June 24, 2014

To: James H. Page

From: Susan J. Hunter

Subject: New Program Proposal - UM

The University of Maine is requesting the creation of a B.A. in Human Dimensions of Climate Change. Climate Change is a very important focus area in both research and education at the University of Maine and this degree would provide an opportunity for the university to attain national distinction for this innovative program. The proposal has been reviewed by two external reviewers, both of which were positive. I recommend approval of this program.
June 24, 2014

Susan J. Hunter, Ph.D.
Vice Chancellor for Academic Affairs
University of Maine System
16 Central Avenue
Bangor, ME 04401

Dear Vice Chancellor Hunter:

On behalf of University of Maine President Paul Ferguson, I am pleased to forward the attached final program proposal for the B.A. in Human Dimensions of Climate Change. This proposal has been reviewed and endorsed by the Undergraduate Program Curriculum Committee, the Provost’s Council, the Faculty Senate, and has been externally reviewed by respected colleagues in the field.

The reviewers comments (attached) noted that the “program usefully and efficiently takes advantage of the faculty and graduate resources of the Climate Change Institute (CCI)…existing related M.S. and Ph. D. programs in Quaternary and Climate Studies and Anthropology and Environmental Policy respectively.” They predict the enhancement of UMaine’s already strong reputation. Additionally, the reviewers indicated that this new offering is unique in the country, involves world-class faculty, and will likely attract new in-state and out-of-state students who might not otherwise apply. One reviewer stated:

“In sum, I believe that the proposed B.A. in the Human Dimensions of Climate Change uniquely and efficiently builds on existing core strengths at the University of Maine; provides an important opportunity for students to acquire skills, experience and knowledge that will prepare them to contribute to the workforce needs of the state and society at large; and enhances the reputation of the University of Maine as a leading institution in the area of environmental science, climate change, and related social and policy implications.”

The response from the Department of Anthropology is attached for your information, as well.

The creation of the B.A. in Human Dimensions of Climate Change requires no additional fiscal or equipment resources and represents a program developed within the context of existing resources.

Climate Change is a very important focus area in both research and educational efforts at the University of Maine. The B.A. in Human Dimensions of Climate Change provides an opportunity for the University of Maine to attain national distinction for this innovative program.

Please feel free to contact me if you have questions.

Sincerely,

Jeffrey E. Hecker
Executive Vice President for Academic Affairs and Provost

MAINE'S LAND GRANT AND SEA GRANT UNIVERSITY
One of Maine’s public universities
Enc:  B.A. in Human Dimensions of Climate Change
      Department of Communication and Journalism response to external reviews
      External Reviewer comments

cc:  Paul W. Ferguson, President
      Naomi Jacobs, Interim Dean, College of Liberal Arts and Sciences
Dear Provost Hecker,

The Department of Anthropology is in receipt of the two external reviews of its proposal to mount a new major, The Human Dimensions of Climate Change.

We are deeply grateful to the two reviewers for their thoughts, and we are especially pleased that they are so positive about our proposal. As they both note, this program, should it be approved, will be unique within the US.

We have noted, and will take under careful consideration the suggestions that Reviewer 1 made for additional courses in the curriculum:

1) We are eager to add, either as a requirement or elective, a course in Public Health and Climate Change. We understand that CLAS hopes to organize a minor in Health Studies that would include a course offering in medical anthropology from Dr Marcella Sorg of the Anthropology Department. If this comes to pass, we would hope that it could be dovetailed to include a module on climate change and health and added to our list of optional courses.

2) Reviewer 1 suggests we add 300-level courses in environmental ethics and in environmental law and policy. When we developed this proposal four years ago, we debated adding the 200-level philosophy course, Environmental Ethics but eventually dropped the idea. We are happy to reconsider, however, adding not just this course but the reviewer’s other two suggestions to the list of optional courses for the major.

In sum, we concur with the findings of the external reviewers’

Sincerely, on behalf of myself and Chair Gregory Zaro

Paul ("Jim") Roscoe
Professor of Anthropology and
Co-operating Professor of Climate Change Studies
UNIVERSITY OF MAINE SYSTEM NEW PROGRAM PROPOSAL

I. Full program title.

B.A. in Human Dimensions of Climate Change

II. Program objectives.
A. Narrative description of program rationale.

Climate Change is one of the leading environmental and human problems facing the world today. Melting glaciers and rising oceans with landward-moving shorelines are one side of the issue; shifting temperature and moisture patterns and the responses of earth’s biota to these changes add to the dilemma. The other side of the problem is the human dimension, both with regards to impact and response. Humans contribute to global warming and environmental degradation, and humans alone can provide solutions to these problems through successful policy initiatives at local through global scales. A recent publication with numerous contributions from University of Maine faculty describes in detail the challenges facing Maine as our climate continues to change (Maine’s Climate Future: An Initial Assessment. 2009. G.L. Jacobson, I.J. Fernandez, P.A. Mayewski, C.V. Schmitt, editors, University of Maine, 74 p.).

Solutions to the many problems arising from climate change will only be found with an understanding of the processes that govern both climate and human culture (understood in the broad sense of technological, sociological, and ideological systems). Successful policy decisions to mitigate climate change will be based on solid science and social science related to culture. There is a dire need to direct basic and applied research to understanding the human and natural causes and effects of climate change, as well as the cultural—that is, the international as well as the national—dimensions of these interactions and their consequences.

Basic scientific observations led us to our current understanding of past climate changes and the spectrum of possible future climate scenarios. Our current view of climate change has evolved from a variety of scientific disciplines. Current and future scientific work will provide a better understanding of the nature of changes to come, as well as the implications of these changes for people and ecosystems.

Social scientists have an extremely important role to play in assisting state, national, and world decision makers in understanding environmental problems and finding solutions to them. Social scientists work with policy makers, conduct research among local populations around the world, and on the basis of this work devise policies that take into account the social and cultural implications of policy decisions from local to international scales.
Anthropology is exceptionally well positioned to address these important dimensions of climate change. Anthropologists draw their data from all known human societies. Social anthropologists conduct extended periods of fieldwork in communities around the world; physical anthropologists and archaeologists reconstruct those of the past. As a result of this work, anthropologists have built up robust models and explanations of similarity and variance across cultures. They are unusually well equipped to investigate and understand responses to climate change by people whose cultural backgrounds may be radically different from those of the western world. They have a detailed knowledge of how environment and climate shapes cultures, and of how cultures shape their environments. And they are able to devise policies that take cultural differences into account in devising and managing climatic solutions.

It is our goal to create a degree program that produces students capable of rising to the human dimensional challenges of the climate-change issue. UMaine is already widely known for the research conducted by its Climate Change Institute. Institute faculty are jointly appointed and affiliated in academic units including Anthropology. This program will capitalize on the faculty, facilities, research, and graduate programs currently in place by offering an undergraduate B.A. degree in the Human Dimensions of Climate Change (HDCC) that draws on the existing faculty and infrastructure of the Department of Anthropology and their affiliations and collaborations with the Climate Change Institute.

This degree program will be a distinctive program for UMaine because: 1) it will be based in an existing program of excellence, 2) the faculty, courses, and infrastructure are largely in place, and 3) no other such program exists in the nation.

By creating an exciting degree program revolving around the human dimensions of climate change, we will provide students with a thorough grounding in what is likely to become the most important environmental issue in their lives. Because the program will be unique, moreover, it should attract students from both within and out-of-state and offer them opportunities to work with faculty on exciting scientific questions in research areas all over the world. It promises also to transform UMaine into the first choice school of many students who would not otherwise apply here.

**B. General program goals (limit to 3-5 major items maximum).**

1. To provide students with a thorough grounding in what is likely to become the most important environmental issue in their lives.
2. To engage future climate policy makers in the interdisciplinary framework essential to bridge social and environmental sciences.
3. To produce future global citizens capable of rising to the challenges of the climate-change issue.
4. To provide UMaine with a nationally recognized program based in an existing area of excellence with faculty, courses, and infrastructure largely in place.
5. To increase the number of highly qualified and diverse students for whom UMaine is a first-choice institution.

C. Specific student outcomes or behavioral objectives.

The program will engage students in the human dimension issues of one of the most important scientific and cultural challenges facing the world today. These engaged students will be able to understand the diverse human causes and impacts of climate change to better enact successful policy decisions at local, national, and international levels. The program will provide students with skills useful outside as well as within the academic environment. Specific skill sets are both quantitative and qualitative and focus on ethnographic methods and analysis such as participant observation, directed interviewing, and statistical analysis of qualitative and quantitative ethnographic data. We envision students finding positions in private business as well as in state, national, and international institutions that deal with policy decisions related to the human dimensions of climate management and change.

Learning Outcome Assessments. The centerpiece of the program’s Learning Outcome and Assessments (LOAs) will be the Human Dimensions of Climate Change Seminars (I and II) offered in the student cohort’s first and last semesters. If the program is approved, we look forward to working with the Center for Excellence in Teaching and Assessment as well as with the Director of Assessment to develop a Learning Outcomes and Assessment strategy that incorporates best practices for learning outcomes.

D. Accountability.

This program will be unique; no other similar program exists. Students will be actively engaged in social science training and research based within the interdisciplinary framework. This program will incorporate largely existing faculty, courses, and resources within the Department of Anthropology with affiliation and collaboration from the Climate Change Institute, Earth Sciences, and the School of Marine Sciences. A full external program review will take place after five years. The program itself will conduct internal budgetary and curricular reviews in years two and five as well.

III. Evidence of program need.

Human Dimensions of Climate Change. In response to growing awareness of the global climate crisis, we need to train future citizens in the interdisciplinary analysis of climate science, the complexities and intricacies of diverse global cultures, and the implications of human social and cultural processes for climate
change and efforts to mitigate and adapt to it. Our program in HDCC seeks to provide such solutions.

The Climate Change Institute offers an M.S. degree in Quaternary and Climate Studies, incorporating an academic program within a robust research center to produce the one of the best academic/research units focused on global climate change in the world. Graduate students come from all over the world to work with our renowned faculty, faculty who are jointly appointed in diverse academic programs across campus, including Anthropology. Globally, we have a need for a trained workforce that understands the complexity of the human dimensions of climate change and can incorporate that understanding at all levels of decision-making and in all arenas. We need to train not only graduate students but undergraduates as well who will find positions in private business and in state, national, and international institutions that deal with policy decisions related to climate management and change.

The State of Maine. A recent report on Maine’s climate future (Maine’s Climate Future: An Initial Assessment. 2009. G.L. Jacobson, I.J. Fernandez, P.A. Mayewski, C.V. Schmitt, editors, University of Maine, 74 p) submitted to the governor, outlines the measured changes that have taken place in Maine’s climate and underscores the need to anticipate future changes as well. Warmer and wetter conditions will profoundly affect our economy, shifting vegetation communities, altering fisheries in the Gulf of Maine, possibly harming skiing and maple sugar industries, among other problems. Rising sea level along our coast already threatens whole beach communities, and coastal marshes are at risk of inundation. We are proposing to create a pool of young climate social scientists who, armed with an understanding of basic climate science and of the human dimensions surrounding climate change, will be poised to help society adapt to coming changes and capitalize on the new opportunities they offer. Given the expertise concentrated at the University of Maine, no other institution, public or private, in the State of Maine is as well positioned to offer this degree.

Strategic directions at the University of Maine. The proposed program will advance a number of goals of the UMaine Strategic Plan. The program aligns well with the University’s Blue Sky Strategic Plan, 2012-2017 to:

1) be a first choice institution for highly qualified and diverse students (Pathway 1, Serving Our State: Catalyzing Maine’s Revitalization, & Pathway 4, Transforming Lives: Strengthening the UMaine Undergraduate Student Experience). Our proposed program is unique in the nation and likely to draw exceptional students with interests in climate change.

2) increase research opportunities for undergraduate students, drawing on our strengths as a research university (Pathway 4, Transforming Lives: Strengthening the UMaine Undergraduate Student Experience). The undergraduates we attract will share our research experiences as well as
opportunities to conduct research with our graduate students, who will serve as co-mentors with faculty on funded projects in Maine and around the world.

3) *increase the number and visibility of interdisciplinary programs* (Pathway 3, Embracing a Culture of Excellence: Promoting Spirit, Community, and Collaboration). This program requires that students gain both a solid foundation in relevant natural sciences and follow a track in climate or ocean physical science. This interdisciplinary approach draws on multiple established collaborations between this department and units associated with the Climate Change Institute.

4) *develop new programs that maximize existing strengths* (Pathway 2, Securing Our Future: Ensuring Financial Sustainability, & Pathway 3, Embracing a Culture of Excellence: Promoting Spirit, Community, and Collaboration). The proposed new undergraduate program draws on faculty, facilities, and collaborations already in place in one of UMaine’s highly successful graduate programs: the Climate Change Institute.

**A. For 2-year programs, indicate potential employers who have requested the program and their specific employment projections.**

NA

**B. Detailed survey of similar programs that are offered within the University System, other higher education institutions or other agencies within the State.**

There are no similar anthropology programs within the state or the nation.

**C. Enrollment projections for five years.**

The program is cohort based and is projected to attract excellent students from within and out-of-state. To begin with, we would admit 10 new incoming students each year for a four-year program total of 40 students. Anthropology currently has two active undergraduate degree programs, the B.A. in Anthropology (112 majors, Spring 2014) and the B.A. in International Affairs/Anthropology (22 majors, Spring 2014), as well as a recently launched Ph.D. program in Anthropology and Environmental Policy with 3 active graduate students and a second cohort admitted for Fall 2014. In addition, Anthropology is actively involved in the M.S. in Quaternary and Climate Studies program through the Climate Change Institute (approximately five of whom are archaeologists advised by Anthropology faculty). We could admit a greater number of incoming students if resources were expanded beyond those stipulated in this proposal, but we are presently limited by the number of our students who can be accommodated in the two upper-level classes in Earth Sciences and Marine Sciences, ERS 369 and SMS 402 (see below).
IV. Program content.

A. Outline of required and/or elective courses (not syllabi):

The program centers on core courses in Anthropology but draws on courses in Earth Sciences, Marine Sciences, and Economics. Students will also complete a Capstone experience.

**Human Dimensions of Climate Change Core Courses** (24 sch):

- ANT 225 Climate Change, Societies, and Culture (3)
- ANT 101 Introduction to Anthropology: Human Origins and Prehistory (3)
- ANT 102 Introduction to Anthropology: Diversity of Cultures (3)
- ANT 410 Seminar in Human Dimensions of Climate Change (3)

Four of the following courses:

- ANT 250 Conservation Anthropology: The Socio-Cultural Dimensions of Environmental Issues (3)
- ANT 270 Environmental Justice Movements in the United States (3)
- ECO 381 Sustainable Development Principles and Policy (3)
- ANT 420 Human Impacts on Ancient Environments (3)
- ANT 435 Human Dimensions of Natural Resource Management (3)
- ANT 464 Ecological Anthropology (3)
- ANT 466 Economic Anthropology (3)
- ANT 475 Environmental Archaeology (3)

**Natural Science Climate Change Courses** (18 sch):

1) Introduction to the physical sciences (12 sch)

Students must complete the following three basic science courses:

- BIO 100 Basic Biology (4)
- CHY 121 Introduction to Chemistry (3)
  + CHY123 Introduction to Chemistry Lab (1)
- PHY 111 General Physics 1 (4)

2) The Earth Science/Marine Science track (6 sch)

Students must also complete an Earth Science OR a Marine Science sequence.

a) Earth Science sequence:

- ERS 121 Humans and Global Change (3)

  And either:

  - ERS 140 The Atmosphere (3)

  Or:

  - ERS 369 Energy Resources and Climate Change (3)

  NB: Students will need to complete ERS 121 before they enter ERS 369

b) Marine Science sequence:

- SMS 100 Introduction to Ocean Science (3)
SMS 402 Oceans and Climate Change (3).
NB: Students will need to have completed two of the three courses in requirement 1) along with SMS 100 before they enter SMS 402.

**Capstone Research and/or Laboratory Experience** (3 sch):
The Capstone will involve one of the following:
1) ANT 493 The Capstone course in Anthropology (3)  
   [the honor’s thesis counts toward the capstone requirement]
2) An ANT 497 independent study course in climate change (3).

**TOTAL SCH = 45 sch**

**B. Development of new courses and/or what they may displace:**

The only new course that needs to be developed for this program is **ANT 410 Seminar in Human Dimensions of Climate Change**. The introductory, integrative seminar, **ANT 225 Climate Change, Societies, and Culture**, was previously offered as an **ANT 490 Special Topics course**. The ANT 410 course will not displace any other course.

**C. Type of research activity, if any, in program design**

Undergraduate student research activity will involve analyzing the intersection between climate change and human action, and potential avenues of research will be as diverse as the topic itself. A basic understanding of the climate/culture intersection will be presented in **ANT 225 Climate Change, Societies, and Culture** at the beginning of the first year. Students will analyze current research on the topic and begin to grapple with the extent of the problem and the intermingled nature of needed solutions. Research, in the form of analytical papers and hands-on field or laboratory data collection, will also be conducted in mid- and upper-level courses and in the capstone.

For example, in **ANT 250 Conservation Anthropology: The Socio-cultural Dimensions of Environmental Issues**, students will be involved in the analysis of different types of human/environmental relationships across diverse cultural, socio-economic, and political contexts using case studies from around the world, culminating in an analytical research paper. In **ANT 420 Human Impacts on Ancient Environments** students will critically evaluate the relationship between humans and their environment in the past, assessing the local, regional and global impacts that we have had on our planet. This type of analysis will involve research into human-induced environmental changes through time and how these have and will impact contemporary resource management and environmental policy for the future. Again, their research experience will culminate in a broad-scale, analytical research paper.
D. Nature of independent study, clinical experience, and/or field practicums employed in curriculum design

N/A

E. Impact of program on existing programs on the campus

We expect the HDCC program to attract students to UMaine who would not otherwise apply here, with a disproportionately large number of applications coming from top quality out-of-state students. Given this probable student demographic, the program will not displace many students from other programs at UMaine.

The only programs outside anthropology that are likely to be impacted are the Honor’s College and some physical science programs. The Honors College could be impacted in so far as the program is likely to attract high-quality students, many of whom may choose to participate in the Honor’s College.

The departments of Biology, Chemistry, Physics, Earth Sciences, and Marine Sciences will be impacted in so far as program students will be taking some of their introductory courses. Since these courses are all Gen Ed service courses, program students will not negatively impact them any more than would any student in any UMaine program. Program students will also be taking an upper level course either in Earth Sciences or Marine Sciences. Enrollments in these two courses are limited, but Marine Sciences has agreed to accept and Earth Sciences have provisionally agreed to accept HDCC students into their upper level courses.

The main program to be impacted, therefore, will be Anthropology itself. Currently, Anthropology is operating close to its limits. The combined number of majors in its undergraduate programs (B.A. in Anthropology and B.A. in International Affairs/Anthropology) has increased by 56% over the past 10 years (86 to 134 students), with a decline in FTE over the same period (6.875 to 6.1). Anthropology also teaches the most SCH/FTE of any unit at UMaine (1,237 SCH/FTE for AY 12-13, not including DLL production; data from Office of Institutional Studies). For comparison, the SCH/FTE for all UMaine units is 385 SCH/FTE, the College of Liberal Arts and Sciences is 560 SCH/FTE, and the Maine Business School is 623 SCH/FTE (OIS).

In addition, Anthropology recently launched a Ph.D. program in Anthropology and Environmental Policy without additional resources. The program has 3 active graduate students and awaits arrival of its Fall 2014 cohort (an additional 2-4 students). Anthropology also advises graduate students in the M.S. programs in the Climate Change Institute and Environmental and Ecological Sciences.

The further, major complication is that Anthropology is a central player in the IGERT grant on Abrupt Climate Change recently awarded to the Climate Change
B.A. in Human Dimensions of Climate Change

Institute. Anthropology is the only PhD granting, social-science department on the project. Usually, therefore, we recruit 1 to 2 of the annual complement of candidates over the five years the grant will run (2012-2017). Further, each PhD candidate in this program has to have a natural science and a social science faculty member on his/her committee. The demand for anthropology faculty to serve on these committees (a total of 24) is therefore intense. Finally, since the 2012-2013 academic year, Professor Roscoe has been teaching a new IGERT grad course every other year.

Adding up to 40 additional students in a new program in HDCC will therefore present challenges for Anthropology. We do not anticipate problems in the large introductory anthropology classes these students will be taking, but they may create difficulties in the core mid- and upper-level courses they need to take – ANT 250, ANT 420, ANT 435, ANT 464, and ANT 466. Currently, these courses are taught primarily to anthropology majors, using writing intensive, research intensive, and/or laboratory intensive strategies. The HDCC Program will therefore increase competition for space. We anticipate that these core mid- and upper-level courses, which currently are offered every other year, will either have to be offered more frequently since most already enroll at or close to capacity or enrollment will have to be limited solely to majors.

To continue serving its current undergraduate and graduate students, to add new Ph.D. students, to accommodate the major demands of the IGERT grant in Abrupt Climate Change, and to include new students associated with this program, Anthropology will request an additional graduate Teaching Assistant once a critical mass has been achieved. The Teaching Assistant will be a Ph.D. student in the Anthropology and Environmental Policy program and will provide support for 100- and 200-level anthropology and geography courses that teach large numbers of students and for the Human Dimensions of Climate Change Seminar sequence.

If demand grows beyond the number for which we have space, and no new resources are available above those requested in this proposal, then transfer into the program from elsewhere on campus and continuation in the program will need to be limited. A specific plan for these actions will be developed when and if needed.

V. Program resources.

A. Personnel.

The core of the program is already largely in place, faculty whose research is focused on the human dimensions of environmental issues. Some of these faculty are members of the Climate Change Institute or work on climate change research. These faculty will either be directly involved in teaching the program’s courses, helping with advising students, participating in research projects, and providing
guest lectures as needed, or they are members of the department who will be carrying the load of maintaining our current programs. Participating faculty, whose vitae are in Appendix I, include in alphabetical order:

- **Christine Beitl**
  Assistant Professor of Anthropology

- **Cynthia Isenhour**
  Assistant Professor of Anthropology

- **Samuel Hanes**
  Assistant Professor of Anthropology (beginning Fall 2014)

- **Stephen Hornsby**
  Professor of Geography and Canadian Studies
  Director, Canadian American Center

- **Teresa Johnson**
  Associate Professor of Marine Policy
  Cooperating Professor of Anthropology

- **Alice Kelley**
  Research Assistant Professor of Climate Change Institute
  Cooperating Professor of Anthropology

- **Lisa Neuman**
  Associate Professor of Anthropology and Native American Studies

- **Darren Ranco**
  Associate Professor of Anthropology
  Chair, Native American Programs

- **Brian Robinson**
  Associate Professor of Anthropology and Climate Change

- **Paul (Jim) Roscoe**
  Professor of Anthropology
  Cooperating Professor of the Climate Change Institute

- **Daniel Sandweiss**
  Professor of Anthropology and Climate Change

- **Marcella Sorg**
  Research Associate Professor, Margaret Chase Smith Policy Center, Climate Change Institute, Department of Anthropology

- **Timothy Waring**
  Assistant Professor of Human Ecology
  Cooperating Assistant Professor of Anthropology

- **Gregory Zaro**
  Associate Professor of Anthropology and Climate Change
  Chair of Anthropology

1. **Specific effect on existing programs of faculty assignments to new program.**

All of the courses needed for this program are currently in place except for ANT 410 Human Dimensions of Climate Change Seminar II. The mid- and
upper-level courses currently in place are near or at capacity so would need to be offered more frequently to accommodate more students. To cover the Human Dimensions of Climate Change Seminar, increased enrollments, and/or the increased frequency in offering our mid- and upper-level courses, will involve faculty reassignment and the addition of a graduate teaching assistant.

B. Current library acquisitions available for new programs.

   Library holdings are generally adequate in Anthropology and in many of the fields that will support this program.

C. New equipment necessary for new program and plan for its acquisition and implementation.

   Equipment needs for this program are either in place or can be acquired through normal grant channels.

D. Additional space requirements, if any, including renovations.

   This program does not require additional laboratory or other space. Anthropology has five active research laboratories.

E. Extent of cooperation with other programs, both on the initiating campus and other campuses.

   The Climate Change Institute is one of the best academically-oriented climate change-focused research groups in the nation, and the Institute is supportive of all aspects of this proposal. Many Climate Change faculty are appointed and affiliated in Anthropology.

   Most of the courses in the natural science component of the new program (BIO 100, CHY 121, CHY 123, ERS 121, PHY 111, SMS 100) are already offered on campus each year as large Gen Ed courses. We have agreements from Marine Sciences and Earth Sciences to reserve seats for HDCC students in the three other required science classes, ERS 140, ERS 369 and SMS 402.

VI. Total financial consideration.

   An undergraduate program in the HDCC will be an opportunity for UMaine to attract students who would not necessarily apply or come to UMaine otherwise. This would be an exceptional program for UMaine because it would be based in existing units that are nationally and internationally recognized for their
leadership in cutting-edge research, the faculty and infrastructure are largely in place, and no other such program exists in the nation.

A. Estimate of anticipated cost and anticipated income of the program for five years.
The anticipated costs of the program are solely the graduate teaching assistant position needed to help teach new program courses, teach for reassigned faculty, and help with the already high enrollments and numbers in our current undergraduate offerings. The Graduate Teaching Assistantship includes a base stipend of $14,600, plus full-time tuition (9 sch/semester) that ranges from $7,524 for in-state tuition to $23,112 for out-of-state tuition, plus ½ of health insurance costs ($1,059) for a 5-year total cost range of $115,915 - $193,855 (Table 1). This brings the estimated anticipated cost of the program over a Five-Year Timeframe to be $115,915 - $193,855.

Table 1. Estimated Cost of the Program over a 5-Year Timeframe; Graduate Teaching Assistantship Costs

<table>
<thead>
<tr>
<th>Year</th>
<th>Stipend</th>
<th>Tuition and Fees 2</th>
<th>Health Insurance 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>$14,600</td>
<td>$7,524 – $23,112</td>
<td>$1,059</td>
</tr>
<tr>
<td>Year 2</td>
<td>$14,600</td>
<td>$7,524 – $23,112</td>
<td>$1,059</td>
</tr>
<tr>
<td>Year 3</td>
<td>$14,600</td>
<td>$7,524 – $23,112</td>
<td>$1,059</td>
</tr>
<tr>
<td>Year 4</td>
<td>$14,600</td>
<td>$7,524 – $23,112</td>
<td>$1,059</td>
</tr>
<tr>
<td>Year 5</td>
<td>$14,600</td>
<td>$7,524 – $23,112</td>
<td>$1,059</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>$115,915 – 193,855</td>
<td></td>
</tr>
</tbody>
</table>

1 = Minimum stipend set by the Graduate School
2 = Range includes In-State, NEHBE, and Out-of-State Tuition, estimate with no tuition increases
3 = Includes ½ Health Insurance costs, estimates with no cost increases

Revenue will come in the form of increased tuition dollars from students who would not normally apply or come to UMaine. This is hard to specifically quantify, but we expect a moderate to large percentage of the students who are accepted into the program to be non-Maine residents paying out-of-state tuition. We also expect students enrolled in the degree program to be high-achieving
individuals who may be awarded academic scholarships. Notably, this new degree will offer an exciting opportunity for students from other New England states because they have the option of paying a decreased out-of-state tuition for a program not offered in their own state (the New England Regional Program, NEHBE). The University of Maine has great strengths in Anthropology and Climate Change in comparison to any of the other New England states.

In AY 2013-14, Maine Residents pay $279/sch, NEHBE students pay $419/sch, and non-Maine residents pay $858/sch. We are estimating and capping the number to 10 students in the program per year for a five-year total of 50 students. We estimate that 30% of the students will be Maine Residents, 30% will be NEHBE students, and 40% will be non-Maine residents (Table 2). We include the UMaine discount rate estimate of 41.8% to cover financial aid and scholarship reductions. The estimated 5-year revenue for the program is $1,350,775.

Estimated revenue from the program outweighs the costs by a range of $1,234,860 to 1,156,920. Revenue can increase if more students were enrolled in the program. For the moment, we intend to cap enrollment at 10 students per year given space constraints in upper division ERS and SMS courses.

Table 2. Estimated Revenue of the Program over a 5-Year Timeframe

<table>
<thead>
<tr>
<th>Year</th>
<th>Students</th>
<th>Maine Residents</th>
<th>NEHBE</th>
<th>non-Maine Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td></td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Tuition</td>
<td>$25,110</td>
<td>$37,710</td>
<td>$102,960</td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td>6</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Tuition</td>
<td>$50,220</td>
<td>$75,420</td>
<td>$205,920</td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td>9</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Tuition</td>
<td>$75,330</td>
<td>$113,130</td>
<td>$308,880</td>
</tr>
<tr>
<td>Year 4</td>
<td></td>
<td>12</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Tuition</td>
<td>$100,440</td>
<td>$150,840</td>
<td>$411,840</td>
</tr>
<tr>
<td>Year 5</td>
<td></td>
<td>12</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Tuition</td>
<td>$100,440</td>
<td>$150,840</td>
<td>$411,840</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>$351,540</td>
<td>$527,940</td>
<td>$1,441,440</td>
</tr>
<tr>
<td>TUITION</td>
<td></td>
<td></td>
<td></td>
<td>$2,320,920</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$1,350,775*</td>
</tr>
</tbody>
</table>

Estimate with no tuition increases.
Assumes graduation in 4 years.
* Estimate with UMaine discount rate of 41.8% (discount rate refers to the average discount on tuition and fees when financial aid and scholarships are taken into consideration).

B. Detailed information on first-year costs, including:
1. **New personnel requirements (include employee benefits);**

   One Graduate Teaching Assistant

2. **First-year revenue and identity of source;**

   First-year revenue will come in the form of increased tuition dollars from students who would not otherwise apply or come to UMaine. Please see Table 2.

3. **How operational costs are to be absorbed into current campus operating budget over a 5-year period;**

   Operational costs, in the form of one graduate teaching assistant, will come directly from the income generated by the program through tuition. Costs will be absorbed into the E&G Budget in the same way that the revenue brought in by the program will be absorbed into the E&G budget.

4. **What additional funding is required to support the program (identify the source);**

   None.

5. **Lifetime of outside or independent funding and plan for how and when – becomes part of E&G budget.**

   N/A

**VII. Program evaluation**

**A. A post audit of an approved new program must be made after two years.**

   The program will undertake a review at the end of the second year as well as a five-year review.
VIII. Submitted By:

Name

[Signature]

Date

3/31/14

Paul "Jim" Roscoe
Professor of Anthropology; Cooperating Professor of Climate Change Institute

[Signature]

Date

3/31/14

Gregory Yaro
Associate Professor of Anthropology and Climate Change; Chair of Anthropology

IX. Approved By:

[Signature]

Date

3/31/14

Dean, College of Liberal Arts and Sciences

[Signature]

Date

4/23/2014

Provost

[Signature]

Date

4-30-14

President
APPENDIX I
Vitae of Faculty Involved in the Program
(see V.A.)

Christine Beitl
Assistant Professor of Anthropology

Cynthia Isenhour
Assistant Professor of Anthropology

Samuel Hanes
Assistant Professor of Anthropology (beginning Fall 2014)

Stephen Hornsby
Professor of Geography and Canadian Studies
Director, Canadian American Center

Teresa Johnson
Associate Professor of Marine Policy
Cooperating Professor of Anthropology

Alice Kelley
Research Assistant Professor of Climate Change Institute
Cooperating Professor of Anthropology

Lisa Neuman
Associate Professor of Anthropology and Native American Studies

Darren Ranco
Associate Professor of Anthropology
Chair, Native American Programs

Brian Robinson
Associate Professor of Anthropology and Climate Change

Paul (Jim) Roscoe
Professor of Anthropology
Cooperating Professor of the Climate Change Institute

Daniel Sandweiss
Professor of Anthropology and Climate Change

Marcella Sorg
Research Associate Professor, Margaret Chase Smith Policy Center, Climate Change Institute, Department of Anthropology

Timothy Waring
Assistant Professor of Human Ecology
Cooperating Assistant Professor of Anthropology

Gregory Zaro
Associate Professor of Anthropology and Climate Change
Chair of Anthropology
SUGGESTED EXTERNAL REVIEWERS

1) Dean Allen Berger
Forum 2-062
4901 - 46 Avenue
The University of Alberta Augustana Campus
Camrose, Alberta
CANADA T4V 2R3
Phone: 780.679.1130
Email: allen.berger@ualberta.ca

Dean Berger is an anthropologist, and was a most useful reviewer on our Anthropology and Environmental PhD program proposal.

2) Dr Richard Wilk
Provost Professor
Department of Anthropology
Indiana University
Student Building 130
701 E. Kirkwood Avenue
Bloomington, IN 47405-7100
(812) 855-3901
wilkr@indiana.edu

Dr Wilk is a well-known economic anthropologist, who specializes in consumption and climate change, and is a member of the Task Force on Climate Change of the American Anthropological Association.

3) Dr Jeffrey Quilter
William and Muriel Seabury Howells Director
Peabody Museum of Archaeology & Ethnology
Harvard University
11 Divinity Ave.
Cambridge, MA 02138-2019
quilter@fas.harvard.edu

Dr Quilter is an environmentally oriented archaeologist.

4) Dr Matthew Nisbet
Associate Professor
Dr Nisbet is a regular visitor to the Climate Change Institute and offered a short course for CCI last summer, but we believe he counts as "external".

5) Dr Richard Scaglion
University of Pittsburgh
Department of Anthropology
3302 WWPH
Univ. of Pittsburgh
Pittsburgh, PA 15260
412-648-7500
scaglion@pitt.edu

Dr Scaglion is an environmental and legal anthropologist