student can apply to an academic department and RAP simultaneously or can be admitted to RAP after beginning coursework. Over 100 graduate students have participated in the program, representing every college and school at UAF.

e-Learning

Due to its focus on cohort building, incoming RAP students are asked to spend fall semester at the UAF campus. The foundation courses (4 credits) are taught at this time and students share office space in the RAP trailer behind the Reichardt Building. After the initial semester RAP students may move to other locations such as the UAS or UAA campus. The students may then take courses via distance delivery as offered or needed. The monthly "All RAP" seminar is videoconferenced.

Effects on Other Programs

RAP complements both the existing academic programs and Interdisciplinary master's and doctoral programs by providing a forum for cross-disciplinary learning and communication. As a result, departments may draw students from other areas that would not normally enroll in a course or conduct research in a given discipline. For example, a recent MFA in Art graduate and ceramicist conducted some of her studies using the Advanced Instrumentation Laboratory of the College of Natural Sciences and Mathematics.

Alignment with University Mission, Goals, Core Themes and Objectives

The RAP certificate aligns well with UAF's mission: **The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.** UAF's Core Themes are an expansion and explication of its mission statement. The RAP graduate certificate most directly addresses the following Core Themes, Objectives, and Indicators.

Core Theme – Educate: Undergraduate and Graduate Students and Lifelong Learners

Objective 4: Mentor or guide graduate students to master a subject area or advance knowledge.

Indicator 7: Graduates secure jobs or continue their education.

Indicator 8: Students produce independently reviewed research and creative products.

Core Theme – Research: Create and Disseminate New Knowledge, Insight, Technology, Artistic, and Scholarly Works

Objective 7: Engage graduate and baccalaureate students in research, scholarship, and creative activity.

Indicator 14: Students produce independently reviewed research and creative products. (same as indicator 8)

Core Theme – Connect: Alaska Native, Rural, and Urban Communities by Sharing Knowledge and Ways of Knowing

Objective 11: Academic programs relevant to Alaska Native and rural residents are delivered broadly across Alaska.

Objective 12: Alaska Native knowledge and ways of knowing are integrated into academic programs.

RAP appeals to students with an intellectual curiosity that are willing to step outside disciplinary boundaries with their research design. Students are selected based on their desire to approach Northern research questions from a holistic perspective that includes both natural and social science elements. RAP already attracts the best and brightest students; the certificate will be one more means of recruiting and retaining talented graduate students. RAP students design projects with community needs in mind. They work with community members to observe, listen, document and develop strategies and/or solutions to identified needs. RAP students share their insights and promote knowledge and ways of knowing through scholarly articles, presentations, educational outreach and involvement in community organizations. Students are often the force behind new partnerships and collaborations and serve as the catalyst for change. Students provide the energy to move good ideas and projects forward. RAP students have made significant contributions to the understanding of climate change and Arctic research; their success enhances the University's reputation.

RAP prepares students for employment in governmental agencies, non-governmental organizations, academia and private industry. 100 percent of alumni respondents surveyed in 2013 felt that RAP increased employment opportunities. One alumnus wrote, "The RAP allowed me to extend my strong natural science foundation into work as a social scientist with a profound understanding of the cultural and economic issues facing Alaskan individuals and communities."

Alignment with Strategic Pathways

The core principles of the Strategic Pathways Framework are listed below, with an explanation of the RAP program alignment with these principles.

- **Focus:** UAF has been identified as the UA system's research university, renowned for leadership in Arctic and the North, with regional community campuses. Its research leadership areas related to RAP include Arctic, physical, and natural science; and its academic strengths related to RAP include physical, natural, and related sciences, Arctic and Northern studies, management, rural development, and doctoral education.
- **Access:** From the beginning RAP has successfully recruited Alaska Native students and other minorities that are underrepresented in STEM graduate programs. After an initial in-residence semester, students have been able to complete the program from a number of different locations around the State.
- **Scope:** RAP will increase the scope of credentials offered by the UA system, since this program is unique to UAF.
- **Excellence:** Students admitted to RAP are among the best applicants to the constituent graduate programs.
- **Consistency:** Offering the RAP certificate will appropriately recognize student achievement, on par with other graduate programs at UAF.
- **Fiscal Sustainability:** The cost of RAP course delivery is low, making use of adjunct faculty employed in related positions, and this cost can be more than covered by tuition revenue. Student research is supervised by existing faculty in the participating departments.

Alignment with Shaping Alaska's Future Themes

The certificate will contribute to state accountability by documenting the students' successful program completion. The number of students in relation to the cost of the program will support the "Shaping Alaska's Future" by improving the efficiency of the program.

- **Student Achievement and Attainment:** The students who apply to RAP are high achievers. They have the initiative to pursue research questions from an interdisciplinary perspective. The awarding of a certificate following 12 credits will acknowledge their progress and provide motivation for completing their Master or PhD degree.
- **Productive Partnerships with Public Entities and Private Industries:** State and federal agencies and non-governmental organizations have hired a significant number of RAP alumni. Both governmental and non-governmental organizations value the students' ability to analyze complex problems and develop effective strategies. Perhaps as a result of the cohort experience, RAP students are excellent communicators. They learn from day 1 how to express their ideas so that others outside their academic discipline can learn and understand.
- **Research and Development and Scholarship to Enhance Alaska's Communities and Economic Growth:** The approach to research using both a physical and social science perspective benefits the individual Alaska communities where the research is conducted and contributes

knowledge to Alaska as a whole. RAP students are very cognizant that they must keep their communities informed throughout the entire research process from study design through dissemination of results. For example, one RAP student is sharing her knowledge of building a successful tourism business in the Interior with Igiugig to further their ecotourism development goals.

- **Accountability to the People of Alaska:** The certificate will demonstrate accountability by documenting the students' successful completion of the program. A majority of the students' research addresses impacts of climate change. Whether they are documenting traditional knowledge regarding caribou migration or analyzing cortisol levels in whales to determine stress, the state of Alaska will benefit from the knowledge gained.

State Needs to be Met

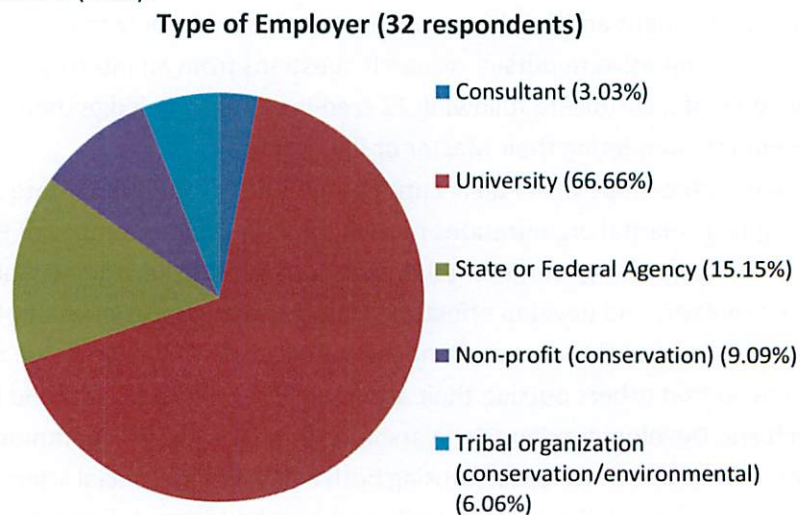
RAP students have a good employment track record. They learn to conduct multidisciplinary research, acquire technical expertise from GIS- drone surveillance, and are dedicated to uncovering and sharing knowledge. The majority of RAP graduates have remained in Alaska.

Employment of Recent Graduates, May 15, 2016-May 6, 2017

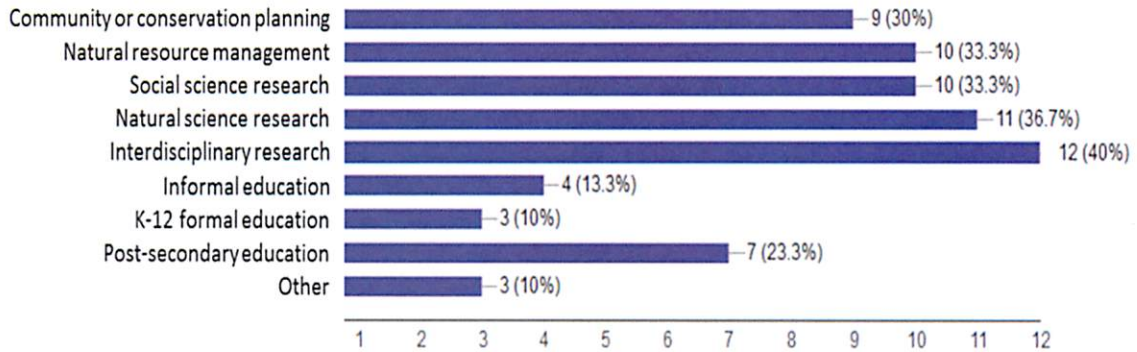
MS Graduates
EPA, Cincinnati OH
Research Technician, Greenland
PhD Graduates
Assistant Professor, Colorado Mountain College
Assistant Professor, Cross Cultural Studies and Director, Alaska Native Knowledge Network, UAF
Post-doctoral Fellow, Alaska SeaLife Center
Post-doctoral Fellow, UAF Alaska Center for Energy and Power

Employment of Past Graduates (before May 2016)

These were obtained by means of a survey: 57 surveys were sent, 10 surveys were undeliverable, and there were 32 respondents (68%).



Field of current employment (30 respondents)



Budget

Since any student who has a baccalaureate degree is eligible to apply for admission to the RAP certificate, it is expected that enrollment numbers will significantly increase. The certificate is expected to attract both new and existing UA students. Tuition and fees for the six required credits in year 1 (FY19) are expected to be \$65,700. This estimate is based on tuition and fees for 15 students (eight Alaska residents and seven nonresidents, which is according to the proportion of Alaska residents in recently admitted cohorts). We anticipate that increased students will apply and be accepted as the program becomes better known. By year three we anticipate an enrollment of 30 students generating \$134,205.

Adjuncts are recruited from exceptional upper level RAP graduate students or alumni, who hold a variety of university, agency, and non-profit organization positions. Using adjuncts provides advanced students (or alumni) excellent teaching experience at minimal cost. It additionally keeps the program fresh and relevant. Additionally, by using courses offered across the university curriculum, the cost of instruction is lowered and the graduate class size is increased. This cost saving measure allows an increased allocation of state funding to student support in the form of fellowships, travel to professional meetings (network formation) and publication costs. RAP uses the existing administration of UAF's Graduate School.