

**University of Maine System
UMM-UM Primary Partnership
Academic Team Report**

October 17, 2016

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Executive Summary

On March 23, 2016, Chancellor Jim Page and the presidents of the University of Maine (UMaine) and the University of Maine at Machias (UMM) announced plans to develop a “primary partnership” between the two institutions. Chancellor Page tasked the provosts at UMaine (Jeff Hecker) and UMM (Kay Kimball) to create inter-campus teams of faculty and academic leaders to develop recommendations related to the academic portion of the proposed UMM-UMaine primary partnership.

The academic teams concentrated their initial efforts on developing collaborations at the curricular level based on UMM’s programs in Biology, Business and Entrepreneurship, Education, English, Creative Writing and Book Arts, Environmental Studies, Interdisciplinary Fine Arts, Marine Biology, Psychology and Community Studies, and Environmental Recreation and Tourism Management. An additional team addressed General Education requirements.

The overarching goal for this effort was to develop program collaborations and alignments that would build on the system-wide Program Integration work already underway to facilitate enrollment growth, reduce expenses, and better serve students.

Summary of Recommendation

The recommendations that emerged from the UMaine-UMM disciplinary teams can be organized into the following types.

1. *Transfer programs.* Several teams recommended that curricula be aligned so that students can start at one university and transfer to the other after one or two years and complete the degree program at the other in three or two additional years. Most, but not all, of these so-called 1+3 and 2+2 programs involve students beginning their studies at UMM and completing them at UMaine.
2. *Pathways to graduate degrees.* Some teams identified ways that curricula could be aligned so that students completing a four-year degree program at UMM could move directly into a master’s program at UMaine and complete the program in one year.
3. *Shared courses.* Some teams identified courses that could be shared by programs at both universities. Most of these courses would be offered online or through another distance technology, however, some would be offered in May term or summer sessions.
4. *Graduate student teaching.* There are opportunities for UMaine graduate students to teach at UMM. The teaching experience would help round out the students’ professional training and would provide UMM with instructors who could add breadth and depth to the curricula of some of their programs.
5. *Marketing.* Several teams pointed out the need to develop marketing plans for the collaborative programs.
6. *Advising.* The collaborative programs will require intrusive advising to assure that students understand their options, complete the appropriate course work and are prepared to transfer between universities when necessary.

Disciplinary Recommendations

Business

- 1+ 3 collaboration with students starting at UMM and completing their degrees at UMaine. UMM students who want Finance, Accounting, Management or Marketing can transfer to UMaine to complete the degree.
- UMM will focus resources on Management program with emphasis on non-profit management

Education

- UMaine students can take an Area of Specialization in Special Education through UMM.
- 4+1 UMM to UMaine in Special Education (all UMaine masters Special Education requirements are available on line)
- UMaine's English as a Second Language programs (undergraduate specialization and graduate certificate) can be made available to UMM students.
- 2+2 UMM to UMaine collaborative program that would allow students to start at UMM and graduate from UMaine (a CAEP accredited program)

English/Creative Writing/Book Arts

- Make changes to the UMM curriculum to improve retention and time to graduation.
- 2+2 UMM to UMaine collaboration in English/Creative Writing
- Facilitate enrollment of UMaine students into book arts courses at UMM
- Incorporate UMaine ENG courses that are regularly offered on line into UMM major

Environmental Studies and GIS

- 2+2 UMM to UMaine program where students start in Environmental Studies at UMM and complete in Human Dimensions of Climate Change at UMaine.
- Various GIS collaborations

Interdisciplinary Fine Arts

- Develop visual and music concentrations within the UMM Associate degree. Student could then transfer to UMaine to complete a BA degree.
- May term courses at each campus to serve students from the other (e.g., Book-Art course at UMM)

Marine Sciences

- 2+2 UMM to UMaine in Marine Sciences
- 4+1 in Marine Sciences (UMM bachelors to UMaine masters)
- UMM students access to Marine Sciences study abroad opportunity at Deakin University in Australia
- Spring Semester by the Sea at UMM (for UMaine and UMM students)
- Allow UMM students to enroll in Darling Marine Center Semester by the Sea
- UMaine Graduate students teach at UMM

Psychology – Social Work

- UMaine PSY241 (Statistics for Psychologist) be made available online for UMM students
- Develop a 2+2 (both directions) option in Psychology
- Develop a 1+3 (both directions) option in Psychology

- Develop a 2+2 (UMM to UMaine) SWK option
- Develop MHRT certification (through UMM) for UMaine PSY and SWK students

Environmental Recreation and Tourism Management

- Share courses (both live on one campus and via distance technology on the other, and campus-specific field courses)
- Semester away at UMM for UMaine students
- Collaborative marketing of programs

General Education

- Align learning outcomes for GenEd math courses
- Align learning outcomes for ENG101 on both campuses
- Determine what UMaine programs can be completed in 2 years in a 2+2 arrangement if all GenED requirements are completed at UMM. Market this opportunity.
- Develop a coordinated and intrusive advising system for UMM students considering UMaine degree programs

Critical Challenges

Despite the many potentially successful outcomes identified through this process, there remain some considerable barriers to overcome. Among the most significant are those associated with resource allocation, policies and procedures, and implementation coordination.

Resource Allocation

Sufficient resources will need to be identified and marshaled to facilitate:

- Faculty development to support initiatives related to course-sharing, distance learning, curricular revisions, and program and pathway development
- Travel for further planning and implementation, particularly regarding proposed 1+3, 2+2, and 4+1 models
- Marketing specific program collaborations emphasizing expanded opportunities for students and service to the state
- Teaching and advising workload adjustments to allow for shifting responsibilities and to better support coordination efforts
- Shared library holdings, services, and related academic resources

Policies and Procedures

Some current practices may need to be adjusted to enhance students' abilities to avail themselves of new opportunities through the partnership:

- Streamline registration to facilitate students from either campus enrolling in courses at the other institution
- Minimize impact on student financial aid, and alert students in advance if there are any concerns
- Find ways to ease transfer policies to expedite proposed 1+3 and 2+2 models
- Explore ways to address specific program accreditation concerns
- Examine tuition differentials, course fees, and related student expenses to mitigate or eliminate potential complications

- Streamline student access to and enrollment in proposed travel courses and residential exchanges

Implementation Coordination

Careful coordination of specific proposals will require additional efforts from each campus to handle the following:

- Greater and more systematic alignment of learning outcomes (specific to identified courses)
- Achieve program alignments while maintaining differentiation between them to enhance proposed 1+3 and 2+2 agreements and avoid undue complications
- Development of assessment plans to evaluate effectiveness of specific academic initiatives
- Ongoing program coordination within specific collaborative models (particularly regarding new course development, course rotations, frequency, and sequencing)
- Conscientious and intrusive student advising
- Addressing a variety of capacity issues related to faculty workload, curriculum management, and expanded opportunities for students
- Potential development of service-learning initiatives, internships, community partnerships, and related efforts
- Address capacity issues related to housing, travel, and semester away opportunities
- Supervision of proposed graduate teaching assistants and instructors

Key Recommendations

Critical to the entire partnership will be the specific benefits to students that these curriculum pieces can deliver. The partnership will support student enrichment, retention, persistence, and completion at both institutions through this partnership. Toward those ends we recommend the following to facilitate implementation of the proposed initiatives:

- Continue curriculum team approach with standing curriculum communities that include faculty from both campuses, and meet regularly to assure curricula alignment, modify existing partnership agreements, and develop new collaborations to better serve students. Curriculum communities should meet at least once per semester.
- Apply UMS funds designated for program integration to support highest priority recommendations. The UMM-UMaine partnership serves in part as a pilot for system-wide initiatives under One University, and therefore merits priority funding.
- Give priority to faculty collaborations and research proposals that advance the primary partnership objectives through cutting-edge pedagogies, curriculum development, and assessment.
- Faculty from the two universities have begun the process of developing collegial relationships through this initiative so, rather than addressing opportunities for shared faculty development, research projects, and the like through this process, encourage faculty to continue to do that on their own or through the curriculum communities discussed above.
- Direct the next stage in the Academic Team charge toward other initiatives that support undergraduate and graduate research opportunities, internships, field experiences, career development, and related student-focused efforts.

Appendix A

**University of Maine System
UMM-UM Primary Partnership
Task Team Charter on Academics
June 6, 2016**

CHARTER PURPOSE

- To establish the roles and responsibilities of the UMM-UM primary partnership task team on: *Academics.*

ADMINISTRATIVE TASK TEAM PURPOSE

- The overall UME/UMM Primary Partnership charge is for the two institutions to develop a pathway that moves both forward in a mutually advantageous way. The goals of this Partnership include building on One University principles to take advantage of synergies that can develop across academic units, achieving better levels of access, value and service to our students and/or achieve economies of scale.
- The initial focus of the academic collaboration will be on curricula. However, building on this foundation, future work will explore opportunities for research, community engagement, faculty development, and other collaborative initiatives.

CHARGE

- This Task Team is to stand up an inter-campus team of faculty and academic leaders to develop prioritized curriculum and program structures that support, for example, 2+2 or 4+1 student enrollments as well as shared or complementary courses. These plans will build on the UMS program integration initiative, focusing on the unique program opportunities of these two institutions and their signature programs in particular. A report of these opportunities will be presented to the two faculties and administrations by October 15, with a report to the Chancellor in time for informing the Board of Trustees at their November 2016 meeting.
- Consideration should be given to enrollment data, institutional assets (i.e., faculty and facilities), accreditation standards, and state needs (e.g., employment trends) when formulating opportunities.
- The Task team is to use the first two steps of the four-step process of: **analysis, design,** implementation and audit.
- The task team leaders can utilize sub-teams as they deem necessary.
- The task team's updates and draft reports are due to the Sponsors on a schedule determined by the Sponsors.
- Chancellor Page is the final decision-maker of questions about this charter and what recommendations are presented to the BOT for consideration.

TASK TEAM SPONSORS

- President Hunter and President Swain.

TEAM COMPOSITION

- The Task Team will consist of the two CAOs, who may then appoint sub-teams for reviewing particular academic disciplines or general education as they deem appropriate, as long as all assigned areas of review are covered.
- The Task Team members are: (list)

- Provost Jeff Hecker, University of Maine
- Interim Provost Kay Kimball, University of Maine at Machias
- Because of the close relation between this academic task and the System-level Academic Transformation, the Task Team is expected to consult regularly and as necessary with the VCAA once he/she is on-board.

SCOPE OF EFFORT

- Includes *all academic functions (beginning with the curriculum)*

KEY DELIVERABLES

Deliverables include:

1. An examination and report on the opportunities for growing enrollment and/or enhancing the curriculum of each of the programs at UMM and UMaine that might include shared or complementary courses or collaborative programs (e.g., 2+2 or 4+1).
2. Recommendations should include proposed models for collaboration and a prioritized set of recommendations based upon their potential for growing enrollment, reducing expenses, and serving students.
3. The recommendations should describe additional resources needed for implementation (if any).
4. The report should include an anticipated timeline for implementation.
5. In addition, the report should include in an Appendix the following:
 - a. A list of every academic area reviewed, together with analytical and design methods/processes and inputs used for each area, as well as stakeholders consulted.
 - b. Common lexicon (definitions) of relevant terms and concepts.

ASSUMPTIONS FOR THE TEAM TO INCORPORATE AND/OR TEST AS PART OF ITS WORK

1. There are synergies and improvements that can be found in each academic area due to scale and collaboration (the bias is to the positive).
2. It is important to maintain or strengthen student- and community-focused service at the campus level.
3. The Task Team will fully consider academic area expertise and stakeholder interests in developing their recommendations.

KEY DESIGN CONCEPTS TO CONSIDER

- Prioritization should be to those academic areas that are believed to hold the most immediate promise for enrollment gains and increasing student services/success.
- Resources for leadership and effective change management will be made available to the team.

Appendix B

Sample Curriculum Team Charge and Report Template with Timeline

UMaine – UMM Primary Partnership Academic Program Team Charge

Background

The University of Maine (UMaine) and the University of Maine at Machias (UMM) have agreed to develop a primary partnership. In his announcement of the primary partnership, Chancellor Page indicated the following.

- An inter-campus team of faculty and academic leaders will develop prioritized curriculum and program structures that support, for example, 2+2 or 4+1 student enrollments as well as shared or complementary courses. These plans will build on the UMS program integration initiative, focusing on the unique program opportunities of these two institutions and their signature programs in particular. A report of these opportunities will be presented to the two faculties and administrations by October 15, with a report to the Chancellor in time for informing the Board of Trustees at their November 2016 meeting.

The Chief Academic Officers of the two universities, Jeffrey Hecker (UMaine) and Kay Kimball (UMM) are leading the inter-campus curriculum team. They will create sub-teams that align with the primary UMM degree programs as well as a team focused on general education.

The initial focus of the academic collaboration will be on curricula. However, building on this foundation, future work will explore opportunities for research, community engagement, faculty development, and other collaborative initiatives.

Charge

Examine and report the opportunities for growing enrollment and/or enhancing the curriculum of the Business & Entrepreneurial Studies program (UMM) and Maine Business School (UMaine) through collaboration that might include shared or complementary courses or collaborative programs (e.g., 2+2 or 4+1). Please consider enrollment data, institutional assets (i.e., faculty and facilities), accreditation standards, and state needs (e.g., employment trends) when formulating opportunities. Please propose a model (or models) for collaboration and a prioritized set of recommendations based upon their potential for growing enrollment, reducing expenses, and serving students. Describe additional resources for implementation (if any). The report should include an anticipated timeline for implementation.

UM/UMM Primary Partnership Academic Collaborations Curricular Alignment Progress Report

Program names with brief descriptions:

Opportunities for growing enrollment:

Opportunities for enhancing curriculum:

Model(s) for collaboration:

Prioritized recommendations:

Anticipated timeline for implementation:

Additional resources needed:

Challenges:

Timeline

June 22	Convene at UMaine to review team charges and begin work
August 1	Curriculum Team preliminary reports due
August 15	Provosts return preliminary reports with comments
August 17	Convene at UMM to consider provosts' comments
Early September	Communicate with and solicit feedback from program faculty
September 23	Updated team reports due
Sept 26-Oct 7	Comment period for both institutions
October 10-15	Final reports with recommendations due to Presidents (10/10) and Chancellor (10/15)

Appendix C

Curriculum Team Reports

Biology

Business

Education

English, Creative Writing, and Book Arts

Environmental Recreation and Tourism Management

Environmental Studies

Interdisciplinary Fine Arts

Marine Biology

Psychology and Community Studies

General Education

BIOLOGY

UM/UMM Primary Partnership Academic Collaborations Curricular Alignment Progress Report

UM: Farahad Dastoor, Ann Dieffenbacher-Krall, Karen Pelletreau

UMM: Ellen Hostert, Eric Jones

Program names with brief descriptions:

UMM BA Biology The Biology program at University of Maine at Machias (UMM) focuses on experiential learning. Nearly every course in the Biology major has a required laboratory section where the focus is on providing hands-on opportunities for students to learn and use marketable field and laboratory skills ranging from biotechnology to natural resources management. Biology majors may choose to concentrate their studies in Fisheries Biology, Wildlife Biology, or Pre-professional Biology (Pre-Med, Pre- Vet, Pre-Pharmacy, and Pre-Physical Therapy). The program predominately serves traditional-aged full time residential students. The Biology program interacts closely with the Marine Biology, Environmental Studies, and GIS programs at UMM, providing our students with even more opportunities to acquire marketable skills. Students in the Biology major have opportunities throughout the major to meet and interact with alumni and employers who provide valuable career information and advice. UMM's Biology graduates work in natural resource management agencies and in the growing biotechnology industry in Maine (Jackson Laboratories, IDEXX, Mount Desert Biological Laboratories, etc.). Additionally UMM's Biology majors have gone on to study at prestigious veterinary schools, pharmacy schools, medical schools, and graduate programs.

UMM Biology faculty collaborate with 11 other institutions in the Maine INBRE program to provide intensive courses, internships, and career training for students in the biotechnology and medical fields. Additionally Biology faculty form close partnerships with state and federal agencies and non-governmental organizations focused on fisheries and wildlife management and conservation, including Maine Department of Marine Resources, Maine Department of Inland Fisheries and Wildlife, Maine Warden Service, National Marine Fisheries Service, US Fish and Wildlife Service, Downeast Coastal Conservancy, and Downeast Salmon Federation. Our students and alumni work with these agencies as interns or in contract positions, and students in our courses complete projects for them.

Biology faculty and courses support the Conservation Law concentration in the Environmental Recreation and Tourism Management (ERTM) program. This concentration was developed specifically in response to requests from the Maine State Warden Service. The Maine Warden Service has also requested we establish a Wildlife Forensics Laboratory to process samples for potential prosecution. This will tie the Wildlife Biology concentration with Conservation Law concentration in ERTM. UMM's herbarium contains approximately 2,000 specimens of vascular plants and an additional modest collection of non-vascular plants, lichens, and marine macroalgae. Additionally

UMM houses an entomological collection and a wide variety of articulated skeletons, all of which have been articulated by students. These natural history collections are in the process of being digitized by biology majors so that access to this valuable resource will be greatly facilitated.

UM Biology The School of Biology and Ecology (SBE) at University of Maine (UM) serves as a central home for research and teaching programs in organismal biology, ecology and pre-medical studies at UM. Our areas of inquiry span biology in both scale (cellular to global) and discipline (genetics and developmental biology to ecology and biogeochemistry). Undergraduates at the School of Biology and Ecology pursue a wide variety of careers in both basic and applied aspects of biology that range from cellular biology to ecology. A significant proportion of students plan to enter the healthcare field.

UM SBE offers undergraduate programs leading to a BS degree in Biology, Zoology, Botany, or Medical Lab Sciences, or a BA degree in Biology, Zoology, or Botany. The department provides a major academic home for students wishing to pursue pre-med and other health profession careers. The Pre-Medical concentration prepares Biology or Zoology students for medical school, dental school, optometry school, veterinary school, or professional training in a host of other health related fields. These students may opt to apply to 3+4 accelerated programs in cooperation with New England College of Osteopathic Medicine, New England College of Optometry, or Logan University of Chiropractic, or to the Tufts Maine Track early assurance program. Our Medical Laboratory Sciences faculty coordinates with staff at EMMC to provide practical, hands-on experience for students in the MLS program. MLS students take the American Society of Clinical Pathology certifying exam to become certified medical laboratory scientists.

Many of our students are interested in research careers with animals, plants, or fungi, in agriculture, or related to the environment. UM SBE recognizes the significance of a solid foundation in organismal biology integrated with an understanding of ecology and evolutionary principles in meeting today's environmental and human health issues. The coursework required of each program is rigorous and spans the subdisciplines of biology and ecology, including the basic principles of structure and function, physiology, genetics, and development. Students interested in ecology may select an Ecology concentration. A key feature of UM SBE's degree programs is the wide choice of courses to meet each of the required areas, allowing students a degree of freedom to design their degrees to reflect and engage their particular interests.

SBE provides high quality basic introductory biology service courses (i.e. BIO 100, BIO 200, BIO 222, and BIO 208) for the biologically based disciplines within the College of Natural Sciences, Forestry, and Agriculture, the nursing program, and the University community as a whole. A Neuroscience minor, in cooperation with the Psychology Department, is available to all UM students. Students in majors outside of SBE can choose from minors in Pre-Medical Studies, Botany, Biology, and Zoology.

Having extensive research and service programs, UM SBE offers graduate programs in

Botany and Plant Pathology, Entomology, Zoology, and Biological Sciences, and interdepartmental degrees in Plant Sciences and Ecology and Environmental Science. A combined BS and MS degree program (Four Plus Program) allows determined undergraduates to begin enrolling in graduate level courses during their senior year to obtain credit toward both the BS and MS degrees.

Opportunities for growing enrollment:

UMM to UM 2+2 Agreement

What follows is a description of enrollment trends at UMM over the past 5-8 years. This is intended to provide a summary of the state of enrollment and first year admittance into the biology major at UMM. Both FTEs and headcount have been increasing in the Biology program at UMM since 2007. The increase, modeled as a linear function of the enrollment data, is greater in terms of headcount than in terms of FTEs (3.2 vs. 2.7). This inference is more robust for the headcount data than for the FTE data ($R^2 = 0.84$ vs. 0.57). The enrollment numbers in the biology program have been 45 students on average over that time period using either headcount or FTE. While first year admits at UMM in the Biology program from 2011-2015 have shown a decreasing trend, first year admits for the Fall semester of 2016 are 22, higher than any other year during that period and higher than the average of 14 over that time period. This figure for 2016 first year admits does not include UMM-UM 2+2 students (UMAD). Those UMAD students account for 26% (8/30) of the incoming class during the 2016 academic year. The UMAD students represent half of the difference in first year admits for the Fall of 2016 versus the average of first year admits for the 5 years previous to this semester. UMM's first year retention rate, measured as an average over the years 2008-2015, is 42%.

Given the paucity of data bearing on the potential effects of any 2+2 partnerships between UMM and UM, it is difficult to project what effect such programs will have on the enrollment at either institution. It is important to note that enrollment capacity is an important consideration when discussing programs intended to boost enrollment. For example, UMM regularly offers three sections of our introductory biology (BIO 117) course each fall semester and one section in the spring semester. BIO 117 is required for all Environmental and Biological Sciences majors at UMM as well as Psychology and Community Studies majors and those students majoring in Secondary Education. Each section of BIO 117 has the capacity to serve 24 students and this restriction is imposed by the size and structure of the laboratory used for the course, including safety considerations. While larger lecture sections could conceivably be taught, more sections of lab would have to be offered in order to accommodate such an increase in the number of students enrolled in that course. Given that information, it is important to note that faculty who teach these courses already carry full loads each term and thus the offering of additional sections of lab presents a possible complication in terms of the requisite human resources (see associated challenge below).

Because of size of the department at UMaine Orono, it is likely that any 2+2 students enrolled at UMM will be able to be accommodated upon transfer to UM. Due to the flexible nature of our biology curriculum, we anticipate that these students will distribute themselves across the curriculum based on interests. The one exception to this would be

any students interested in pursuing a pre-med concentration, which would have more constrained requirements. We will have a better understanding of these enrollment patterns as the program evolves. Synchronization of enrollment times between campuses will be important to ensure that students can enroll competitively for the upper level biology courses.

UM to UMM 1+3

We have identified a possible need for a select subset of students who begin their tenure at UM and find that they are not accustomed to the size of the classes and of the community at the UM campus. For these students we would like to explore a 1+3 program that would allow students desiring a smaller, more intimate and field-oriented learning environment to transfer during their first year of classes at UM to UMM. If this program proves helpful for students it may lead to increased enrollment for the upper level courses at UMM.

Semester Away

The committee recognizes that each campus offers unique opportunities for students to have a brief immersion program at the sister campus. We will next work on recognizing a semester of courses that could be taken by a cohort of students that can all be counted towards the degree. There may be an opportunity to develop shared courses for these study away programs. We envision a semester at UMM that will provide intense field experience, while a semester at UM would provide high end research lab courses.

Growing Enrollment Recommendations

- Formalize a 2+2 program for students interested in pursuing Biology, Zoology or Botany degrees.
- Develop a coordinated plan to offer and advertise upper level courses in a manner that allows students from the sister campus to enroll (also noted in Biology Program Integration Round 2 report).
- Identify course combinations that would be of interest to ecology students at UM that could be taken during a semester away at UMM; these particular courses would be subject to increased enrollment.
- Formalize the 1+3 program and make advisors at UM aware of this option for students at UM who may be struggling (e.g., due to factors such as course size). Any students transferring to UMM in a 1+3 program would add to enrollment of the upper level courses. However it is not currently possible to predict what number of students would take advantage of this type of program. Providing seamless transfer of credits may incentivize students.

Opportunities for enhancing curriculum:

- Cross mapping of courses from each campus to the Biology program at the other campus (both directions) will provide expanded opportunities for students to take specialized courses of interest and complete their degree programs in a timely manner.
- Developing May term or summer term field courses at UMM that are taught by UM faculty, or co-taught by both UM and UMM faculty and cross-listed for both

campuses would provide new opportunities for students and faculty at both campuses.

- The offering of a semester away will provide opportunities for students to experience specialized courses not available at their home institution.
- The development of a cross institutional botany minor may lead to new curriculum opportunities.

Model(s) for collaboration:

Presently being modeled or discussed

- UMM→ UM 2+2 program in Biology
- UM→ UMM 1+3 program in Biology
- Possibility of a field “semester away,” a set of fall semester courses for UM students taken at UMM to take advantage of UMM’s experiential emphasis and fieldwork-based lab courses.
- Possibility of a lab “semester away,” a set of semester courses for UMM students taken at UM to take advantage of UM’s excellence in laboratory research.
- The development of a Botany minor at UMM would be facilitated by the ability of UMM students to take an additional Botany course from UM in order to fulfill the credit load requirements for such a minor, and to provide the students at UMM with the breadth of coursework in the discipline that is appropriate for a minor. The development of this minor has been requested by several UMM students and the single Botany faculty at UMM is not able to teach all the necessary Botany-related courses that would be required due to other teaching obligations (i.e. courses in the Environmental Studies program and in the General Biology curriculum). Students interested in either a Botany minor or Botany degree at UM may also benefit from the botany expertise at UMM.

Future ideas for exploration

- Collaborations with UMM Biology and UM’s Department of Wildlife, Fisheries, & Conservation Biology, Ecology and Environmental Science and School of Marine Science are concurrently being explored.
- Possibility of a professional Master’s degree in Biology at UM that could link with UMM’s Biology major as a 4+ opportunity.
- Explore possibility of a TA-exchange program to provide additional teaching experience to UM graduate students, particularly those with research interests in the Downeast area, and to supply UMM biology courses with experienced TAs.

Prioritized recommendations:

- Develop clear 2+2 program of courses for B.S. degrees in Biology, Zoology or Botany.
- Identify effective mechanisms and timepoints for assessment of the transitioning students as well as mechanisms to track student success upon entrance to UM.
- Update transfer equivalencies for students moving from UM to UMM.
- Better define 200, 300, and 400 level courses, so that similar courses across campuses are at the same level. This may require some re-numbering, or at least, a consistent numbering practice moving forward (also noted in Biology Program Integration Round 2 report). UM SBE’s department has starting the process of

mapping and evaluating its course offerings and we anticipate this will take a significant amount of time (at least one academic year).

- Provide external support for advising faculty from the reciprocal institution so that students are clear about the requirements initially and throughout the program.
- Determine the amount of support available for additional resources so that the campuses can plan accordingly.
- Identify and compensate faculty members presently affected by increased load by the current 2+2 arrangement.

Anticipated timeline for implementation:

2+2 UMM→ UM Biology Program - draft *completed* (Appendix A)

- Incorporate revisions and follow each campus's process for approval, to be completed and submitted to Administration by the end of Fall semester 2016.

Updating transfer equivalencies for students transferring to UM from UMM- *completed*

- Every biology course from UMM was evaluated for equivalency during Summer 2016. Courses deemed equivalent by individual faculty have been updated in the transfer equivalency tool to reflect these changes. A complete list of courses from UMM and how they would transfer to the degree programs at UM can be found in "UMM-UM 2+2 BIO Course Equivalencies" (Appendix B; please see below associated challenge).

Ongoing

- Consultation with the relevant faculty at UM concerning the proposed Botany minor at UMM will be accomplished during the Fall 2016 semester and a plan will be drawn up by the end of the Fall 2016 term.
- UMM will continue to evaluate UM courses for transfer credit and decisions will be forwarded to Registrar by the end of Fall semester 2016.
- A draft of 2+2 programs and or additional collaborations between UM's Marine Science; WLE; EES programs and UMM's Biology major can be expanded once the course equivalency tool in MaineStreet SMS courses is re-evaluated. This could be completed by the end of the Spring 2017 semester. (Note: This collaboration involves the UMM Biology faculty in collaboration with faculty from UM WLE, Marine Science and EES. The above report reflects the work directly between UMM Biology and UM School of Biology and Ecology.)
- Semester Away - The committee will work to identify and structure the field semester away during Fall 2016, and the lab semester away will be explored in Spring 2017.
- Assessment - The committee will work to identify how and when to best assess students in the 2+2 program along with how the semester away might be assessed.

Additional resources needed:

(Many required resources are alluded to in the challenges section below.)

- TA support and adjunct support. Includes identifying qualified candidates, compensation, benefits, office space and associated privileges, and housing space for TAs at UMM.
- Compensation for additional workload (e.g., teaching, advising, and administrative). This includes compensation for supervision of grad TAs from UM teaching at UMM.
- Reliable technology for streaming coursework/developing and delivering online content is required to facilitate the offering of courses remotely. This should be the responsibility of the IT departments at the respective institution and not of the faculty teaching the course. Additional load on faculty willing to stream their courses should be minimized by using external IT and tech support.
- Professional development support for faculty developing and teaching online courses is needed at UMM. Faculty teaching courses remotely from either campus will need assistance in the design of their courses to make them amenable to remote delivery.
- Housing for students interested in a semester away program on both campuses.
- Housing for students needing to take summer courses at UM during their first summer enrolled UMM.
- Housing for faculty interested in offering May term/Summer courses, co-teaching or collaborating otherwise. We see this being something that could be possible on either campus, but most likely at UMM.
- Incentive for faculty to become involved in cross collaborations and inter-institutional efforts to diversify and enhance curriculum.

Challenges:

Administrative & Instructional

- Difficulties using MaineStreet to check transfer equivalencies for a block of courses between 2 campuses (also noted in Biology Program Integration Round 2 report).
- Obstacles to students enrolling in courses not at their home institution must be eliminated (also noted in Biology Program Integration Round 2 report). The ability to enroll in both institutions simultaneously may be necessary for students taking live courses on one campus and online courses from the other.
- All new and revised course proposals approved by faculty every year should be provided to both campuses so transfer equivalencies can be updated annually.
- Many of the courses offered at UMM do not have direct equivalents to courses offered at UM; for example UMM offers an intensive Plant Ecology course with a lab. While UM has a suite of plant courses, there is not one specializing in plant ecology. In such situations, the course was evaluated and placed into one of the 5 requisite biological science areas required for the UM degree. It should be noted that due to constraints of MaineStreet, it is not possible to automate the transfer of these credits and allocate them towards the degree. For every 2+2 student, every course that falls under this category will have to manually be approved by the program coordinator of SBE. This workload needs to be considered.
- Efforts to streamline or automate the transfer process are needed.

- Acceptance of AP credits needs to be aligned between UM and UMM. For example, UMM grants credit for BIO 117 credit with a score of 3 on the Biology AP exam. However, UM requires Biology majors to score a 4 on the exam to receive credit for the equivalent course. Students at UM transferring into the program with an AP score less than 4 will therefore be required to take UM's Biology series.
- Increased enrollment at UMM may lead to the requirement for additional laboratory sections for the first year courses (e.g. BIO 117) and second year Chemistry courses. Increased enrollment at UM will likely target courses such as BIO 350 (Genetics), a requirement for the degree and one that all incoming students will take in their junior year. Additional support for undergraduate Maine Learning Assistants (MLAs) may need to be considered.
- Synchronization of enrollment times between campuses will be important to ensure that students can enroll competitively for the upper level biology courses.
- Additional work placed on program coordinators to implement and carry forward the official changes to programs may be a significant addition to an already extensive workload.
- 2+2 students will not be eligible for transfer if they fail to pass any of the courses during the first two year sequence. Student who do will be required to retake the course. Summer course offerings at UMM are limited, but taking it at UM would not benefit the student with the current policies (the grade would not be replaced). It may be advantageous to allow for summer courses taken at UM to count towards their efforts in improving their coursework and keeping on track for transfer to UM.
- The cooperative offering of courses across campuses would benefit greatly from shared library resources. The scope of library resources available at the two institutions is not equivalent and this asymmetry restricts the materials that students can avail themselves of during the course of their studies. This was brought up in several of the Program Integration round 2 reports.
- Work load. Throughout the conversation a major concern was the many areas where such mergers and collaborations will lead to increased workload. In addition this may not be spread equally among faculty. For example, for those faculty at UM who may be willing to stream their courses to UMM, how are they compensated vs. their peers who are not? How are they incentivised?

Advising & Student Support

- Co-advising of 2+2 students between UMM and UM needs to be accounted for in faculty load. Same issue for co-advising for any future collaborative programs.
- This population represents a significant increase in the number of transfer students coming into SBE. This translates to an increased advising load for the transfer student advisor at UM (also the undergraduate program coordinator) and the faculty member assigned the responsibility of advising these students at UMM.
- Students transferring to UM in their third year may experience a large shift in learning culture. Transfer students historically receive minimal resources and support and as a result are disproportionately known to fail when arriving at UM.

- Additional resources, perhaps including a 1 credit, first-semester seminar at UM, could reduce failure of transfer students who had been successful in their first years at UMM.
- Generating a 4 year plan for students who do not place into College Algebra upon admittance needs to be considered and possibly developed (e.g. 3+2 or 2+3 programs).
 - Mutual resources for students enrolled in the 2+2 program needs to be provided, including access to the Career Center.
 - Additional resources should be identified for support services that students may require, e.g., Counseling Services, Math and English support.

Other

- Maintaining unique programs that serve the mission of the home campus while collaborating with the sister campus

APPENDICES (Final versions to be included with the final report)

Appendix A UMM-UM 2+2 BS Recommended 4 Year Plan

Appendix B UMM-UM 2+2 BIO Course Equivalencies

Appendix C Anticipated timeline for the committee

Appendix D UM-UMM 1+3 Biology recommendations

Appendix E UM to UMM transfer equivalency (evaluation in progress)

BUSINESS

INTRODUCTION

On June 22, 2016 and August 17, 2016 representatives from the Maine Business School and the University of Maine Machias Business and Entrepreneurial Studies Program worked to develop a proposed outline for cooperation between the two programs. We began with the dual goals of growing enrollment and enhancing the curriculum with an eye toward enhancing student success and enticing and enhancing student engagement with the programs within the University of Maine System.

BACKGROUND

Before we get to the recommendations we have, it is vitally important that the realities of both programs are presented:

University of Maine Machias Business and Entrepreneurial Studies Program:

- Approximately 100 undergraduate students
- Accredited by NEASC
- 2 FTE faculty and 2 adjuncts offering the program (supplemented with offerings from the University of Maine Augusta)
 - 1 faculty is a recently graduated JD with a background in Business Law and Small Business Management
 - 1 faculty teaches primarily economics and public policy
 - A replacement faculty position has been approved
- With the loss of faculty over the last two years, there are no slack resources for teaching new courses and there are no specialists in the department to teach the Sports and Fitness Management or Marketing Concentrations.

Maine Business School:

- Approximately 1000 undergraduate and 100 graduate students as of the September 1, 2016 enrollment report.
- Accredited by AACSB
- 24 FTE and 5 adjuncts offering the program
 - Tenure track faculty and lecturers in four majors (Accounting, Finance, Management and Marketing) and three concentrations (Entrepreneurship, International Business and Management Information Systems)
- Growth of 38% in the last four years has made it so that there is extremely limited slack resources in any given class or among the faculty to teach new sections/classes

RECOMMENDATIONS

Given the requirements of AACSB accreditation regarding the number and type of courses that can be brought from a non-accredited program into an accredited program, we recommend a 1+3 program for UMM students interested in graduating in Finance, Accounting, and/or Marketing, or those students interested in graduating from the Maine Business School. Students interested in the 3+1 program will need to apply and be accepted to UMM, take the courses listed below, and request a transfer to UMaine with an overall GPA of 2.0 or

above with a C- or better in each of the business courses (BUA 101, 201, 202 and 220). To accommodate this, the committee recommends the following:

UMM students interested in matriculating from the Maine Business School would take the following 30 credit hours of UMaine equivalent courses at UMM before transferring:

UMaine	UMM
ENG 101 (College Composition)	ENG 101 (Composition)
ECO 120 (Principles of Microeconomics)	ECO 202 (Microeconomics)
ECO 121 (Principles of Macroeconomics)	ECO 201 (Macroeconomics)
MAT 215 (Introduction to Stats for Bus and Economics)	MAT 113 (Introduction to Stats)
CMJ 103 (Fundamentals of Public Communication)	SPE 104 (Public Speaking)
PSY 100 (General Psychology)	PSY 110 (Intro to Psychology)
BUA 101 (Introduction to Business Entrepreneurship)	BUS 111 (Intro to Business & Entrepreneurship)
BUA 201 (Principles of Financial Accounting)	ACC 201 (Financial Accounting)
BUA 202 (Principles of Managerial Accounting)	ACC 202 (Managerial Accounting)
BUA 220 (The Legal Environment of Business)	BUS 221 (Business Law I)

Following this first year, interested students would be able to transfer to UMaine into the business school with no “lost” credits and on track to graduate with the degree of their choosing.

As the committee was talking about this, one of the things we identified is the opportunity for UMaine to teach BUA 201 (UMM equivalent ACC 201) and BUA 202 (UMM equivalent ACC 201) using distance technology to UMM students. Currently UMM is staffing the accounting courses with adjuncts while UMaine has already developed BUA 201 and BUA 202 as online courses greatly reducing the time lag necessary to begin implementing this solution, though capacity is a question to be addressed.

This agreement serves students well by eliminating new students coming into the accounting, marketing and fitness management concentrations at UMM with an expectation of being able to matriculate at UMM which will allow UMM to focus limited resources on their management concentration. At UMM, students interested in fitness management will still be able to study this topic through the environmental recreation and tourism management degree while students interested in marketing and accounting will be able to study at UMaine through the proposed 1+3 agreement. Of particular note, by focusing on the management concentration exclusively, UMM will be able to further develop their entrepreneurship and small business management offering, and possibly, create an offering in non-profit management which is would be incredibly valuable in Washington County and which the Maine Business School does not offer (see appendix A for a draft of a revised UMM business curriculum).

IMPLEMENTATION

The time required to get this new partnership started is quite minimal. We expect that this program can be initiated for incoming students enrolling in the Fall of 2017 assuming that key resources are provided to support implementation. The resources required to make this partnership work at UMaine revolve primarily around support for teaching additional students

in online section of BUA 201 and BUA 202 (assuming that the numbers are in the double digits for a given semester). It is likely that the initial support would be no more than money to support one or two adjuncts, with additional resources becoming required if this program is very attractive and draws a significant number of students. Beyond teaching resources, needs are minimal for the University of Maine as we will leverage the support of the Associate Dean of Undergraduate Studies and the staff of the Undergraduate Program office (currently 2.5 FTE staff work in this office to do professional advising as well as manage undergraduate issues). In order to make sure there is concomitant support at UMM, a business program coordinator is needed for the program. The release time offered to a program coordinator at UMM will allow a faculty member to focus on the population of students engaged with the program to make sure their advising is accurate and timely from their first semester.

The key to successful implementation of this program will be in identifying those students it will serve well, letting them know about the program through an effective marketing campaign and then getting them on track from the first semester they enroll at UMM. With a 1+3 program, student engagement in their degree is critical to make sure that participants do not fall behind their peer group who start at UMaine.

It is our belief that the above proposed 1+3 program may increase enrollment by attracting students to the system who would otherwise have pursued business degrees via other institutions, or not at all. Regardless of this program's ability to attract outside enrollment, however, this program can be a win for both institutions and the University of Maine System by better leveraging the resources and distinctive competencies of the respective faculties at UMaine and UMM.

Appendix A

DRAFT of Revised Business Program

September 13th, 2016

In addition to the major requirements, students must complete the University Core and electives to meet 120 credits. Note that some Core requirements may be met by certain Business & Entrepreneurial Studies requirements. To graduate, students must earn a cumulative grade point average of at least 2.00. *Denotes MBA prerequisites for University of Maine. *Italics indicates new course.*

Business Major Requirements (54 credits total)

Intro Level Courses:

- BUS 111 Intro to Business & Entrepreneurship
- MAR 101 Marketing & Entrepreneurship *
- *BUS 1XX Intro to Personal and Business Finance*
- PSY 110 or ISOC 141 Psychology or SOCI 101 Sociology

Professional Courses:

- ACC 201 Financial Accounting *
- ACC 202 Managerial Accounting *

- ECO 201 Macroeconomics *
- ECO 202 Microeconomics *
- MAN 318 Human Behavior in Organizations
- MAN 325 Finance *
- BUS 212 Business Communications
- BUS 221 Business Law I
- *BUS 3XX Internship and Seminar*
- PSY 311 Social Psychology
- MAN 321 Operations & Project Management **or** MAN 313 Managerial Decision Making

Choose from the following options (9 Credits)

1. Small Business & Entrepreneurship

- MAN 301 Management *
- MAN 302 Small Business Management & Entrepreneurship
- MAN 406 Entrepreneurship (senior capstone)

2. Non-profit Organization Management

- WRI 414 Grant and Proposal Writing
- BUS 325 Business Ethics & Social Responsibility
- *MAN 4XX NPO Management & Governance* (senior capstone)

EDUCATION

UM/UMM Primary Partnership Academic Collaborations Curricular Alignment Final Team Report

Context for the Collaboration

University of Maine

The School of Learning and Teaching at the University of Maine supports CAEP-approved undergraduate programs in Elementary, Secondary, and Early Childhood Education; graduate programs in Curriculum, Assessment, and Instruction, Special Education, Literacy, and STEM; and doctoral programs in Literacy, STEM, and Prevention and Intervention.

The Department also supports graduate certificates in English as a Second Language (ESL), Positive Behavior Supports, Autism, Alternate Certification, and Early Childhood Teacher (to support Maine's 081 teaching endorsement). A Master of Arts in Teaching program for Secondary Education has been revised and approved by the UM Graduate Board; we are preparing to accept students in 2017. The Department collaborates in one inter-campus graduate program in Instructional Technology and is cooperating with USM on their graduate program in Rehabilitation Counseling. Several 4+1 partnership conversations have begun between the College of Liberal Arts and Sciences and the Department of Teacher and Counselor Education.

Elementary Education majors must complete a 24-credit Area of Specialization in one of the following areas: English, Math, Science, Social Studies, ESL (English as a Second Language), Modern Languages (French or Spanish), Human Development, or STEM.

University of Maine at Machias

The Education Program at UMM prepares students for teaching careers in elementary education (K-8), secondary education (7-12), and special education (K-12). The Bachelor of Science in Elementary Education offers five different concentrations for students to choose from:

- **Community Engaged Learning:** This concentration focuses on exploring community resources and challenges as well as provides foundations for rural education with additional local field placements.
- **English and Language Arts:** This concentration provides individualized training in literature with a special focus on creative writing and grammar.
- **Environmental Literacy:** The goal of this concentration is to give students a strong foundation in science. It also strives to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of humans to the natural world.
- **Marine Biology:** The coursework of this concentration examines are local marine organisms and their ecosystems. Our science faculty specialize in teaching outdoors to enhance hands-on learning. Students learn about the biology and ecology of marine plants and animals inhabiting oceans, rocky shores, tidal pools, marshes, mudflats, and other marine environments.

- **Special Education:** This concentration prepares students to become certified as special education teachers. It explores both the legal and foundational aspects of special education as well as practical training in teaching and assessment methods.

Students who are interested in pursuing a career as a secondary teacher may choose one of two pathways to certification. They may major in a specialty area (Interdisciplinary Fine Arts (with a Visual Arts concentration); English, Creative Writing & Book Arts; Biology or Marine Biology; or Psychology & Community Studies) and minor in Secondary Education, or they may choose to major in Secondary Education with a concentration in Art, English, Life or Physical Sciences, Mathematics, or Social Studies. Students who earn a major in secondary education or a minor in secondary education at UMM are eligible for Secondary Certification (7-12) in their content area (Art, English, Social Studies, Life or Physical Science, or Mathematics).

For students who already hold a baccalaureate degree, UMM provides certification-only programs to prepare for a teaching career at either the elementary or secondary level. UMM offers professional coursework leading to Elementary Certification (K-8) or Secondary Certification (7-12) in the fields of Art, English, Social Studies, Life or Physical Science, or Mathematics, and certification in Special Education (K-8 or 7-12). It is possible to complete UMM's post-baccalaureate Teacher Certification Program within three semesters if all content requirements are fulfilled.

Opportunities for Growing Enrollment through Collaboration

1. There is a great need for certified special education teachers in Maine, as well as coursework to support currently-employed special education teachers who are not fully certified as required by the US Department of Education's Every Student Succeeds Act (ESSA). While the University of Maine offers a graduate program, there are no current options at the undergraduate level for concentrated study on teaching students with disabilities. Elementary Education students must take a 24-hour Area of Specialization as part of their preparation. UMM offers coursework in Special Education which could become an **Area of Specialization in Special Education** for UM students. By offering this collaborative Area of Specialization for elementary and secondary education majors at UM, it is likely that enrollment in UMM special education courses may increase, and that additional students may be drawn to the education majors at UM (particularly if they wish to pursue special education at the undergraduate level, as this option has historically not been available to students at UM).

2. Through a **4+1 agreement** to be created under this partnership, UMM teacher education students in Elementary, Secondary or Special Education could complete a master's degree in Special Education through the University of Maine. All of UM's graduate courses in Special Education are online, which will support the non-traditional student population at UMM. The potential for 4+1 programs for UMM students in Special Education to complete a Master's in Special Education in one year (and summer) can support UM graduate enrollment and potentially increase UMM undergraduate enrollment.

3. The potential for **2+2 articulation agreements** for students beginning their studies at UMM and completing their programs at UM could be similar to existing articulation agreements with community colleges. These agreements allow students from other institutions to graduate from a nationally accredited program, assuming they meet requirements for candidacy. Careful consideration of accreditation requirements must precede work on agreements as UM is CAEP accredited and UMM is not. As noted in the discussion of the special education area of specialization and 4+1 agreement above, the possibility of 2+2 articulation agreements stands to enhance enrollment at both UM and UMM by offering students choice and flexibility in terms of curriculum and geographic location.

4. The University of Maine supports both an **Area of Specialization for undergraduate students and a graduate certificate for practicing teachers in teaching English as a Second Language**. All courses are offered in the summers as hybrid courses and several (but not all) offered online during the academic year. In Washington County, there is a countywide need for teachers with expertise in working with students who are English Language Learners. Washington County is home to two Native American communities with elementary schools that are part of the Bureau of Indian Education. Passamaquoddy Language and Culture programs exist at these schools, and courses in Passamaquoddy Language and Culture are available at some public high schools in Washington County. Washington County is also home to Washington Academy, an independent secondary school that serves over 350 day students and about 90 residential students representing more than 20 surrounding communities and more than 15 countries. In the geographic area served by Narraguagus High School (including the communities of Milbridge, Harrington, Cherryfield, and Addison), there is a significant population of Hispanic students associated with migrant workers who have settled in the area. The availability of the ESL Specialization for pre-service and inservice teachers in Washington County stands to enhance the likelihood that students who are English Language Learners can benefit from their K-12 education.

Opportunities for Enhancing Curriculum

There is a shortage of certified Special Education teachers statewide. This proposal offers the option for Elementary and Secondary education majors at UM, with interests in working with students who have disabilities, to take the necessary coursework leading to certification in Special Education, thus broadening their curriculum. UM does not have an undergraduate Special Education program but students in its Master's degree program can earn initial teacher certification in special education. This collaboration will invite both UM and UMM students, through the combination of an Area of Specialization and a 4+1 program in special education, to graduate from UM's nationally accredited program with a Master's degree and special education teacher certification through one additional year of study.

The Machias area has a growing population of English language learners. Opportunities for teacher candidates (and practicing teachers) to gain skills and knowledge in ELL strengthens the curriculum and serves the children and families in the area.

Model(s) for Collaboration

1. Building upon on existing strengths in UM and UMM programs, three models of collaboration are planned:
 - a. The addition of Areas of Specialization in Special Education and ELL as program options in existing programs;
 - b. The creation of 2+2 programs (articulation agreements), assuming there are no complications with CAEP accreditation for UM; and
 - c. Creation of 4+1 programs for UM and UMM students to earn Master’s degrees and certification, therefore building capacity in the state for Master’s level Special Education teachers
2. UM and UMM have prior experience in collaborating with other UMS campuses using distance education modalities. Through our proposed model, we will draw upon the expertise of faculty who have significant experience in distance education teaching, advising, and supervision. These faculty have experience in designing and delivering programs “at a distance,” and honor place-based training and supervision to support pre-service and in-service teachers in our geographically diverse state.

Prioritized recommendations and action taken since the preliminary report

1. **Create the option for UM students to add an Area of Specialization in Special Education.** To ascertain interest in an Area of Concentration among UM undergraduates, members of this collaboration committee conducted a survey of students in UM’s introductory EHD 101: The Art and Science of Teaching course. This course is required for all UMAINE undergraduate preservice teachers. 92.6 percent of student respondents enrolled in this course are yet to be admitted into teacher candidacy, as they are primarily first and second year students. Although 89.3 percent responded that they have decided on one or more area(s) of specialization, it is not uncommon for students to change or add specialization areas in year three. When asked if they would be interested in a UMAINE Area of Specialization or Minor in Special Education, 64 percent of respondents expressed moderate or high interest. When asked if an online option for Special Education courses would affect their Area of Specialization, 41.7 percent of students responded with no reservation towards an online option, and an additional 41.7 responded with only some reservation. If this option is established and promoted, these numbers indicate compelling viability of a Special Education Area of Concentration or minor program.

Areas of Specialization at UM consist of 24 credits. UM elementary and secondary education majors already complete one Special Education course as part of their required program of study. With the addition of an undergraduate area of specialization in special education, UM elementary and secondary education students would be able to complete 21 additional credit hours (7 courses) through UMM to bring the total Area of Specialization to 24 CH. UM and UMM faculty have identified four UMM Special Education courses to serve

as the required concentration courses, and students who choose to pursue this concentration may choose from several other UMM Special Education course offerings to fulfill the 9 CH (3 courses) to round out the area of specialization.

Next steps:

- UM will submit documentation for a new Area of Specialization to the School of Learning and Teaching, the College Curriculum Committee and Undergraduate Program for Curriculum Committee (UPCC) for approval.

2. Create a program option for UMM students to complete a 4+1 program leading to a Master's in Special Education through the University of Maine and for UM students in the Area of Specialization in Special Education to complete a 4+1 program.

UM and UMM faculty recently reviewed the syllabi of UM and UMM Special Education courses for alignment. Through this process, faculty identified four UMM courses that are closely aligned with UM graduate-level Special Education courses. UMM Education/Special Education faculty recently submitted a proposal at UMM to renumber these four courses from 300- to 400-level, so that the courses will be able to transfer to UM at the graduate level. This proposal was approved by UMM's Professional Studies Division and will soon be considered by UMM's Curriculum Committee. Pending the approval of the Curriculum Committee, the proposal will be reviewed by UMM's Provost before the renumbering is completed by the Registrar's Office. In advance of offering these four courses at the 400-level during the 2017-18 academic year, UM and UMM faculty will collaborate to more closely align learning outcomes and key assessments so that the students in the 400-level UMM courses are able to seamlessly transition into a 4+1 Master's in Special Education degree program at UM.

UM students in the Special Education Area of Specialization for Special Education, and UMM students with a Special Education Concentration, will be eligible to apply in their third year for a 4+1 program at UM. The four required courses in the Area of Specialization (also required for UMM students) will be accepted as graduate-level coursework in the Master's in Special Education degree program at UM. With the one additional year of study, students will be able to graduate with a Master's degree in Special Education and recommendation for special education teacher certification.

Courses in the Area of Specialization* (required courses in bold type)

SED 302: Adapting Instruction for Students with Disabilities

SED 320 Special Education Law

SED 325 Assessment in Special Education

SED 335 Program planning for Students with Disabilities

SED 345 Behavior Support and Intervention

Plus, three electives from:

SED 355 Transition in Special Education

SED 362 Typical and Atypical Expressive and Receptive Language

SED 365 Differentiated Instructional Strategies

SED 370 Teaching Reading and Writing to Children with Special Needs

* Note: The four classes in bold type are in the process of being revised and renumbered to 400-level classes.

At UMM, more than 30 students are enrolled in the post-baccalaureate Teacher Certification in Special Education program. This non-degree program is approved by the Maine Department of Education for Maine's teaching endorsement #282 Teacher of Students with Disabilities. In this program, students complete a sequence of 30 credit hours plus 12 credit hours of student teaching, at which time they are recommended for initial teacher certification by the UMM's Registrar. The student does not receive a diploma or complete a degree through this program. Through the 4+1 agreement, students enrolled in UMM's Teacher Certification in Special Education program could begin coursework at UMM (courses comprising the 4+1 proposal), then enter the +1 year at the University of Maine and graduate with a Master's in Special Education plus recommendation of UM for initial special education teacher certification in Maine (endorsement #282)..

Next steps:

- An application for 4+1 will be made to the Graduate School of the University of Maine following established guidelines.

3. Create the option for UMM students to add Area of Specialization in ESL/ELL. UM offers a 24 credit hour Area of Specialization in Teaching English as a Second Language. The courses are offered online and face-to-face during the summer, which would enable UMM students and school personnel working with English Language Learners to pursue the Area of Specialization without conflicts of time with the public school academic year or the undergraduate academic year at UMM. While the four courses required in the ESL core are available only through UM, students may complete UMM's EDU 339 Working with Culturally Diverse Students in order to meet the required Multiculturalism Course (3 CH). Similarly, UMM students may be able to apply other courses in Anthropology, Psychology and Community Studies, and Sociology toward the nine credit hours of electives required in the Area of Specialization. The current requirements for UM's Area of Specialization in Teaching English as a Second Language are outlined below:

Required Core ESL Courses (12 credits):

- ELL 470: The Teaching of English as a Second Language (3 credits)
- ELL 475: Curriculum Development in English as a Second Language/English as a Foreign Language Context (3 credits)
- ELL 480: Testing and Assessment in English as a Second Language/English as a Foreign Language Context (3 credits)
- ELL 485: Applied Linguistics and Second Language Acquisition Principles for ESL/EFL Teachers (3 credits)

Required Multiculturalism Course (3 credits):

- EDB 202: Education in a Multicultural Society (3 credits) or UMM equivalent

- EDG 425: Field Experience: Urban and Rural Education (3 credits)
- ELL 491: Multiculturalism and Diversity for ESL/EFL Context (3 credits)

Electives (9 credits):

- ANT 102: Introduction to Anthropology: Diversity of Cultures (3 credits)
- ANT 300: Basic Theory in Cultural Anthropology (3 credits)
- CHF 331: Cognitive Development (3 credits)
- CSD 381: Later Language Development (3 credits)
- DIS 300: Disability: Interaction of Human Diversity and Global Environment (3 credits)
- INT 410: Introduction to the Study of Linguistics (3 credits)
- MLC 172: Multiculturalism in America (3 credits)
- PSY 230: Social Psychology (3 credits)
- PSY 425: Social Issues in Development Psychology (3 credits)
- SOC 201: Social Inequality (3 credits)
- SWK 330: Contemporary Issues in Diversity and Pluralism (3 credit)
- SWK 350: Human Behavior and the Social Environment 1 (3 credits)

Next Steps:

- UMM will facilitate the necessary procedural steps for establishing a new concentration (Teaching English as a Second Language) within the elementary and secondary education degree programs. This includes identifying potential UMM courses that will fulfill elective requirements in the Area of Specialization.
- UMM faculty will work to align UMM's EDU 339 Working with Culturally Diverse Students course more closely with UM's EDB 202 Education in a Multicultural Society, such that learning outcomes and key assessments are aligned.

4. Create articulation agreements (2+2) for UMM students to begin their studies at UMM and complete them at UM with CAEP approval and certification. UM and UMM faculty members have collaborated with UM's Coordinator of CAEP and Certification Program Director and Academic Advising and Support Services Coordinator to create a draft articulation agreement located in Appendix A of this report.

Next steps:

- Begin the formal process at UM of getting approval for articulation agreements.

Anticipated timeline for implementation

It is likely that the initiatives outlined in this report could go into effect for availability at the start of the 2017-2018 academic year.

Additional Resources Needed

Given that our proposal is heavily focused on distance education as a means of partnering, it would be helpful to have access to support personnel in distance and online learning who are familiar with these initiatives. While this may not require dedicated personnel to serve only this program, there should be staff on both campuses who are aware of and familiar with the needs of students in these programs, and who can properly

direct students and faculty to orientation and training materials for becoming familiar with delivery systems, and who can be readily available in the event of technical difficulty “on the spot” (e.g., during “live” course delivery/recording).

ELL Initiative

Resources for these initiatives are likely to include dedicated distance education technology that will enable students and classrooms at UM and UMM to “connect” at a distance. This may include, but is not limited to, Polycom equipment (space) and faculty training. Otherwise, course materials may be shared via online course management system resources already in use (Blackboard). From time to time, some transportation resources may be needed if faculty desire to bring students together for field work or course meetings in person. Some of the ELL courses are held in the summer during week-long residencies in addition to online work. Access to affordable campus housing for those weeks would remove some of the barriers for UMM students enrolled in this option.

Special Education Initiatives

Given that UM and UMM currently rely on distance technologies to facilitate programs and coursework, making courses available to students at the undergraduate or graduate level should not require significantly more resources. However, the delivery of courses to additional students on either campus may strain special education faculty resources. UMM employs one tenure-track special education faculty member, and relies on the expertise of four regular adjunct faculty members to teach seven different special education courses. Adding additional students to UMM’s special education courses may further strain faculty resources at UMM, but this issue is already being addressed through a current search for an additional tenure-track special education faculty member at UMM. Assuming that the search is successful, this faculty member would join UMM faculty in fall 2017. Ideally, to target the State’s demand for Special Education teachers, one additional faculty member for this initiative would be optimal. While there is not precedent in our programs for a shared faculty line (between UM and UMM), to support One University initiatives, such a position would be valuable to this effort, provided the person hired has potential to meet tenure expectations at UM or is hired at the Instructor level.

Challenges

Accreditation requirements have been at the forefront of our team’s discussions, and we have been fortunate to have input from UM’s Coordinator of CAEP and Certification Program Director as we’ve worked toward completion of this report. The crux of the issue is that UM programs are nationally accredited (CAEP) while UMM programs are not. Therefore, UMM students enrolled in UM courses would be subject to accreditation requirements. Through the articulation agreements that have been drafted through the work of our team, UMM students would be able to graduate from nationally accredited CAEP-approved programs.

Another potential challenge to our initiatives is associated with offering coursework via distance technology. With the distance modality comes inherent challenges and pitfalls including technological “glitches” or outages, challenges to accessibility, limited student

resources, and possibility that some students may not feel comfortable completing coursework outside of a non-traditional setting. However, the benefits that are associated with distance education can outweigh the challenges when course instructors are properly prepared and when technological assistance is readily available.

Committee members

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Appendix A. Drafts of Articulation agreements between the University of Maine's
Elementary and Secondary Education Programs and the University of Maine at
Machias's Education Programs

Articulation Agreement

Elementary and Secondary Education

**The University of Maine
&
University of Maine at Machias**

September 2016

Terms of Articulation Agreement

The University of Maine / University of Maine at Machias

Elementary and Secondary Education

The purpose of this agreement is to recognize the compatibility of these respective programs, to promote the transfer of qualified students and to provide the means for a smooth transition for University of Maine at Machias students to The University of Maine's Bachelor of Science: Elementary or Secondary Education programs.

Respective UMM and UM officials will approve the following terms and course transferability by signing the attached Articulation Approval Form.

1. UMM students will be accepted to the University of Maine based on individual achievement (a minimum 2.75 GPA) and available space in the program.
2. General education transfer courses must be passed with a "C-" or higher and all professional courses must be passed with a grade of B- or better.

3. UMM students will be required to complete all UM Elementary or Secondary Education requirements that do not have UMM course equivalents in order to be awarded a UM Bachelor of Science: Elementary or Secondary Education degree.
4. UMM students will be required to complete at least one field based (practicum or internship) at UM.
5. Any UMM course not listed in the agreement as equivalent to a UM course will transfer as elective credit if passed with a “C-“ or higher.
6. At the time of application, students transferring must submit passing scores on the PRAXIS CORE exam. During the first semester at UM, all UMM students must successfully obtain teacher candidacy established by the College of Education & Human Development. Refer to Appendix A for specific teacher candidacy requirements.
7. This agreement may be reviewed at the request of either institution if substantive changes in courses or programs at either institution are implemented. Respective programs are responsible for appropriate revisions to this agreement.

Draft Articulation Agreement
The University of Maine / University of Maine at Machias
(transferring from UMM to UMaine)
Elementary Education
Major Requirements

These Courses at UMM....	Fulfill Major Requirements at UM
PSY 110 Intro to Psychology	PSY 100 Introduction to Psychology
PSY 212 Lifespan I or PSY 201 Developmental Psychology	CHF 201 Introduction to Child Development
EDU 112 School & Community	EDH 101: The Art and Science of Teaching
EDU 216 Assessment & Curriculum Design	EHD 204: Instruction and Assessment
[No current equivalent in EDU]	EDT 400 Technology integration
EDU 337 Classroom Management	EHD 301: Classroom-based Prevention and Intervention: Supporting Positive Behavior and Academic Achievement
EDU 309 Educational Psychology	EHD 203: Educational Psychology
EDU 339 Working with Students who are Culturally Diverse	EHD 202: Education for a Multicultural Society
	TEACHER CANDIDACY
SED 201 Dimensions of Exceptionality in the Classroom	SED 302: Adapting Instruction for Students with Disabilities

EDU 223 Children's Literature	ERL 317 Children's Literature
EDU 334 Integrated Reading & Language Arts Methods is K-6	ERL 319 Teaching Reading/Language Arts in Preschool-Grade 3
[No current equivalent in EDU]	ERL 320: Teaching Reading Language Arts 4-8 Literature course for prerequisite to ERL 317
EDU 344 Mathematics in the Elementary School	EMA 316: Methods for Teaching Math
EDU 332 Elementary Science Education Methods	ESC 317: Methods for Teaching Science
EDU 329 Elementary Social Studies Methods	ESS 315: Methods for Teaching Social Studies
	EHD 400: Practicum in K-8
	EHD 490: Student Teaching K-8
	EHD 498: Seminar
All other Education courses passed with "B-" or better	General Electives

Courses designated with * indicate writing intensive courses.

General Education Requirements

These Courses at UMM....	Fulfill Gen Ed Requirements at UM
ENG 101 Composition	ENG 101 English Composition
PHI 201 Ethics	Ethics
	Writing Intensive (2 courses – one must be in major)
	Social Context & Institutions
	Western Cultural Tradition
	Cultural Diversity & International Perspective
	Population & Environment
	Artistic & Creative Expressions
MAT 107 Structures of Arithmetic I	MAT 107 Elementary Descriptive Geometry
MAT 108 Structures of Arithmetic II	MAT 108 Elementary Numerical Mathematics from a Modern Perspective
Any equivalent 4 credit lab science in Biology, Chemistry, or Physics or any equivalent 3 credit applied science	Sciences (1 Lab Science and 1 Applied Science)
ELA 342 Humans in Nature	Capstone Experience

A maximum of 60 credits will be accepted for transfer credit from the UMM's degree in Elementary Education to the UM Elementary Education major.

Articulation Agreement

The University of Maine / University of Maine at Machias
(transferring from UMM to UMaine)

Secondary Education Major Requirements

These Courses at UMM....	Fulfill Major Requirements at UM
PSY 110 Introduction to Psychology	PSY 100 Introduction to Psychology
PSY 212 Lifespan I	CHF 201 Introduction to Child Development
EDU 112 School & Community	EHD 101: The Art and Science of Teaching
EDU 216 Assessment & Curriculum Design	EHD 204: Instruction and Assessment
[No current equivalent in EDU]	EDT 400 Technology Integration
SED 345 Behavior Support & Intervention	EHD 301: Classroom-based Prevention and Intervention: Supporting Positive Behavior and Academic Achievement
EDU 309 Educational Psychology	EHD 203: Educational Psychology
EDU 339 Working with Students who are Culturally Diverse	EHD 202: Education for a Multicultural Society
	TEACHER CANDIDACY
SED 201 Dimensions of Exceptionality in the Classroom	SED 302: Adapting Instruction for Students with Disabilities
EDU 327 Content Area Literacy Methods	ERL 421 Literacy Across the Curriculum

No equivalent	EHD 400: Practicum in 7-12
No Equivalent	EHD 491: Internship in 7-12
No equivalent	EHD 498: Seminar 7-12
All other Education courses passed with "B-" or better	General Electives

Courses designated with * indicate writing intensive courses.

General Education Requirements

These Courses at UMM....	Fulfill Gen Ed Requirements at UM
ENG 101 Composition	ENG 101 English Composition
PHI 201 Ethics	Ethics
Dependent on Content Area	Writing Intensive (2 courses – one must be in major)
Intro to Psychology	Social Context & Institutions
Dependent on Content Area	Western Cultural Tradition
EHD 202	Cultural Diversity & International Perspective

Dependent on Content Area	Population & Environment
Dependent on Content Area	Artistic & Creative Expressions
Any equivalent 4 credit lab science in Biology, Chemistry, or Physics or any equivalent 3 credit applied science (Except Life and Physical Science)	Sciences (1 Lab Science and 1 Applied Science)
Any 6 credits that fulfill the Quantitative Literacy Gen Ed Requirement at UMaine (Except for Math, Physical, and Life Science)	6 credits Math

*** When student expresses interest in Secondary Program, a program plan will be designed specifically for the student with the UMaine Advising Center and UMM advisor.***

A maximum of 60 credits will be accepted for transfer credit from the UMM's degree in Secondary Education to the UM Secondary Education major.

APPENDIX A

TEACHER CANDIDACY REQUIREMENT

ENGLISH, CREATIVE WRITING, AND BOOK ARTS

UMaine/UMM Primary Partnership Academic Collaborations Curricular Alignment Progress Report

English/Creative Writing/Book Arts

Team members:

Emily Haddad, Prof. of English and Dean, College of Liberal Arts and Sciences, UMaine
Tessa Mellas, Assistant Prof. of English, UMM
Jennifer Moxley, Prof. of English, UMaine

Program names with brief descriptions:

UMaine English

Literature: Courses in literature make up the largest portion of the English major's studies. Our curriculum provides students with a broad-based foundation in English and American literature as well as in-depth inquiry into focused areas of literary study.

Writing Concentrations: In addition to at least 24-27 credits in literature and literary theory, every English major completes a 9-12 credit concentration in Creative Writing, Analytical Writing, or Technical/Professional Writing.

Core Requirements for All Majors: Majors take a minimum of 36 credits in English beyond ENG 101. At least 18 of these credits must be University of Maine courses. Students must also complete an additional field requirement, which may be satisfied in three ways: a minor, a second major, or intermediate proficiency in a language other than English (to the 204 level in college courses, or the equivalent by examination).

All majors must complete the following requirements:

- ENG 170 - Foundations of Literary Analysis
- ENG 222 - Reading Poems
- ENG 271 - The Act of Interpretation
- Five literature courses at the 300 or 400 level, including at least one British and one before 1800
- One additional English course at the 200 level or higher
- Three or four courses in the chosen writing concentration

Writing Concentration Options:

Creative Writing (9 credits, all courses are 3 credits):

- ENG 205 - An Introduction to Creative Writing or
ENG 206 - Descriptive and Narrative Writing
- ENG 307 - Writing Fiction or ENG 308 - Writing Poetry
or ENG 309 - Writing Creative Nonfiction
- ENG 405 - Topics in Creative Writing
or ENG 407 - Advanced Fiction Writing
or ENG 408 - Advanced Poetry Writing

The Capstone Experience for this sequence is completed by the submission and approval of a creative manuscript, usually supervised by the instructor of the 400-level writing workshop.

Analytical Writing (9 credits all courses are 3 credits):

- ENG 212 - Persuasive and Analytical Writing
or ENG 315 - Research Writing in the Disciplines
- Two of the following:
ENG 301 - Advanced Composition
ENG 395 - English Internship
ENG 402 - Topics in Writing and Research

The Capstone Experience for this sequence is completed by tutoring for a semester in the Writing Center after the completion of ENG 395, by completing ENG 402, or by completing a thesis-level research paper in a 400-level literature course.

Technical/Professional Writing (12 credits):

- ENG 317 - Business and Technical Writing Credits: 3
- Two of the following:
ENG 415 - Advanced Report & Proposal Writing Credits: 3
ENG 416 - Technical Editing & Document Design Credits: 3
ENG 418 - Topics in Professional Writing Credits: 3

The Capstone Experience for this sequence is completed through ENG 496 - Field Experience in Professional Writing Credits: 1-6

In addition to the capstone options described above, the capstone requirement may be satisfied with the approval of an Honors thesis in an area of English studies.

Minimum Grade requirements for courses to count toward major:

- A “C-” or better in all courses counted toward the English Major.
- A minimum accumulative GPA of 2.0 (“C”) in the major.

A complete program of study and course descriptions are online at

http://catalog.umaine.edu/preview_program.php?catoid=67&poid=8740&returnto=2170.

UMM English, Creative Writing, and Book Arts (ECB)

Overview: The ECB program combines the study of literature and creative writing with the art of making and publishing books. Project-based learning involves students in the editing, design, marketing, and printing of books for UMM Press, providing students with job experience and skills.

Writing Concentrations: In addition to 34 credits in Creative Writing, Book Arts, Literary Studies, and Communication, students complete a 12-credit concentration in Creative Writing, Book Arts, or Literary Studies.

Core Requirements: All ECB majors take 34 credits of required courses beyond ENG 101, plus 12 credits in their concentration and six credits for their capstone experience. The ECB major consists of a minimum of 52 credits (nine credits satisfy university core requirements). ECB majors must pass the Junior Portfolio review milestone by the end of

their junior year. The major requires a GPA of at least 2.25 in courses used to satisfy program requirements.

All majors must complete the following requirements:

- ENG 210: Beginning Creative Writing
- ENG 231, 232, or 233: Techniques of Poetry, Fiction, or Creative Nonfiction (2 of the 3 required)
- ART 216: Book Arts I
- ART 233: Book Design & Publishing
- ENG 236: Professional Editing
- ENG 117: Intro to Literary & Cultural Studies
- ENG 224: Masterpieces of World Literature
- ENG 325: Masterpieces of British Literature
- ENG 327: Masterpieces of American Literature
- ENG 207: Studies in Composition & Grammar
- ENG 234: Career Writing
- ENG 441: Professional Project*
- ENG 442: Senior Project*

*For teacher education students, EDU 490: Student Teaching replaces ENG 441 and ENG 442.

Writing Concentration Options:

Book Arts Concentration (12 credits, all courses are 3 credits)

- ART 217: Papermaking
- ENG 242: Electronic and Periodical Publishing
- ART 326: Book Arts II
- ART 214: Graphic Design, ART 214: Illustration, or ENG 345: Book Culture & Knowledge

Creative Writing Concentration (12 credits, all courses are 3 credits)

- 6 additional credits in CW at or above 200 level
- 6 additional credits in CW at or above 300 level

Literary Studies Concentration (12 credits, all courses are 3 credits)

- ENG 451: Chaucer or ENG 453: Shakespeare
- 6 additional credits in literature electives at or above 200 level that focus on major works of the literary canon
- 3 additional credits in literature electives at or above 300 level that focus on major authors of the British or American canon

UMM course descriptions are online at

http://machias.edu/assets/files/academics/course_catalog/Catalog_2016_2018/Course-Descriptions_2016_2018.pdf.

Opportunities for growing enrollment:

The UMM program is unique in combining a press-centered program in book arts with the study of literature and creative writing. The multifaceted nature of the curriculum and the studio-based, hands-on approach to instruction are key strengths. Still, some students considering the major might find the large number of required courses (52 cr. total) off-putting or lengthy to complete, especially in light of anecdotal evidence that post-graduation career placement has been difficult. Our proposals focus on curricular changes intended to improve retention and thereby enrollment.

Proposed Action Items:

1. Simplify and integrate the UMM major curriculum to reduce the number of required courses.
 - The array of required courses is difficult for the current (and likely) number of faculty to maintain, even with the assistance of some UMaine coursework available via distance. The infrequent availability of required courses, such as Electronic and Periodical Publishing, may be especially detrimental to retention and progression.
 - Students who miss a course in rotation (notably the “masterpiece” courses) are either delayed or prompted to take an individualized directed study course to replace it. Providing multiple directed studies adds further burdens to the faculty without improving the learning experience for students.
 - Majors take nine 100- and 200-level courses in program requirements, with the result that they stay at the introductory level for a significant amount of time. As they progress in their degree and their skills advance, they remain in courses with introductory-level students, which is intellectually frustrating. Anecdotal evidence suggests that this frustration affects retention.
 - Whereas UMM requires 12 courses (34 credits) in major requirements prior to coursework in the concentration, UMaine requires 3 courses (9 credits), with the remaining credits in the form of distribution requirements in literature and a writing concentration. The UMM major requires a total of 52 credits; UMaine’s major requires 36. Both current and prospective UMM students might be discouraged by the large number of core requirements and the lack of flexibility that affords in their degree.
2. Revise the capstone requirement based on a review of desired student learning outcomes for the major and a realistic plan for achieving them.
 - Given the scope of the curriculum and the typical preparation level of students, many reach their capstone without the skills necessary to complete a thesis independently.
 - One possibility would be to shift the thesis (ENG 442) and possibly the professional experience (ENG 441) to an option for the most motivated and skilled students, with most students instead completing a capstone component attached to an upper-division course (similar to what is required in the UMaine Analytical Writing concentration). Advantages of such an approach could include:
 - Encouraging students to stay in the program and facilitating timely completion of degrees.
 - Enhancing enrollment in upper-division courses. These courses have often become quite small in recent years, sometimes resulting in cancellation.

- Reducing the burdens placed on faculty by underprepared students who need intensive mentoring to complete thesis projects.
 - UMM’s professional capstone experience is a forward-thinking model, but the program does not have an abundance of partnerships from which students can currently choose internships. Consequently, this option, which would be useful for job placement, is not used as often as it should be. Support for faculty to develop those partnerships and organize regular internships would enhance the success of this part of the capstone, should it remain in the curriculum.
3. Facilitate selection of a UMM online course in literature at the 200 level as an elective for UMaine English majors, and vice-versa.
- Any single 200-level literature course may be used as an elective toward the UMaine English major. When UMM offers such courses online, UMaine student registration could be encouraged, thereby increasing enrollment in UMM courses.
 - UMaine routinely offers 200-level literature courses online that would meet elective requirements in the UMM Literary Studies concentration. A few could also substitute plausibly for a UMM “masterpieces” course for students who were out of cycle. Retention could be enhanced by making this option easy for students.
4. Facilitate double majors within UMM by allowing BA+BS combinations within 120 required credits.
- UMM policy requires students completing both a BA and a BS concurrently to take 30 credits beyond the 120 required for either degree. The additional credit requirement may be particularly discouraging to the occasional student earning a BS in Secondary Education who would like to double major in the ECB BA program.

Opportunities for enhancing curriculum:

UMaine offers a larger array of courses, in more frequent rotation, whereas UMM has unique opportunities in book arts. Our proposals focus on facilitating collaboration and exchange to take advantage of these strengths, predominantly at the level of individual courses.

The action items proposed above for increasing enrollment would also enhance the curriculum, primarily at UMM. Additional proposed action items are:

1. Facilitate enrollment by UMaine students in book arts courses at UMM.
 - There are not enough book arts courses typically offered in a given semester to create a “semester away” experience, but participation in this unique program would be possible on a course-by-course basis. Book arts courses typically meet once a week, so travel to UMM would be feasible for UMaine students. Summer offerings, including May term, could also be used. UMM has indicated that it would waive art course prerequisites on a case-by-case basis.
2. Incorporate UMaine ENG courses that are regularly offered online into UMM major.

- See “Growing Enrollment” Action Item #3 for an example.
- ENG 317: Business and Technical Writing does not currently fit into the UMM curriculum but would be an especially desirable course to add because of its professional applications.
- This action item should be approached cautiously so as not to undermine course enrollment at UMM, but it could provide valuable enrichment of the curriculum.

3. Investigate and, where practical, implement sharing so as to take advantage of available expertise.

- Curricular example: The UMM faculty specializations tend toward fiction rather than poetry. A UMaine adjunct with specialization in poetry lives near Machias and might be interested in teaching a course face-to-face at Machias with distance delivery to UMaine.
- Co-curricular example: Both UMaine and UMM offer a wealth of co-curricular experiences in English and writing. These include visiting writers, an undergraduate student literary magazine, and at UMaine bus trips sponsored by the UMaine Humanities Center, etc. Facilitating participation across the two institutions could benefit students.

Although this committee does not specify curricular modifications in detail, apart from the ones noted above, it strongly recommends that curricular revision be guided by these principles:

- The curriculum should be designed to enact student learning outcomes for the major as a whole. National standards such as the AAC&U value rubrics may be helpful in guiding development of the student learning outcomes.
- There should be integration of coursework across all three strands (literary studies, creative writing, book arts).
- The existing faculty should be able to deliver the curriculum with (1) limited contributions by adjunct faculty members and UMaine distance courses and (2) course rotations that facilitate completion of the major in four years of study.
- The major should provide effective, relevant professional preparation for students. In particular, any concentration(s) should realistically prepare students for related professions.

UMM faculty should take the lead in revising the ECB curriculum collaboratively, with continued input and expertise from UMaine colleagues. Closer alignment with UMaine’s English major should be considered, both as a potential model for a successful curriculum with fewer credits and as a means of making the 2+2 program more successful.

The committee encourages the UMM administration to support professional development opportunities for the faculty.

Model(s) for collaboration:

The action items above include several possible collaborations at the level of individual courses. In addition, we propose a 2+2 model. Students who wish to transfer from UMM to UMaine earlier could pursue it as a 1+3. The model would be available for UMM

students to pursue any of the three UMaine English major concentrations. It would work best for students pursuing creative writing or technical/professional writing. UMM 2+2 students pursuing the analytical writing concentration would enter UMaine with one less course complete.

The availability of a 2+2 pathway could attract students who would not otherwise consider attending UMM.

Proposed Action Item:

1. Offer a 2+2 pathway for UMM students who wish to complete an English major at UMaine.
 - Pathway assumes one ENG course per semester at UMM, with students also starting on UMaine's gen. ed. requirements and beginning coursework in a minor.
 - Students would complete ENG 101, ENG 210 (similar to ENG 205), ENG 117 (similar to ENG 170), and a 200-level literature course at UMM toward transfer to UMaine. [Note: ENG 101 is a gen. ed. requirement and not a major requirement at both UMM and UMaine.] UMM could enhance this opportunity by boosting one or more appropriately selected 100-level literature courses to the 200 level and/or by modifying courses so that they more closely resemble UMaine counterparts.
 - The remaining 30 credits in the UMaine English major, creative writing concentration, could be completed in the junior and senior year. Students wishing to pursue the technical/professional writing concentration instead would substitute ENG 317 online at UMaine for ENG 210 at UMM.
 - An online UMaine English course such as ENG 229 might be redesigned to meet the writing intensive requirement, providing another ENG option for 2+2 students as well as serving students in other majors who need a writing intensive course.

Prioritized recommendations:

1. *Curriculum.* The UMM faculty should immediately take up curriculum revisions to make the ECB program more consistent with well developed student learning outcomes for the major, more appealing to prospective students, more conducive to completion for majors, and more favorable to job placement following graduation.
2. *Coordination.* Both campuses should work together to establish a process for faculty coordination of a clearly defined 2+2 pathway, not only to ensure that UMM students are well-prepared to finish their degrees at UMaine, but also to optimize an exchange of opportunities and resources across the two campuses. Coordination must address distance or hybrid course delivery and advising for potential 2+2 students. Comprehensive and consistent advising materials must be available for students and faculty.
3. *Council.* Formation of a curricular council, with representation from each campus, would be advantageous to the ongoing success of the primary partnership between UMaine English and UMM English, Creative Writing, and Book Arts.

- Given the radically disproportionate sizes of the two faculties (3 ongoing FTE at UMM, 22.5 at UMaine), a council of the whole is not advisable.
- Department heads should be appointed to serve on the council, given their comprehensive programmatic knowledge and their role in governance.
Note: Because of the small faculty size, the ECB program does not have a head of the program; this role is fulfilled in part by the Arts & Letters Division Chair.
- Both creative writing and literature should be represented.

The success of such a council would depend on a clear and realistic charge, as well as financial support for at least one face-to-face meeting each year, perhaps alternating between campuses. The council would report its findings to the provost(s). In order that such meetings not lapse into mere “sharing sessions,” all meetings should have clear agendas and objectives, as set by the provost(s) with input from council members. The UMS vice-chancellor for academic affairs should be informed annually of the council’s work.

Anticipated timeline for implementation:

1. *Curriculum.* Curriculum redesign might be undertaken at UMM within a three-year time frame.
 - This current academic year could be utilized for research of other comparable studio programs at small public universities and for revision and clarification of the program’s mission, learning outcomes, and professional goals for students, in partial alignment with UMaine’s program.
 - The 2017-18 academic year could be used for choosing and creating courses that match the mission, learning outcomes, and professional goals for students and revising/establishing the courses’ individual learning outcomes.
 - The third year of the redesign could be used for any necessary professional development in preparation for the new curriculum and for passing the curricular changes through the university’s administrative processes for approval.
2. *Coordination.* Coordinating advising and course delivery between UMM and UMaine should be undertaken in the 2016-17 academic year so that students incoming in fall 2017 will be able pursue a clearly defined 2+2 pathway (understanding that changes to enhance this option will continue after that date). Advising materials should be developed and distributed to faculty, staff, and administrators by the end of the spring 2017 semester.
3. *Council.* The curricular council should be established and charged in spring 2017, with its work beginning in fall 2017.

Additional resources needed:

If UMM decides to keep the professional experience in the capstone, support in the form of release time might be necessary for faculty to find the time to work with community partners for internships.

As the curricular revision takes shape, funds for professional development for UMM faculty to teach redesigned courses may be needed.

The maintenance of the curricular council will require travel funding for face-to-face meetings.

In short, the direct cost of these recommendations is incidental. The indirect cost in faculty, staff, and administrator time could be very substantial indeed.

Challenges:

- 1. Faculty assignment:** With a 4-4 load and relatively few majors, establishing a full schedule for UMM faculty members that uses their time efficiently may require some rebalancing to include more ENG 101 and/or gen. ed. sections within each professor's teaching portfolio. If UMM's enrollment grows, there will be increased need for English faculty to teach multiple sections of composition so as not to incur the additional expense of too many adjunct instructors. UMM's Arts & Letters Division Chair would be able to help accomplish such a rebalancing.
- 2. Course equivalency:** The 2+2 course plan is based on equivalencies that are at best approximate. In fact, it is unlikely that students who have completed ENG 117 at UMM will have accomplished the same learning outcomes as those completing ENG 170 at UMaine. As the primary partnership develops, one goal will be to bring the course curricula, including the prerequisite structures, closer together. This work will be complicated by lack of standardization across sections within each course.
- 3. Student preparation and achievement:** A successful 2+2 approach is predicated upon UMM students who enter UMaine as juniors having approximately the same level of academic capability as "homegrown" UMaine juniors. There is some doubt about whether this will occur, due to UMM's lower admission criteria and relatively non-sequential curriculum (see comments above about extended time spent at the introductory level).
- 4. Availability of UMaine courses at a distance:** Online sections of UMaine English courses often fill. A registration timeline fair to both UMaine and UMM students will be needed. Other forms of distance delivery from UMaine to UMM could be desirable, especially at the upper-division level; at present the UMaine English faculty have little experience with or attraction to distance delivery of advanced coursework.
- 5. Advising:** 2+2 students will require careful advising in order to avoid inadvertently selecting courses that will not meet specific degree requirements at UMaine. One helpful measure could be to designate a professional advisor at each campus to work closely with such students and with his/her counterpart.
- 6. Institutional/System infrastructure:** Many of the steps above sound simpler than they are. Differences in curriculum approval processes, tuition rates, library access, technology on campus, and faculty governance practices (to name just a few) could undermine the success of this coordination effort. Moreover, there is

no tradition of or infrastructure for English faculty collaboration between UMaine and Machias. The practice of meaningful collaboration will have to be built attentively over time. The process for doing this has not yet been established.

ENVIRONMENTAL RECREATION AND TOURISM MANAGEMENT

UM/UMM Primary Partnership Academic Collaborations Curricular Alignment Progress Report Report-September 15, 2016 Recreation and Tourism Management

1. Program names with brief descriptions:

1.1. UMM – Environmental Recreation and Tourism Management (ERTM)

The Environmental Recreation & Tourism Management program is recognized within the University of Maine System and region as a high-quality, pertinent academic program that supports economic development in our region and prepares local, regional, and international students for a broad range of professional careers. With its close alignment to the university's Environmental Liberal Arts core, the program is one of our campus' showcase programs, maintaining approximately 70 students and contributing to quality of life within our campus and surrounding community.

The ERTM program emphasizes a balance between analytical thinking and practical application. The curriculum is designed and selected with the expectation that graduates will leave UMM with a solid foundation of knowledge and skills pertinent to all areas within the leisure service industry (as "generalists", rather than "specialists"). Yet, students have the opportunity to delve more deeply into their personal area of interest through our carefully designed concentrations and the possible adoption of cross-disciplinary minors.

UMM as a whole, and the ERTM program specifically, take great pride in the personal approach to education and our Downeast location. Our location on the coast and among rivers, lakes, and forests lends itself to the enjoyment of outdoor recreational experiences and, therefore, to unique experiential learning opportunities particularly for future outdoor enthusiasts and resource managers. Also, since our small community setting lacks professional recreation practitioners, the campus itself as well as surrounding communities call on the faculty and students to provide technical assistance and staffing expertise for the development and delivery of recreational opportunities. This creates hands-on learning and public service experiences, which help to improve the quality of life in Downeast Maine.

1.2. UM – Parks, Recreation and Tourism (PRT)

The Parks, Recreation, & Tourism (PRT) program within the School of Forest Resources (SFR) trains outdoor recreation, tourism, and natural resource planning professionals with outstanding scientific and technical knowledge, practical field and management skills, knowledge about human dimensions of natural resources, a strong stewardship ethic, and other necessary skills needed to design and manage

high-quality, nature-based recreation and tourism experiences. The program's emphasis on the integration of natural, social and management sciences reflects the interdisciplinary context in which complex recreation, tourism, natural resource management, and environmental concerns are addressed in the field. The PRT program offers three concentrations: (1) Parks and Recreation Management; (2) Nature-Based Tourism; and (3) Conservation Law.

Students have the ability to pursue a 4+1 program that provides the opportunity for a student with one extra year to obtain an advanced degree in a Masters of Forestry or a Masters in Business Administration. PRT actively exchanges information with individuals and organizations concerned with the management and stewardship of natural resources to disseminate current knowledge and best practices, and obtain feedback for evaluation and modification of our undergraduate and graduate programs. Our graduate as well as undergraduate students have the opportunity to work closely with faculty on research projects.

2. Goals and strategies for collaboration:

2.1. Opportunities for growing enrollment:

According to enrollment records...

- [UMM-ERTM program](#).
- [UM-PRT program](#). Over the past four (4) years, 63% of the new PRT students are internal transfers, 16% are external transfers, and 21% are first year students. This indicates that as overall campus enrollment increases, PRT enrollment will also increase. It also indicates that attracting more first-year students is a potential growth area. We propose to increase PRT enrollments by 50% (from 50 to 75) over the next 5 years.

To increase enrollment (transfers and first year students), we propose the following promotional strategies

- (i) Develop new advertising materials, relying heavily on web promotion to primarily attract new students, as well as transfer students.
- (ii) Coordinate and advertise courses to serve students at both campuses.

2.2. Opportunities for enhancing curriculum:

Based on our analysis of course offerings and course needs at both campuses, the team proposes the following strategies to enhance both curricula and increase course offerings.

- (i) Collaborate via sharing of the following courses: Introduction to Tourism (UMM), Ecotourism (UM), Field camps (UMM-UM), and Travel courses (UMM). The first two courses will be offered by and taught at one campus, while allowing students in the second campus take the

course via distance learning. Field camps and travel courses will bring together students from both campus at locations in Maine and abroad.

- (ii) Provide undergraduate research opportunities for students in both campuses to engage in data collection efforts.
- (iii) Attract UMM undergraduate students to pursue a graduate degree at UM.
- (iv) Develop and offer semester study away at UMM focusing on outdoor recreation skill development.
- (v) Share certification training for UM and UMM undergraduate students such as: Leave no trace, Interpretive guide, among others.
- (vi) Explore the possibility of jointly offering of The International Ecotourism Society's University Consortium Certificate.

3. Models for collaboration:

3.1. Course sharing

- (i) Use distance education techniques to have students of both campuses taking courses offered by one campus.
- (ii) A streamlined registration process is essential.

3.2. Field courses

- (i) Taught outside the semester schedules.
- (ii) Students from both campuses can attend the same course.
- (iii) A streamlined registration process is essential.

3.3. Develop a joint marketing strategy

4. Prioritized recommendations

Our team proposes to address the following strategies (presented based on priority, with 4.1 being the top priority):

4.1. Course sharing

4.2. Field courses

4.3. Research opportunities

4.4. Develop a joint marketing strategy

5. Anticipated timeline for implementation:

5.1. Course sharing

- Spring 2018: Introduction to tourism (UMM), and Ecotourism (UM).

5.2. Field courses

- May 2016: Costa Rica travel course (UMM).
- Winter 2016: Patagonia travel course (UMM).
- Spring 2017: May term (UM).

5.3. Research opportunities

- Fall 2016-Summer 2017: Joint drafting and submission of grant proposals (e.g., Allagash Wilderness, climate change and tourism in coastal areas).
- 2017 (pending funding support): Development of data collection methods, protocols, and submission of IRB. Recruiting of students.
- 2017-2018 (pending funding support): Undergraduate involvement in data collection.

5.4. Develop a joint marketing strategy.

- 2017: work with advertising experts to develop advertising material. Support in developing attractive program description, photographs, short videos, and student/alumni profiles. Development of webpage to post the material.
- Spring 2018: launch the advertising campaign.

6. Additional resources needed:

6.1. Course sharing

- Teaching release to develop hybrid course: Fall 2017 or Spring 2018 for Introduction to tourism (UMM), Ecotourism (UM).
- Provision of a Teaching Assistant at both campuses to support operation of equipment for distance learning course offerings (connect and run google hangout session).
- Support for instructors to develop hybrid courses.

6.2. Field courses

- Funds to support faculty overload.
- Teaching assistant to support field trips.

6.3. Develop a joint marketing strategy

- Support of advertising expert to develop the material and webpage design.
- Technical support to record and edit videos, prepare and print student/alumni profiles, and take/edit pictures.
- Creation of a webpage that includes information of tourism and recreation offerings at UMM and UM, with links to our specific campus' programs.

7. Challenges:

7.1. Course sharing

- A streamlined registration process is essential.
- Access to video conferencing rooms or other distance technology.

- Coordination of logistics (scheduling, classrooms, teaching assistant support) to effectively offer hybrid courses.
- Time and expertise to develop distance education courses.

7.2. Field courses

7.3. Develop a joint marketing strategy

- Time and expertise to develop marketing strategy.
- Funding.

ENVIRONMENTAL STUDIES

UM/UMM Primary Partnership Academic Collaborations Curricular Alignment Progress Report

Introduction and Context:

This Progress Report includes a description of potential partnerships between UMM's Environmental Studies and Geographic Information Systems (GIS) Programs with UM's programs in Environmental Science, Fisheries and Wildlife Biology, Human Dimensions of Climate Change (HDCC), and Geographic Information Systems.

Fisheries and Wildlife Biology: It became clear after our initial partnership meeting in June 2016 that there is significant overlap between the "Biology" and "Environmental Studies" teams and that involvement by the Director and faculty of Ecology and Environmental Sciences (EES) at UM was necessary for the development of collaborations among these academic disciplines. The EES Director has provided comments, but further discussions are still needed among multiple faculty members representing each unit prior to implementation of formal partnerships.

Our goal is to develop a general model for collaboration in the degree programs in the School of Biology, Ecology and Environmental Sciences, and Wildlife, Fisheries and Conservation Biology within the College of NSFA at UM and the Biological and Environmental Studies programs in the UMM Divisions of Environmental and Biological Sciences. With a general model in place, developing program-specific academic partnerships will be more cohesive, consistent, and coherent.

The science teams have also been discussing possibilities for semester long or summer intensive programs for UM students to focus on field and GIS experiences. These may enhance the Fisheries and Wildlife Biology collaboration and encourage exchange between campuses.

Human Dimensions of Climate Change: During the August trip to Machias, Dan Sandweiss (UM) and Tora Johnson (UMM) began discussing the possibility of a 2+2 pathway for the HDCC Program. Through subsequent email communication, the details have largely been worked out and the UM Anthropology Department (the HDCC home) has agreed in principle.

During the initial years at Machias, students would complete 12 credits in basic science (Biology, Chemistry, and Physics) which a part of the HDCC program. The required UM courses all have approved equivalents at UMM. Students would also take the UMM approved equivalent for Ant 102 and one elective course, to be drawn from a set of courses at UMM which are currently being discussed between UM Anthropology and Tora Johnson. Further discussions with UMM anthropology and social science faculty are planned for fall 2016.

We expect to have this pathway fully fleshed out and approved by both institutions by the end of the fall semester. At Tora Johnson's suggestion (well-received by the geographers

in UM's Anthropology Department), we will also begin discussion of a pathway for the geography minor.

Geographic Information Systems: Building on prior collaboration, we are moving forward with three areas of collaboration among the GIS Program at UMM and the Spatial Informatics Program and School of Forest Resources (SFR- home of undergraduate GIS courses and remote sensing courses relevant to natural sciences).

First, at the Provosts' behest and under the leadership of Dan Hayes, SFR faculty and administrators are moving forward to proposed a certificate and a minor in GIS Applications at UM and expect to have the program in place by the end of the academic year. The programs will be modeled on the shared certificate program developed in parallel with the program integration effort with collaboration among all seven UMS campuses and now adopted by UMM, UMPI, UMFK and UMM. This will allow UM students to take advanced UMM GIS courses, expanding the opportunities available to them and boosting enrollment in UMM's upper division GIS courses. UMM GIS students will also have access to UM advanced courses such as remote sensing for forestry applications through the Wheatland Laboratory.

Second, the introductory undergraduate GIS course at UM (SFR 400) is a crucial service course for a wide array of majors with enrollment commonly between 150 and 200 students per year. The course is in need of significant revision and align with pedagogical standards and learning outcomes established in the shared certificate and required for students in various majors. GIS faculty and staff in both institutions will work together through AY 16-17 to update the course, train UM GIS faculty to use distance technology for GIS courses, and shift some of the enrollment to UMM. This will allow UM to serve students more effectively and boost enrollment in the corresponding course at UMM, GIS 230.

Third, we have also begun on graduate level pathways for UMM and UM GIS students. Often, the GIS courses offered at UMM are more appropriate for some UM graduate students than those offered at UM. However, there are currently significant hurdles for UM graduate students who wish to take UMM GIS courses. The introductory sequence (GIS 230 and GIS 330) and some 300 level courses at UMM can't be taken for graduate credit, so graduate students have had to enroll in 400-level special topics courses involving extra paperwork on both campuses. Faculty will explore options to streamline enrollment for graduate students to enroll in UMM courses for graduate credit, whether that's dual-listing at UMM or dual-listing in both institutions.

Finally, Harlan Onsrud with the Spatial Informatics Program at UM and UMM GIS Director Tora Johnson have begun working on a plan to allow UM graduate students to take advanced GIS courses at UMM and for UMM students to take advanced courses at UM. This will also allow UMM students who have taken articulated advanced courses at UMM to transfer them to UM if they wish to pursue the M.S. in Spatial Informatics (SI) or the Graduate Certificate in GIS. Offering UMM GIS courses for graduate credit through the SI program would require instructors to be on the graduate faculty at UM, and pending further discussion with administrators, we will pursue that effort.

Program names with brief descriptions:

UM - Department of Wildlife, Fisheries, and Conservation Biology (WFCB) - B.S. degree in Wildlife Ecology with concentrations in Fisheries, Wildlife Science & Management, and Conservation Biology. M.S., M.W.C., and Ph.D. degrees are offered in Wildlife Ecology.

UM - Ecology and Environmental Sciences Program (EES) - B.S. degree in Ecology and Environmental Sciences with five concentrations: Earth and Environmental Sciences, Ecosystem Ecology, Soil and Water Science, Natural History and Environmental Studies, Sustainability, Environmental Policy, and Natural Resource Management. M.S. and Ph.D. degrees are offered in Ecology and Environmental Sciences.

UMM - B.A. in Biology with concentrations in Fisheries Biology and Wildlife Biology

UMM - B.S. in Environmental Studies with multiple concentrations available in natural sciences, GIS and social sciences

UMM - Certificate and Minor in GIS Applications - UMM offers a certificate, an advanced certificate, and a minor in GIS focused on applications of GIS in any aligned discipline. UMM students in four-year programs often use the minor as the framework for a GIS concentration in science degrees.

UM - B.A. Human Dimensions of Climate Change - Housed within the Department of Anthropology, this major is centered on social sciences as they relate to climate change.

Opportunities for growing enrollment:

Fisheries and Wildlife Biology: Both WFCB and EES at UM have experienced significant increases in enrollment (163% for WFCB during the past five years) and face significant challenges in delivering a high-quality program to their current study body. So, growing enrollment at UM would be impossible without significant additional resources. Therefore, our focus here has been on increasing enrollment in relevant programs at UMM. Opportunities include...

- Marketing of experiential learning experiences unique to the Downeast region involving non-governmental organizations and state and federal natural resources agencies mentored by both UM and UMM faculty could serve as a substantial draw for both institutions and increase enrollment at UMM.
- 2+2 pathways (both UMM-to-UM and UM-to-UMM) for fisheries and wildlife giving students multiple options for their courses of study

Human Dimensions of Climate Change:

- 2+2 pathway will create a new opportunity for students to utilize existing UMM courses to pursue this degree at UM, thereby increasing enrollment at UMM.

Geographic Information Systems:

- Shifting some enrollment in introductory GIS courses to UMM could increase enrollment there while alleviating capacity problems for SFR 400 at UM.
- A shared GIS certificate program with advanced courses drawing on the diverse expertise at both institutions would expand offerings of advanced GIS courses at both institutions, making the programs stronger and more attractive to students.
- Streamlined pathways for graduate study through shared advanced courses will diversify graduate opportunities at both institutions and serve as a draw for UMM students wishing to pursue graduate programs at UM.

All Programs:

- Increased outreach and advertising for UMM programs regionally and nationally through UM admissions could boost enrollment in UMM programs.
- Developing distance learning opportunities (e.g., on-line courses, video conferencing) for all programs will increase enrollment at UMM by making UMM courses more available to UM students. It will also make programs at both institutions more attractive with increased diversity in offerings.
- Recruitment to UMM by developing pathways to graduate study at UM (e.g., WFCB, study of remote sensing through SFR, and Spatial Informatics)

Opportunities for enhancing curriculum:

- Developing and building on existing partnerships with non-governmental organizations and state and federal natural resources agencies to provide both UM and UMM undergraduate students with capstone opportunities and internships in the Downeast region (mentored by both UM & UMM faculty and UM graduate students)
- Cross mapping and articulating courses from each campus will expand opportunities for students to take specialized courses of interest
- Developing service learning projects relevant to local environmental and conservation issues in the Downeast region will enhance curriculum for both UM and UMM students
- Providing opportunities for UM graduate students to teach short courses at UMM may also increase

Model(s) for collaboration:

- Adopting 2+2 pathways for fisheries, wildlife, and HDCC programs
- Adopting the shared Professional Certificate program in GIS
- Develop advising plans for students wanting to meet the Professional Certification educational requirements outlined by The Wildlife Society, the American Fisheries Society, and the Ecological Society of America
- Sharing of faculty to balance enrollment with capacity and allow UMM faculty to contribute to offerings at UM

Prioritized recommendations:

- Evaluate faculty appointments and work load
- Address administrative issues related to streamlining the process for students enrolling in courses offered at other institutions (e.g. a UM student enrolling in a UMM course)

- Adopt share GIS certificate and minor programs at UM
- Adopt HDCC 2+2 program at both institutions
- Continue to work on pathways for fisheries and wildlife.
- Update transfer equivalencies between the two programs
- Increased advertising for UMM programs regionally and nationally
- At both UM and UMM, evaluate capacity in experiential learning courses and availability of resources to support additional FTE's, Teaching Assistants, computer facilities, field equipment, and advisors and tutors to support a UM-UMM partnership
- Evaluate UMM degree programs to determine how the New England Board of Higher Education's Tuition Break program (RSP) could affect student recruitment
- Evaluate the effects of collaboration on Student Financial Aid packages

Anticipated timeline for implementation:

Fisheries and Wildlife:

- With the biology team we (Eric Jones and Lindsay Seward) have completed an initial curriculum mapping and course equivalency assessment, with further work needed through AY 16-17 on learning outcome assessment and alignment of courses.
- The Department of Wildlife, Fisheries, and Conservation Biology is undergoing a transition in leadership and will have an interim Chair starting on September 1, 2016. Any significant curriculum analysis, course development, or other collaborations that require significant faculty time could not begin in earnest until September 2017 at the earliest. The WFCB faculty must approve all curricular recommendations.
- The Ecology and Environmental Sciences Program is also in the midst of transition, having hired a new Lecturer and Undergraduate Coordinator beginning in September 2016. The EES Undergraduate Advisory Board must review and approve all curricular recommendations. Significant UM-UMM academic partnership planning will not begin until 2017.

Human Dimensions of Climate Change (Tora Johnson & Dan Sandweiss):

- Finalize articulation details for the 2+2 program: October 2016
- Adopt 2+2 articulation: December 2016
- First offering of HDCC 2+2 program: Fall 2017
- Develop and adopt shared geography minor by February 2016

Geographic Information Systems (Tora Johnson, Dan Hayes & Harlan Onsrud):

- December 2016: Adopt shared GIS certificate and minor at UM
- Revision of UM SFR 400 and a model for shared enrollment for UMM GIS 230:
 - Fall 2016: Consultation with relevant faculty at UM about learning outcome needs (some of this has already been completed at UM)
 - Fall 2016: Work with faculty to determine the best model for sharing enrollment for this course
 - Spring 2016: Work on testing distance learning technologies for UM
 - Fall 2017: Implement new curriculum and shared

- February 2017: Develop frameworks for streamlining enrollment for shared courses and programs, especially for graduate students; implement for Fall 2017
- Fall 2016: Pursue graduate faculty status for Tora Johnson, UMM GIS Director
- Fall 2017: First offering of dual-listed graduate courses

Additional resources needed:

- Faculty release time and technical support to work on implementing the plans as outlined.
- Administrative help for streamlining enrollment between institutions
- Academic Coordinator to evaluate the potential for developing “two-plus-two” or “three-plus-two” options
- Access to software and computer programs in addition to UMM access to UM library resources, including GIS software licenses now administered by two different arrangements on the two campuses
- Administrative assistance for bringing together all faculty and administrators involved with GIS at UM to define their needs and determine the most efficient way to meet them, given the resources and limitations at both institutions
- Transportation costs for combined UM-UMM short courses

Challenges:

- UM-WFCB’s ability to deliver a rapidly growing, experiential-based undergraduate program for ~210 undergraduate majors (fall 2016 projection), a nationally recognized graduate program, and an internationally recognized research program will be challenged during AY 2016-2017 by our limited permanent faculty resources (only 4.00 teaching FTE’s and 3.50 research FTE’s) and the timing of a leadership transition at the start of the 2016/2017 academic year
- UM – EES is also rapidly growing. There are approximately 145 undergraduates enrolled, 45 graduate students, supported by 1.25 teaching FTE. All other teaching and advising is done by partner faculty in participating academic units.
- Aligning student learning outcomes assessment plans between UM and UMM will take significant time and effort and require integration and coordination of assessment instruments, data collection, and analysis.
- There is a general 2-year course rotation at UMM, which means that students starting at UMM will have different options depending upon when they start there. This would affect any 3-plus-2, and potentially even the 2-plus-2 pathways, but may be alleviated with increased enrollment at UMM that allows more frequent offerings.
- It is critical that student learning outcomes assessment in Mathematics and Science is consistent between UM and UMM. A learning outcomes assessment strategy will need to be developed to ensure that students can be successful if a 3-plus-2 or a 2-plus-2 pathway program were to be developed
- Much-needed changes to the GIS offerings at UM have been very difficult because of a broad array of stakeholders and lack of close collaboration among faculty there. This process provides an important opportunity to move forward, but it will require leadership and coordination at UM.

INTERDISCIPLINARY FINE ARTS

On August 17th, Laura Artesani, Michael Grillo, Dan Bilodeau, Bernie Vinzani and Beth Wiemann met at UM-Machias alongside the other teams. We toured the arts facilities at UMM, in particular the Performing Arts Center and Book Arts unit. We also reviewed the Provosts' feedback to us, and drafted the following responses:

1. The feedback asked if there was a simpler way to incorporate the IFA programs at Machias into programs at UMaine. In terms of the majors in visual arts and music at UM, any changes within IFA to have its coursework match up with requirements (often driven by accreditation procedures) will require detailed syllabi examination, and review of course outcomes. This presumes that the vision is to use the IFA coursework towards arts majors in Orono.

If the vision is to use the IFA coursework as general education offerings, that would be simpler, though it would not help with any 2-plus-2 or 1-plus-3 programming for UM arts majors.

It may be best to rethink the concentrations within the IFA at UMM into minors in visual arts and music, as those concentrations line up better with minors in these fields than with the professionally oriented majors at UMaine. This would require that the whole minor be transferable, so that Colleges at UM that require minors would take these offerings as such. Clarity about any arrangements of this kind will be key. It may still be difficult to complete one of these minors within a 2-plus-2 program, but transfer credits from these minors could still be used towards minors in the arts at UM.

To this end, Bernie Vinzani put forward the idea of visual arts and music concentrations within UMM's current Associate's degree. This would provide a framework for 2 years at UMM that would translate directly to UMaine minors. Faculty members are now sharing syllabi for courses in the Visual Arts and Music, and we will see how those areas match up for the future.

It should be noted that the arts experiences offered by the current IFA-UMM courses do distinguish UMM from the community colleges in the area, particularly in the visual arts and in music. Without these experiences, it would be difficult to claim any kind of real exposure to the arts on that campus.

2. The team discussed using Summer term courses at our last meeting as opportunities to bring to the UMM campus experiences that may be too difficult to transport during the fall and spring semesters. Similar opportunities would exist in the January and May terms, particularly with regard to short-term productions or intensive workshops. The Book Arts program at UMM provides an excellent starting point for such work, as UM

art and new media students would be interested in working in that environment, if short-term housing and board could be arranged for the terms outside of the traditional semester calendar. We could use the workshops, assuming that we can match the credit hour work requirements for time on task, towards the Think 30 initiative across the campuses.

3. We can envision marketing intensive workshops at UMM, using a combination of UM and UMM faculty, that can be directed at varying levels of students and professionals. Using the summer, January and May terms, conference-style workshops in Book Arts could bring other professionals in this field to UMM, and students at UM could participate in intensive courses during these terms, using the singular facility in the discipline at UMM. These workshops could become signature offerings to both our system students AND to out of state students in English and the Visual Arts.

Conference Services on the UMM and UM campuses would need to be involved in these offerings, and potentially CED as well, if we target non-traditional age students and participants.

4. Theatre offerings coming to UMM from UM would be primed to give students a theatrical experience outside of a degree program—in part to get the students to think about theatre as an option for the future at UM, and in part to show how the different artistic fields work together in theatre, a natural inter-disciplinary undertaking.

While UMM does not offer theatre as a stand-alone concentration, there are opportunities to work with the student theatre group, in January/May term scheduling perhaps, on the model proposed for Book Arts workshops. There could be system-wide marketing to students that want to work on a small theatre production in an intensive way not regularly possible during the fall and spring semesters.

5. While the number of students in the IFA concentrations is small, the class sizes are not completely out of line with arts programming in the studio sense. The arts faculty at UM envies the small course sizes.

If the IFA concentrations became arts minors/concentrations within an Associate's degree, that may package the offerings in a more transferable way than the IFA currently offers. Again, the clarity of the concentrations' articulation with the UM minors will be very important – no student should be given a false impression of what is possible when moving between the two campuses.

MARINE BIOLOGY

UM/UMM Primary Partnership Academic Collaborations Curricular Alignment Progress Report

Program names with brief descriptions:

UMM currently offers an associate’s degree, a minor, and a bachelor’s degree in marine biology along with a marine biology concentration for education majors.

UM currently offers a bachelor’s degree in marine science with concentrations in marine biology, aquaculture and oceanography. Masters degrees are offered in marine biology, marine policy and oceanography in addition to a dual degree in marine policy/marine biology or oceanography. Doctorates are offered in marine biology and oceanography.

Opportunities for growing enrollments:

- UMM and UMaine are working to officially designate a “2 + 2” arrangement in Marine Sciences with a standard course sequence for the first two years at UMM. The proposed sequence of courses for students studying at UMM is the following:

Fall Year 1	Credits	Spring Year 1	Credits
MAT 102	3	MAT 122 Precalc	3
BIO 117 This Is Life!	4	BIO 118 Plant Life	2
ENG 101	3	BIO 119 Animal Life	2
ENV 103 Oceanography	4	BIO 221 General Microbiology	4
		Gen Ed	3
Total Load	14	Total Load	14
Fall Year 2	Credits	Spring Year 2	Credits
MAT 126 Calc I	4	Gen Ed	3
CHY 101	4	CHY 102	4
BIO 206 Intro to Marine Biology	4	Gen Ed	3
MAT 215	4	Marine Bio Electives	4
Total Load	16	Total Load	14

The remaining two years would be completed at UMaine. The four semesters are outlined below.

Fall Year 3 - UMaine	Spring Year 3 - UMaine
PHY 111 or 121 (4) Physics	BMB 280 (3) Intro. Molecular & Cellular Biology
BMB 221/222 (4) Organic Chemistry	SMS 404 (1) Capstone Seminar
SMS 230 (3) Marine Policy	SMS Elec. (3)*
NFA 117 (1) Issues & Opportunities	PHY 112 or 122 (4) Physics
SMS Elec. (3)*	SMS 204 (2) IMS II: Physics/Chemistry of Marine Systems
	SMS Elec. (3)*
Total Credits = 15	Total Credits = 16
Fall Year 4 - UMaine	Spring Year 4 - UMaine
SBS (~ 15 credits)*	SMS 304 (2) IMS IV Comparative Physiology, Cellular & Molecular Biology
(must take SMS 484 at SBS)	SMS 402 (3) Oceans & Climate Change
SMS 400 (1) Capstone	SMS 400 (2) Capstone
	SMS Elec. (3)*
	Free Elec. (3)
Total Credits = 16	Total Credits = 13

Final approval of the 2 + 2 sequence will proceed through the usual academic channels at UMM and UMaine. This 2 + 2 arrangement will increase the number of freshmen and sophomores at UMM. This year, five 2 + 2 students began their marine studies at UMM. The 2 + 2 initiative may eventually increase the number of juniors and seniors at UMM, should students decide to remain in Machias for the entirety of their undergraduate education.

- UMM and UMaine are working to officially implement the 4 + 1 Professional Master's in Marine Science sequence with approval of dual credit for a selection of upper level UMM marine biology courses. These UMM courses could include Experimental Design and Analysis for Biologists, Marine Ecology, Algal and Marine Plant Ecology, Ichthyology, Senior Thesis in Marine Biology, Senior Seminar in Marine Biology, Seminar in Marine Ecology, etc.

- We are creating a pathway for UMM students to enroll in one of the semester abroad marine science experiences in Australia (and eventually other countries) that UMaine has established. At the onset of this initiative, students at UMM may enroll in marine science offerings at Deakin University in Warrnambool, AUS. They would take classes during Trimester 1, which runs from early March to mid-June. They would take the following four courses (if the students meet prerequisite standards):

- Marine Invertebrates
- Marine Botany
- Marine and Coastal Ecosystems
- Aquaculture and the Environment.

This is an established slate of courses offered at Deakin University for their Environmental Science students. The Warrnambool campus of Deakin University is attractive in that it is similar in size to UMM (~1,100 students), and, like UMM, it is located on the coast, which makes it a prime location for studying marine science. UMaine accepts the transfer of these courses, and UMM will determine their own equivalencies through the normal academic processes. This study abroad opportunity will be a valuable recruiting and retention tool for UMM.

- We are working to establish a spring Semester-by-the-Sea at the UMM campus and UMM's Marine Field Station for students from UMM and UMaine. The slate of courses offered will be different from those offered at the Darling Marine Center so as to provide an additional or alternative Semester-by-the-Sea for UMaine students. The tentative course line-up at UMM will be the following:

- BIO 352 Algal and Marine Plant Ecology (4 cr)
- MAT 315 Experimental Design and Analysis for Biologists (4 cr)
- BIO 310 Special Topics in Mariculture (2-4 cr)
- BIO 227 Invertebrate Zoology (4 cr)
- GIS 330 GIS Applications II (4 cr)
- a marine policy course TBD (3 cr).

This Semester-by-the-Sea opportunity will provide UMaine marine science students with an additional semester of hands-on learning in a coastal environment. It also further opens the door for UMaine scientists and graduate students to study and teach at UMM's Marine Science Field Station.

- Allow/encourage UMM students to enroll in the Semester-by-the-Sea at the Darling Marine Center. The current set of classes in this experience are:

- SMS 491- Problems in Marine Science: Microbial Ecology
- SMS 484 - Estuarine Oceanography
- SMS 483 - Ecology of Zooplankton and Ichthyoplankton
- SMS 480 - Invertebrates of the Maine Coast
- SMS 352 - Marine Ecology
- SMS 350 -- Undergraduate Seminar
- SMS 324 - Introduction to Marine Diving

The opportunity to participate in UMaine's Semester-by-the-Sea will likely increase recruitment and retention of UMM students. It should be noted that UMaine's Semester-by-the-Sea program currently fills the dorm to capacity

during the fall. Increasing the capacity of the dorm could be accomplished by bringing the Lehman House up to code and adding an additional wing onto the existing dorm will be needed for UMM students to enroll in this experience. Increased class size will also require additional graduate TAs and an additional Resident Assistant, if students will be housed separately at the Lehman House on the upper campus.

Opportunities for enhancing curriculum:

- Allow UMaine graduate students to serve as teaching assistants at UMM and to conduct research on the UMM campus and at the UMM Marine Science Field Station. Graduate students interested in teaching opportunities may elect to do this either while doing research at UMM/DEI or while writing their thesis. This would provide a valuable opportunity to experience teaching at a smaller campus, with mentoring from UMM professors.
- Most of the opportunities for enrollment listed above would also enhance the curriculum at one or both schools.

Model(s) for collaboration:

- Most of the above actions would lead to far greater collaboration between students and faculty members at UMM and UMaine.

Prioritized actions:

- Officially designate a 2 + 2 program in Marine Sciences with a standard course sequence for the first two years at UMM.
- Officially implement the 4 + 1 Professional Master's in Marine Science sequence with approval of dual credit for a selection of upper level UMM marine biology courses.
- Establish a pathway for UMM students to enroll in a semester abroad marine science experience in Australia (and other countries) that UMaine has established.

Anticipated timeline for implementation:

- The 2 + 2 program in Marine Sciences is on its way to being formed. Many 2 + 2 students have already begun their first semester of classes at UMM. We have sketched a 2-year course sequence for them to follow at UMM, followed by years 3 & 4 at UM. It is imperative that such a program be officially established and developed by faculty of both campuses and be approved by faculty senate before additional students are accepted.
- The Professional Master's in Marine Science at UMaine is approved and has enrolled its first student this fall. The 4 + 1 program should be approved by fall 2016. Inclusion of eligible UMM students could happen as early as fall

2017. Approval of dual credit for a number of upper level UMM marine biology courses should be finalized by spring 2017.

- The official pathway for UMM students to enroll in the semester abroad marine science experience at the Warrnambool campus of Deakin University should be put in place by fall 2017, with UMM students able to participate in the opportunity during spring 2018.
- The Spring Semester-by-the-Sea at the UMM campus and UMM's Marine Science Field Station for students from UMM and UMaine could be established by spring 2018.
- Allowing UMM students to enroll in the Semester-by-the-Sea at the Darling Marine Center is technically already possible, but establishing this as a normal part of the UMM progression could come as early as fall 2018, if dorm space is increased.
- UMaine graduate students could begin serving as teaching assistants at UMM as early as fall 2017. UMaine students can already conduct research at the UMM Marine Science Field Station, but increased promotion of this opportunity could begin immediately.

Additional resources needed:

- Administrative expediency to push through proposed changes.
- Equal access to library resources (digital journals) for UMM and UMaine students.
- Transportation from UMM central campus to the UMM Marine Science Field Station for the Semester at Sea students (until dorms are built at that property).
- Dormitory facilities at the DMC are already at capacity in the fall, therefore dormitories must be expanded before additional students can be accommodated.
- Dormitory facilities should be built at UMM's Marine Science Field Station. Courses could proceed prior to the dorm build, but daily transportation to and from the UMM campus will be necessary.
- Improved video conferencing systems must be in place in order to expand distance learning opportunities between campuses.

Challenges:

- Teaching load issues for instructors serving at UMM's Semester-by-the-Sea
- Financial losses due to students earning credit hours abroad or at the other university's Semester-by-the-Sea experience.

- Potentially smaller class sizes at UMM due to students completing marine coursework at other institutions.
- Several of this year's "2 + 2" students in marine biology have needed remediation in math and/or English coursework. It is important that students are informed that the 2 + 2 arrangement is only possible if they come in needing no remediation.
- Ongoing financial support is needed for building and maintaining dormitories at the Darling Marine Center and UMM's Marine Science Field Station.
- Financial support will be needed for graduate TAs from Orono in order to support their teaching at UMM. We anticipate that funds for travel, housing, and stipends will be needed.

Other Resources Needed for Marine Science Partnership

While we are well aware that one goal of this partnership is to maximize efficient use of resources at both campuses, we are also aware that in order to reach this goal we must identify the resources to necessary accomplish these changes. As faculty, we are passionate about the quality of education that we offer our students in marine science. We are convinced that investment now will promote excellence in educational opportunities and increased revenue as we attract more students to both of our campuses and optimize the use of our unique marine sites.

Enhanced Video Conferencing Ability (~\$65,000) Video conferencing capacity will be essential for the University of Maine at Machias (UMM) Marine Science Field Station, and while SEANET is poised to provide some infrastructure toward this goal, additional equipment will be required to enable us to co-teach courses with the University of Maine (UM) faculty and connect to students throughout the University of Maine System (UMS). The Collaborative Research, Education and Engagement Center in the Darling Marine Center (DMC) Library is currently undergoing renovation and will include a new video conferencing system (\$15-20K is already in hand). This will enable us to co-teach courses with colleagues at UMM and also to connect with students throughout the UMS.

Support for Graduate Student Teaching Fellowships Support for teaching fellows would depend on the percent effort expected for teaching. For example, if the student taught one class concurrently with doing thesis work (either research on site or writing the thesis), and had stipend/tuition/health insurance covered by other means, we would expect to cover room and board (currently \$4243/semester at UMM) and travel expenses. If, however, the student would be expected to devote 100% effort to teaching, then stipend (~20,500/yr), health insurance and tuition should also be covered. Graduate students acting as residential life assistants at the DEI would expect to be housed on site in the student dormitory (when built).

Expanded fall Semester by the Sea Program at the Darling Marine Center

We need enhanced housing for undergraduates, given that we have space for 28 undergraduates + 1 residential life assistant in Brooke Hall and that this facility has been close to or at capacity in Fall 2015, Summer 2016, and Fall 2016. The long-term solution

is to renovate existing housing stock on the upper campus to student housing standards and/or to build new dormitory space on the upper campus of the Darling Marine Center. We will explore these options through the Master Planning process in the coming months.

In the meantime, to meet the increased enrollment in Semester by the Sea (SBS) and marine science courses across through UMS, it would be wise to renovate existing housing stock at the DMC. We estimate that \$125,000 will be required to bring the Leeman House, our largest housing unit besides the Brooke Hall dormitory, up to code for student housing. This house, once renovated to include sprinkler systems and other fire safety mechanisms as well as urgently needed structural repairs, will house six students plus a residential life assistant. While this is a substantial investment for a small number of beds, from my conversations with UMaine Director of Auxiliary Services Dan Sturup, I understand that it is competitive, in terms of per capita costs associated with new student housing.

Establish spring Semester by the Sea Program at UMM's Marine Science Field Station (MSFS) at the Downeast Institute (DEI) Significant upgrades to must be made in order to offer a Semester-by-the-Sea program at Machias that not only UMM students could take, but also students from UMaine. The DEI board of directors is working on a dormitory facility. Progress would be greatly facilitated by an investment from the University of Maine System. The current plans are to construct a 20-bed dormitory on the footprint of the current "Guest House" that sits on the DEI property several thousand feet from the main building (estimated cost \$1.2-\$1.7 million. Other aspects associated with housing students include residential life support as well as food service. An alternative is to build rooms with separate baths and a group kitchen so that residents can prepare their own meals.

2017 SEA Fellows program (~\$100,000) We are excited to build on the success of the pilot year to further develop research-industry partnerships among UMS students, faculty, and members of Maine's marine industry, as highlighted in the 2016 UMaine Provost's Academic Affairs Annual Report and in the recent UMaine video, available at <https://umaine.edu/news/blog/2016/09/09/students-conducting-research-buoy-aquaculture/> The 2016 SEA Fellows pilot program initiated at the Daring Marine Center (DMC) by Dr. Beal of UMM and Dr. Leslie of UM was funded by NSF SEANET. We estimate that to run this program in summer 2017 for 8 to 10 students will cost \$100,000. This estimate includes student stipends and housing costs, as well as the support of the intensive orientation and wrap up weeks, where students interacted with members of Maine's marine industries and received hands on training in science communication. This total also includes staff support for the program, which is critical to connect the students, academic mentors and industry partners and to support the students as they engage in their applied marine research projects over the course of the summer. This sum is consistent with NSF REU expectations of annual expenditures for programs of this type.

Current cost details Housing (with kitchen privileges) for a 10-week undergraduate internship at the DMC currently costs \$1500/student (\$150/week x 10 weeks), plus the

intern stipend, which ranges from \$3000 to \$5000 per student for 10 weeks (note that \$5000 is the standard NSF undergraduate stipend rate). These rates are based on the 2016 DMC rates. If students were to be provided full room and board, as the 2016 SEA Fellows were for the first and last weeks of their 10-week program in 2016, required funding includes:

- Housing at \$150/week x 2 weeks = \$300/student
- Meal plan is \$46/person/day x 14 days = \$644/student (in 2016, we actually covered meals for only 9 days as part of the 5 day orientation and 4 day wrap up, lessening this line item)

Mentors would join students on site, whether for occasional visits or as part of an intensive orientation and wrap up week. In either case, mentor housing would be \$40/person/night (budgeting funds for 5 mentors x 3 nights x \$40/night would be appropriate, at a total of \$600 in mentor housing + \$690 in mentor meals. This assumes some mentors will not need housing, as they live locally.

Appendix

Professional Science Masters in Marine Science

The Professional Science Masters (PSM) in Marine Sciences requires a minimum of 30 semester hours of credit, including 5 in an apprenticeship. A minimum of 15 course credits must be completed at the 500-600 level, 6 of which must come from a set of core courses (see below) and must include the marine sciences graduate seminar, SMS 691 (1cr). The remaining 9 credits will usually be earned in marine science and policy courses. Examples of non-marine science courses that might apply include mathematics and statistics, resource economics and policy, information management, information science, and conservation and management practices and policies. The PSM in Marine Sciences places significant emphasis on development of professional skills in areas such as communication, journalism, analytical methods, law, policy, public administration, business administration, and marketing. An internship (5 credits) is an important part of the degree and must make a meaningful and new contribution to the individual's professional development. The student's program of study must be approved by the Graduate Committee on the Professional Science Master's in Marine Sciences. Requirements and options are outlined below.

Requirements	Course Options at Orono	Course Options at Machias
1. Fifteen (15) credits in marine science and policy, to include:		
(A) at least 3 credits in the marine sciences core area	SMS 500 - Marine Biology (3cr) SMS 501 - Biological Oceanography (3cr) SMS 520 - Chemical Oceanography (3cr) SMS 525 - Marine Biogeochemistry (3cr) SMS 541 - Physical Oceanography (3cr)	
(B) at least 3 credits in the marine policy core area	SMS 552 - Coupled Natural and Human Systems SMS 557 - Coastal Processes and Coastal Zone Management	

	SMS 567 - Knowledge and Participation in the Science Policy Process	
(C) Additional Science & Policy Courses (9 credits, 3 credits must be at the 500-600 level)	SMS 528 - Advanced Phycology SMS 531 - Coral Reefs SMS 540 - Satellite Oceanography SMS 544 – Oceanography & History of the Gulf of Maine SMS 550 - Fisheries Oceanography SMS 553 - Institutions and the Management of Common Pool Resources SMS 555 - Resource Management in Cross-cultural Perspective ERS 460 - Marine Geology SMS 562 - Fisheries Population Dynamics SMS 585 - Marine System Modeling SMS 595 - Data Analysis Methods in Marine Sciences SMS 598 – Coastal & Marine Resource Management SMS 618 - Particle Dynamics in Aquatic Systems INT 510 - Marine Invertebrate Zoology INT 563 - Marine Benthic Ecology	
For requirement 1(C), a student may select <u>one</u> course from among the following:	SMS 597 - Independent Study SMS 598 - Special Topics in Marine Science SMS 692 - Problems in Marine Science I SMS 693 - Problems in Marine Science II	
For requirement 1(C), a student may take up to 6 credits at the 400 level	SMS 401 - Critical Issues in Aquaculture SMS 402 - Oceans and Climate Change SMS 422 - Biology of Fishes SMS 425 - Applied Population Genetics	BIO 460 - Seminar in Marine Ecology BIO 482 - Senior Seminar in Marine Biology Offer BIO/MAT 315 Experimental Design and Analysis for Biologists at the 400 level. BIO 352- Algal and Marine Plant Ecology (offered at 400 level) and BIO 313- Ichthyology (offered at 400 level) .
For requirement 1(C), additional optional courses: A student may elect to take one 400-600 level science or policy course from another	department in the University of Maine System if: (1) the selection is approved by the student's advisory committee, and (2) the student is considered to have an otherwise adequate background in marine sciences.	

2. Nine (9) credits of professional skills coursework. A course that satisfies the criteria and is approved by committee can come from any program in the University of Maine System.			
	SMS 513 - Broaden the Impacts of Your Research Potential sources of courses relevant to professional practice in the area of marine science and policy: Business Administration, Civil and Environmental Engineering, Communication, Computer Science, Economics, Education, Mathematics and Statistics, Public Administration, Resource Economics and Policy, Spatial Information Engineering		
3. Five (5) credits in an apprenticeship approved by committee.			
	SMS 682 - Internship in Marine Science (pending) SMS 683 - Internship in Marine Policy		
4. One (1) credit graduate seminar			
	SMS 691		

PSYCHOLOGY AND COMMUNITY STUDIES

UM-UMM Psychology (PSY) and Social Work (SWK) Primary Partnership Team
Final Report - September 23, 2016

The Psychology (PSY) and Social Work (SWK) Primary Partnership Team was requested by the Chief Academic Officers to more fully develop the following opportunities for academic collaborations:

1. 1+3 pathway in PSY
2. 2+2 pathways in PSY
3. 2+2 pathway in SWK
4. MHRT/C certificate

The observations and recommendations provided represent our progress in these areas after further deliberation and discussion with our faculty. We will provide background information on the respective programs as seems warranted to in order to provide context to observations and recommendations.

Pathways in Psychology

The UMM Psychology and Community Studies program has a much more applied focus than the UM PSY program. Some of the UMM PSY courses with equivalency to UM foundational or core PSY courses are at the 300 or 400 level. There are approximately 100 UMM Psychology and Community Studies program majors, 30 of whom are in the distance track.

There are approximately 460 UM PSY majors. This large number of majors is most salient when MHRT certification opportunities are considered.

The following are considered **Foundations Courses** in the UM PSY program:

1. **PSY 100** (General Psychology),
2. **PSY 241** (Statistics in Psychology)
3. **PSY 245** (Principles of Psychological Research).

These courses are sequential at UM: PSY 100 is prerequisite to all other PSY classes, PSY 241 is prerequisite to PSY 245, and PSY 245 is prerequisite to most 300 and 400 level classes.

Students should definitely take **PSY 110 at UMM** in their first year, it is equivalent to **PSY 100** at UM, the prerequisite for all other PSY classes and important for the SWK program.

It has been found that students who transfer into the UM PSY program have more options within the program and a more straight-forward path to graduation in 4 years if they are able to complete **PSY 241** or its equivalent by the end of the second year of study.

Currently no equivalent for **PSY 241** exists at UMM. A recommendation in the UMS PSY Program Integration plan that would improve movement from UMM to UM is to develop an on-line PSY 241 course at UM to offer via web modality to UMM. **We recommend that this on-line PSY 241 course be developed by Summer 2017. The planning process is initiated to implement this proposal.**

Another option to satisfy the PSY 241 requirement emerged at the 8/17 team meeting—the possibility of revising or adapting the UMM course **MAT 124** (Statistics for the Social Sciences) for equivalency to PSY 241, which is a 4 credit hour course. MAT 124 is currently a 3-credit course that would provide good preparation for the foundational PSY 241 course at UM. Discussions and planning continue among faculty at UM and UMM with regard to what would be necessary for establishing equivalency between PSY 241 and MAT 124 and on cost/benefit considerations for doing so. Current options being discussed include reworking MAT 124 as a 4-credit course or offering a 1-credit “add-on” that students could take during Winter or May Terms after completing the standard 3-credit version of MAT 124 during the semester.

With regard to **PSY 245**, currently no direct equivalent exists at UMM. It is likely that students could reasonably take PSY 245 after transferring to UM in a 2+2 plan. Note that the research methods course at UMM is a 400-level course (SSC 420) which would not be available to students at UMM in their first two years.

There are five **Core Areas** in the UM PSY program.

1. PSY 223 - Psychology of Childhood (or PSY 224 - Psychology of Adolescence)
2. PSY 212 - Abnormal Psychology
3. PSY 230 - Social Psychology
4. PSY 350 - Cognition
5. PSY 365 - Biopsychology & Behavioral Neuroscience

Students in a 1+3 or 2+2 plan should take **PSY 230** (Abnormal Psychology) at UMM because it has a direct equivalent with the UM core course (PSY 212). It would be beneficial for students in a 2+2 plan to also take **PSY 311** (Social Psychology), which is equivalent to UM core course PSY 230, and/or **PSY 212** (Lifespan I), for which a Maine Street Exception for the UM PSY developmental core requirement (PSY 223 or PSY 224) will be granted. The other 2 UM core courses, PSY 350 (Cognitive Psychology) and PSY 365 (Biopsychology and Behavioral Neuroscience) would be taken at UM.

Students should strongly consider taking **BIO 117** (This is Life) at UMM. It satisfies the "Scientific Inquiry" General Education requirement at UMM, the Laboratory Science General Education requirement at UM, and the UM PSY major requirement for a basic biology class (BIO 100 or BIO 222)

Based on these considerations, plans for movement into the UM PSY major from UMM on a 1+3 basis and a 2+2 basis are now provided. Movement on a 1+3 basis can be

readily accommodated without changes in course designations, patterns of course offerings, or new course development at either institution.

Due to the different foci of the two programs, a 2+2 program would require changes to both the UMM and UM programs, including:

1. Providing permission at UMM for students to take upper level UMM PSY classes or revising prerequisites where appropriate (e.g., PSY 311 - Social Psychology)
2. Granting a UM Maine Street Course Exception so that UMM PSY 212 Lifespan I will satisfy the UM core developmental psychology course requirement (PSY 223 or PSY 224)
3. Offering UM's PSY 241 on-line or revising UMM's MAT 124 to be equivalent, both in content and credit hours

It is still likely though that students would need permission to take some UM PSY courses concurrently rather than sequentially. Although not optimal, this situation is not uncommon with students who transfer or perhaps come to the PSY major later in their program of study.

For movement on either a 1+3 or 2+2 basis, standard UM admissions criteria would be applicable.

I. 1+3 Pathway for UM PSY major:

1st year/UMM courses

ENG 101 (equivalent to UM ENG 101)	3cr
PSY 110 (equivalent to UM PSY 100)	3cr
MAT 124 (or MAT 113 or MAT 215) *	3cr
PSY 230 (equivalent to UM PSY 212)	3cr
BIO 117 (equivalent to UM BIO 100)	4cr

Courses for intended minor (required of all BA students in CLAS at UM). CLAS has a “residency” requirement wherein a minimum half of the credits for the minor are earned by taking UM classes. Advising is critical here, as minor requirements do vary.

2 courses for intended minor	6cr
3 courses that apply toward UM GenEd Requirements	9cr

Total = 31 credit hours (of 120 minimum required for UM graduation)

The minimum required number of UM PSY major credit hours (35) plus the number of credit hours for most academic minors (18) totals 53 credit hours, which is less than half of the minimum 120 credit hours required for UM graduation. There is therefore latitude to explore potential areas for a minor and to take elective courses. However, planning to ensure that most courses taken at UMM can transfer to UM to meet UM GenEd requirements will be optimal.

2nd through 4th years/UM courses:

Required Psychology courses: 30cr

PSY 241*
PSY 245
PSY 223 OR PSY 224
PSY 230
PSY 350
PSY 365

Additional courses needed to meet minimum 3 courses in a concentration (at least one of which must be at 400 level)

Capstone: Either PSY 491 or PSY 494

Remaining courses for minor	12cr
Remaining GenEd courses and credit hours to reach minimum 120	48cr

IIa. 2+2 Pathway for UM PSY major

1st two years/UMM courses:

ENG 101 (equivalent to UM ENG 101)	3cr
PSY 110 (equivalent to UM PSY 100)	3cr
MAT 124 (or MAT 113 or MAT 215)*	3cr
PSY 230 (equivalent to UM PSY 212)	3cr
BIO 117 (equivalent to UM BIO 100)	4cr
3 courses for intended minor	9cr
Courses that apply toward UM GenEd Requirements or electives	35cr

Total = 61 credit hours (of 120 minimum required for UM graduation)

2nd two years/UM courses:

Required Psychology courses: 30cr

PSY 241*

PSY 245

PSY 223 OR PSY 224

PSY 230

PSY 350

PSY 365

Additional courses needed to meet minimum 3 courses in a concentration (at least one of which must be at 400 level)

Capstone: Either PSY 491 or PSY 494

Remaining courses for minor 9cr

Remaining GenEd courses and
credit hours to reach minimum 120 20 cr

*As noted above the possibility of revising UMM course MAT 124 for equivalence with PSY 241 is being explored.

Iib. 2+2 Pathway for UMM PSY and Community Studies major

1st two years/UM courses:

ENG 101 (equivalent to UMM ENG 101)	3cr
PSY 100 (equivalent to UMM PSY 110, Theory & Perspective)	3cr
STS 232 (equivalent to UMM MAT 113, Core Science and Math) (or PSY 241?)	3cr
PSY 230 (equivalent to UMM PSY 311;)	3cr
BIO 117 (equivalent to UMM BIO 117; Core Science and Math)	4cr
ANT 102 (equivalent to UMM ANT 101, Theory & Perspective)	3cr
SOC 101 (equivalent to UMM SOC 114, Theory & Perspective)	3cr
PHI 100 (equivalent to UMM PHI 201, Ethics)	3cr
CSD 101 (equivalent to UMM ASL 101, Foreign language elective)	3cr
Courses that apply toward UMM Core Requirements or electives	32cr

Total = 60 credit hours (of 120 minimum required for UMM graduation)

2nd two years/UMM courses:

CMY 101	3cr
PSY 102	3cr
PSY 211	3cr
Applications Course – Diversity	3cr
Applications Course – Social Science & Environment	3cr
SSC 420	4cr
BEH 450	3cr

Required courses for one of two concentrations:

Applied Psychology Concentration		Disabilities in Youth Concentration	
PSY 212 or PSY 324	3cr	SED 201	3cr
PSY 420	3cr	SED 320	3cr
PSY 442	3cr	SED 325	3cr
COE 313	3cr	SED 335	3cr
Psychology Electives	6cr	SED 329	3cr
Social Science Electives	6cr	SED 311 or SED 340	3cr
		SED 345	3cr
		SED 362	3cr
		Two of designated electives	6cr

Remaining required and elective courses to reach minimum 120cr

Pathway to Social Work

Movement into the UM Social Work (SWK) major can be likely accommodated on a 2+2 basis with relatively minimal changes in course designations, patterns of course offerings, or new course development at either institution. In part, this is due to the relatively applied focus of the UMM Psychology and Community Studies program previously noted. The suggested coursework for a 2+2 program for movement from UMM to the UM SWK program outlined below reflects the likelihood that a UMM student interested in moving into SWK will want to earn provisional MHRT certification in the process. Given the full schedule of SWK courses in years 3 and 4, with only four elective course possibilities, completing coursework for full MHRT certification in years 3 and 4 (which would require 5 additional PSY courses) would necessitate earning more credit hours than the minimum total for the UM SWK major. The MHRT courses, which are designated in bold, will earn Level B provisional certification.

Standard UM admissions criteria would be applicable.

III. 2+2 Pathway for UM SWK major

1st two years/UMM courses :

Year 1:

Semester 1:

PSY 110 = PSY 100 at UM
SOC 114 = SOC 101 at UM
PHI 201 = PHI 100 at UM
ENG 101= ENG 101 at UM
Math gen ed

Semester 2:

MAT 115 = MAT 232 at UM
Science gen ed
Art and Pop & Eenvt gen eds

Year 2:

Semester 3:

PSY 211
PSY 213
PSY 302
Science gen ed
gen ed

Semester 4:

PSY 332
PSY 313
POS 100 (not offered at UMM) on-line
ENG 212 or 317 (not offered at UMM) on-line
gen ed or elective

Each semester would be 15 credits with a total of 60 to transfer into the BSW Program.
Our goal is to encourage and support students to graduate in 4 years.

2nd two years/UM courses:

Year 3:

Semester 5: BSW Sequence Begins

SWK 320*
SWK 350
SWK 380
SWK 395
SWK 491

Semester 6:

SWK 330
SWK 351
SWK 361
SWK 395
SWK 440

Year 4:

Semester 7:

SWK 462
SWK 495 ****
elective
elective

Semester 8:

SWK 463
SWK 495
elective
elective

***SWK 320: It was determined that it will be fine for students to take this course in the third year**

****SWK 495: Note that this capstone is a year long field practicum and seminar in which students are in the field approximately 16 hours a week, this class is 6 credits each semester.

Further integration of MHRT certification into pathways

The 2+2 pathway described above for SWK included courses applicable to MHRT certification that could be taken in the first two years while the student is at UMM.

Consideration of MHRT/C certification may also be of interest to many UM SWK and UM PSY majors. The SWK faculty have discussed wanting to offer this option, however due to limited resources it was determined that it could not be done in a cost effective way. The PSY department had also previously investigated but rejected the viability of making this certification available. The fact that UMM already offers these courses either on-line or via another distance delivery modality affords the opportunity for UM SWK and PSY majors to more directly work toward this certification.

Projections of the number of students who might be interested must be considered with regard to potential capacity issues. There are currently approximately 150 UM SWK majors and 460 UM PSY majors, for a total of 610 students. If we assume 25% enter the programs in a given year we have roughly 150 students per entering cohort. If 10% of each cohort is interested in MHRT, we have $n = 15$; if 20% is interested we have $n = 30$. The former number ($n = 15$) can likely be accommodated, the latter number would exceed current capacity for course delivery.

As background for further discussion, a list of the 10 PSY courses offered by UMM that are applicable to MHRT certification are listed below with their current projected course rotation.

Provisional and Full Certification (offered very year)

PSY 211 Introduction to Behavioral & Community Health Services (Fall)

PSY 213 Psychosocial Rehabilitation Practice (Fall)

PSY 302 Introduction to Counseling Techniques (Spring)

PSY 313 Counseling Diverse Populations (Spring)

PSY 332 Crisis Identification and Resolution (Spring)

Full Certification (offered every other year)

PSY 324 Lifespan II (Fall 2018)

PSY 326 Vocational Implications of Disability (Spring 2019)

PSY 328 Case Management (Spring 2018)

PSY 329 Trauma and Recovery (Fall 2017)

PSY 351 Chemical Dependency and Dual Diagnosis Counseling (Fall 2018)

UMS course capacity data was provided to the UMS Program Integration team for the period from 2010 through 2015. With the caveat that data for all course delivery modalities are combined - these data show an average across the UMM MHRT courses of approximately $n = 8$ additional spots (range = 2 to 19) available with course maximum capacities ranging from 20 to 30. With a similar range of maximal capacities for the subset of courses offered in Spring, Summer and Fall 2016 the average number of unused

spots is closer to $n = 3$ (range = 1 to 9). Meghan Duff , who coordinates this program at UMM, has estimated that an additional 12 to 15 students would provide sufficient additional demand to allow the latter five courses required for full certification to be offered annually. From these data it appears that approximately 10% of UM PSY and SWK majors in a given enrollment cohort ($n = 15$) could be accommodated.

However, it does not seem viable to project that UM SWK and UM PSY would be able to complete this full set of 10 courses for full MHRT certification in addition to the requirements of their current program of study without: 1) having to earn approximately 15 credit hours beyond the minimum for UM graduation; and 2) having to do coursework in Winter or Summer sessions in order to finish in 4 years, or 3) having to take coursework beyond 5 years. It does seem viable to project that MHRT Provisional certification could be earned within a 4-year program of study and without needing to exceed the minimum total number of credit hours required for graduation.

It also seems highly likely that a large number of these students who earn their provisional certification during their undergraduate program of study will proceed to then take the courses required for full certification.

Dr. Duff notes that two of these courses (PSY 329 and PSY 302) have characteristics that make synchronous rather than on-line delivery preferable. However, they can be offered synchronously via video conferencing. Also, a search for a faculty person who would likely instruct some of these courses is approved at UMM.

In summary - the team views this as an opportunity for partnership that can provide considerable benefits for both UMM and UM and recommends further discussion and development.

GENERAL EDUCATION

UM/UMM Primary Partnership Academic Collaborations Curricular Alignment Final Report General Education Team 9/23/2016

Team Members:

U Maine - Timothy Cole & Nigel Pitt

U Maine Machias - Lois-Ann Kuntz & William Otto

Opportunities for growing enrollment:

- Presently, many UMM courses that transfer to UM contribute to the completion of GenEd requirements at UM. Students at UMM who participate in 2+2 or similar programs that may emerge in the Primary Partnership discussions will be able to complete a substantial portion of their GenEd requirements at UM. The current General Education structure will not require substantial revision, and is no impediment to moving forward with programs of this sort.

Opportunities for enhancing curriculum:

- Collaboratively working to adopt courses that meet Gen Ed status could expand the course offerings available to students. For example the ENG 101 A and ENG 101 B option at UMM has been developed with support and feedback from UMaine faculty. In addition, examination of the transfer matrix could result in important courses at UMM that currently are assigned no GenEd status being able to transfer in to meet a UM GenEd requirement.

Model(s) for collaboration: (*The basic assumption is 2+2 or 2+3 transfer model.*)

- For the most part, the collaborative model being employed is the block general education transfer that exists between UMS campuses and the community college system.
- Presently, students at UMM who participate in 2+2 or similar programs that may emerge in the Primary Partnership discussions will be able to complete a substantial portion of their GenEd requirements at UMM. Many UMM courses that transfer to UM contribute to the completion of GenEd requirements there. The current General Education structure is no impediment to moving forward with programs of this sort, with the exception of the key challenges noted below. Due to the fact some partnerships may be a 1+3 and the 2+2 may preclude completing all of UMM's GenEd for block transfer, we are not presuming regular block GenEd transfer, and prefer to focus on meeting the following challenges.

Primary Recommendations, Key Challenges and Embedded Timeline:

1. The two principal barriers to progress in completing GenEd requirements and feasible 2+2 programs are clear: English composition and “General Education mathematics courses” (at UMaine, MAT 101, MAT 103, and STS 232).
 - A. General Education Mathematics- Presently, programs at UMaine that require the entire calculus sequence (MAT 126, 127, and the UMaine MAT 228) are problematic as 2+2 candidates; students at UMM will not have sufficient exposure or course selection to complete the sequence before transfer to UMaine. Programs that require MAT 126 alone may be more viable. Students who do not come in prepared for MAT 126 are the most at risk of not being able to complete the sequence.
 - i. Align learning outcomes and preferred delivery methods for MAT 126 Calculus I (Fall 2016)
 - ii. A team can build on discussions already occurring to build the capacity for GenEd mathematics on the UMM campus: Stuart Swain and William Otto from UMM; Nigel Pitt and Bob Franzosa at UMaine. Consider developing at UMM courses with aligned learning outcomes to meet the Gen Ed requirements at both campuses such as the UMaine MAT 103 Elementary Algebraic Models in Our World and MAT 116 Intro to Calculus (January 2017)
 - B. English Composition and Writing Intensive Courses
 - . It is probable that students in a 1+3 or a 2+2 will end up taking a writing intensive course at UMaine. To ensure students are able to succeed in their later writing courses, common standards for ENG 101 English Composition should be agreed upon.
 1. UMM faculty observe the portfolio review process at UMaine (Dec 2016)
 2. Expectations about levels of proficiency must be established (by May 2017)
 3. Composition of portfolio review teams determined. (May 2017)
 4. At least a pilot for initiating a standard portfolio review for ENG 101, English Composition, should be planned on both campuses (December 2017)
 - i. Another significant challenge is the Writing Intensive GenEd requirement. Approaches to take include revising several key UMM courses to meet the WI requirement as currently configured at UMaine.
 1. Distribute UMaine’s WI learning outcome and policy requirements to pertinent UMM faculty. (Fall 2016)
 2. Evaluate the current ENG and WRI classes currently listed on the transfer matrix as meeting WI requirement, and identify other courses in the UMM

- curriculum that may meet the UMaine WI requirement (e.g ENV 112 Environmental Issues, ENV 224 Scientific Writing and Presentation). (January 2017)
3. Consider embedding the UMaine WI requirement into other courses students may take for their UMM GenEd requirements, e.g. ENG 113 Intro to Humanities, 114 Topics in World Literature, 117 Intro to Literary & Cultural Studies, or 118 Contemporary Literature. (January 2017)
 4. Clearly articulate to potential transfer students the UMM course options that will meet the UMaine's WI requirement. Consider reinstating the W designator for these courses. (June 2017)
2. Advising remains a critical issue for any successful implementation of a 2+2 or similar program: Some level of "intrusive" advising of students will be necessary. Students at UMM who are looking to transfer to UM must first be known to both institutions and then provided with advice about programs at UM and how their program of study at UMM will best contribute to timely completion of degree at UM. Likewise, students who ultimately remain at UMM must be guided accordingly. Students will need guidance about how GenEd requirements differ at the two institutions (and presumably about any changes made pursuant to the concerns noted above in this document), and what the challenges are in either choosing to enter a 2+2 program or to remain at UMM.
- . A consultative group of UMM/UM faculty should periodically meet to monitor status of courses that will meet GenEd requirements upon transfer. (June 2017)
- A. A survey of key UMM courses should be undertaken to determine that the Transfer Matrix accurately represents their GenEd status, and to identify where change is advisable. Generally, the Transfer Matrix available on MaineStreet needs more regular updating in order for it to be a useful tool. (May 2017)
3. Identification of UMaine programs that can reasonably be completed in a 2+2 collaboration if students take all or the majority of their general education courses at UMM, can only realistically be evaluated by program faculty, and not the GenEd program integration committee. The program faculty at UMM and UMaine will continue to partner to examine to determine the feasibility of 2+2 programs and identify those that can reasonably be completed in a 2+2 fashion or alternative (e.g. 1+3 or AA). (December 2016)

Anticipated timeline for implementation:

- The specific timeline for each recommendation is stated in the list of recommendations.
- Substantial planning will be necessary to address these concerns, and some form of "beta testing" attempted before implementation. For example the

ENG 101A and ENG 101 B (Stretch) English Composition is being piloted at UMM modeled after UMaine's program with similar learning outcomes, and the pilot will be completed by May 2017. A pilot math course that meets the quantitative literacy GenEd requirement at both campuses should be performed by Fall 2017.

Additional resources needed:

- Ongoing consultation and development of an adequate system of advising will likely require modest increments of resources.
- Development of WI courses at UMM as suggested above will require resources, including for faculty development.
- Funding for travel for English and Math faculty consultations.
- Ongoing funding may be needed for the consultative group of UMM/UM faculty who will periodically meet to monitor status of courses that will meet GenEd requirements.
- Funding for a wrap up meeting for faculty involved in developing the primary partnership to present any changes that have happened and further recommendations that have emerged.

Challenges:

- General Education Frameworks at UMM and UM are quite different, so students need to be very clear about whether they are likely to transfer to UM as part of a 2+2 plan or stay at UMM. (Courses transferring from UMM to UM are such that students can complete a substantial portion of their GenEd requirements while at UMM for a UM degree.)
- Course rotations at UMM will need to be examined to ensure that students in a 2+2 program can complete a substantial portion of their GenEd curriculum while at UMM.
- Coordinating an adequate system of advising to insure that 2+2 or similar programs can be completed will take substantial planning and effort.