

Board of Trustees 15 Estabrooke Drive Orono, ME 04469

> Tel: 207-581-5840 Fax: 207-581-9212 www.maine.edu

January 17, 2019

RE:

TO: Members of the Board of Trustees Faculty and Student Representatives

Ellen N. Doughty, Clerk of the Board Ellen Dought FR:

January 2019 Board Meeting

The University of Maine

University of Maine at Augusta

University of Maine at Farminaton

University of Maine at Fort Kent

University of Maine at Machias

University of Maine at Presque Isle

> University of Southern Maine

Enclosed are the materials for the Board of Trustees Meeting on Sunday and Monday, January 27-28, 2019, hosted by the University of Maine. Directions are included in the Board meeting materials. Parking is available in the Dunn Hall parking lot.

The Board Meeting materials are available on the Diligent portal, for those who have access, and in PDF format on the Board of Trustees website at: www.maine.edu/UMStrusteesmeetings

Live audio streaming will be available for the Board meeting on Sunday and Monday. The links to the live streaming and the captioning are on the Board of Trustees website at: www.maine.edu/board.

On Sunday, January 27th, the Board meeting will be called to order at 2:00 pm in the Wells Conference Center - Room 3. The Board will go directly into an Executive Session until 4:45 pm. At 5:00 pm the Board meeting will reconvene in the Wells Conference Center – Room 1, with a meeting with the UM Board of Visitors. A reception is scheduled for 6:00 pm, followed by dinner in the Reserve Reading Room at Fogler Library.

On Monday, January 28th, the Board meeting will be called to order at 8:30 am with an opportunity for continental breakfast and networking starting at 8:00 am. The Board meeting on Monday will be in the Wells Conference Center - Room 1.

Meeting rooms have been reserved for the Faculty & Student Representatives if they would like to meet in their respective groups. These rooms are available starting at 1:00 pm on 1/27/19. The Faculty Representatives can meet in Wells Conference Center – Room 2. Robert Neely will meet with the Faculty Representatives at 1:00 pm. The Student Representatives can meet in Corbett Hall – Room 134. Rosa Redonnett will meet with the Student Representatives at 1:00pm.

Overnight accommodations for those that have requested, have been made at the Courtyard Marriott, 236 Sylvan Rd, Bangor, 04401. PH 207-262-0070.

Incoming messages can be left with the UM President's Office at 581-1516 or with Heather Massey at 991-4724 or Ellen Doughty at 949-4905.

In the event of a postponement, cancellation, or changes in the Board of Trustees meeting, a message will be recorded on the Board Office cell phone (991-4724). In addition, every effort will be made to personally contact the Board of Trustees, the Presidents, and the Faculty and Student Representatives.

cc: Chancellor James H. Page University Presidents System Staff

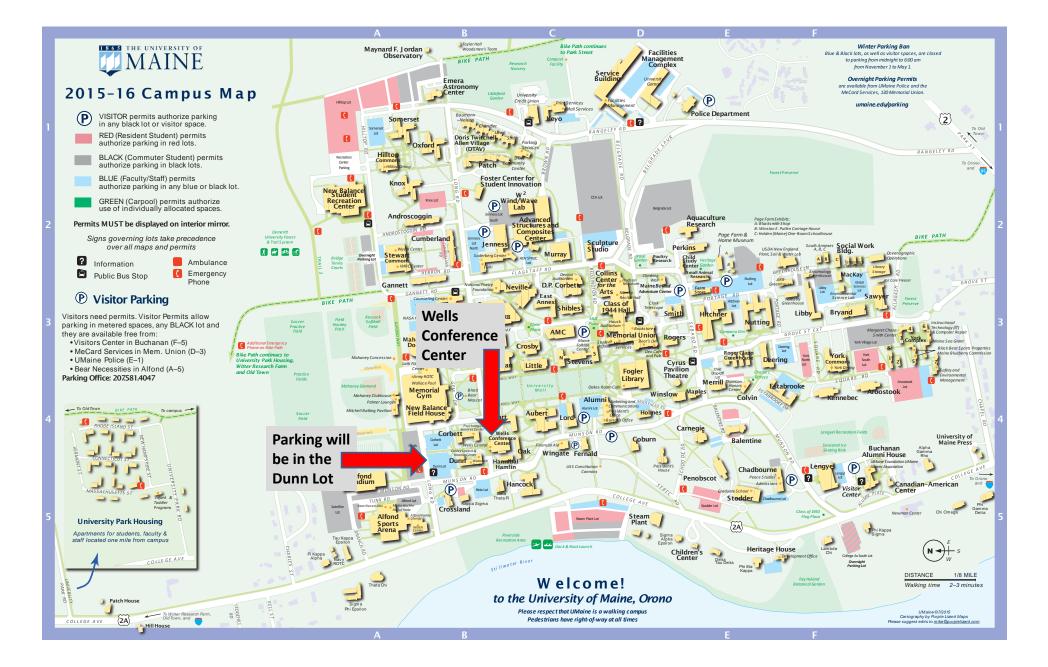


Directions to UM Campus – Wells Conference Center

From the South on I-95: take exit 191 to Kelly Road and turn right. Continue on Kelly Road for 1 mile until you reach the traffic light, then turn left onto Route 2 and go through downtown Orono. Cross the river, turn left at the lights onto College Avenue. Continue on College Ave and enter campus at the Long Road campus entrance on the left.

From the North on I-95: take exit 193 to Stillwater Avenue and turn left. Drive straight for one mile and turn right onto College Avenue. Drive one mile and turn left onto the UMaine campus (Long Road).

The Wells Conference Center and parking locations are noted on the UM campus map.



University of Maine System - Board of Trustees Meeting January 27 & 28, 2019 at the University of Maine Wells Conference Center, Room 1

REVISED 1/23/19

Faculty Representatives – Room 2, Wells Conference Center 1:00 - 2:00 pm - Robert Neeley/Kay Kimball meeting with Faculty Representatives Student Representatives – Room 134, Corbett Hall 1:00 pm - 2:00 pm - Rosa Redonnett meeting with Student Representatives

AGENDA

Sunday, January 27, 2019

Call to Order @ 2:00 pm The Board of Trustees will go directly into Executive Session

Executive Session from 2:00 pm to 4:45 pm – Wells Conference Center, Room 3

Call to Order/Reconvene Public Meeting @ 5:00 pm - Wells Conference Center, Room 1

BOT/BOV meeting @ 5:05 pm Tab 1 - Meeting with BOT and UM BOV

Reception @ 6:00 pm – Reserve Reading Room, Folger Library (Cash Bar) (*By Invitation Only*)

Dinner @ 7:00 pm – Reserve Reading Room, Folger Library (*By Invitation Only*)

Monday, January 28, 2019 Wells Conference Center, Room 1 Coffee & Networking @ 8:00 am

Call to Order/Reconvene @ 8:30 am

Citizen Comment

The Board of Trustees provides time for citizen comment prior to the business agenda at each meeting. The Chair of the Board will establish time limits (usually three minutes per person) and determine any questions of appropriateness and relevancy. Personnel decisions, collective bargaining issues, grievances, litigation and other areas excludable from public discussion under the Maine Freedom of Access Law shall not constitute appropriate matters for such input. A person who wishes to speak during the citizen comment period should arrive prior to the meeting start time and sign up on a sheet provided, indicating name and topic of remarks.

Chair's Report (10 minutes)

Chancellor's Report (40 minutes) Tab 2 - Overview of the Maine Employer Hiring Guide (5 minutes)

Vice Chancellor for Finance and Administration & Treasure's Report (25 minutes) Tab 3 - Financial Update

Vice Chancellor for Academic Affairs' Report (20 minutes)

- Tab 4 2018-2019 Program Innovation Fund Update
- Tab 5 Programs for Examination Update
- Tab 6 Academic Partnership Update

Action Items

- Tab 7 Acceptance of Minutes (5 minutes)
- Tab 8 Approval of Appointment to the University of Maine Board of Agriculture (5 minutes)
- Tab 9 Approval of UMS External Audit Services (10 minutes)
- Tab 10 Recommendation for Private Equity Asset Allocation for the Managed Investment Pool (5 minutes)
- Tab 11 Osher Map Library Foundation Ratification (5 minutes)
- Tab 13 Approval of the Maine Economic Improvement Fund Annual Report (10 minutes)
- Tab 15 Confirmation of Student Representative to the Board of Trustees (10 minutes)
- Tab 16 New Academic Program Proposal: Bachelor of Science in Public Health, USM (5 minutes)
- Tab 17 New Academic Program Proposal: Ph.D in Leadership Studies, USM (10 minutes)
- Tab 18 Revised Board of Trustee Policy 203 Chancellor Appointment & Responsibilities (5 minutes)
- Tab 19 Chancellor Search Priorities and Preferred Characteristics (10 minutes)

Consent Agenda (10 minutes)

- 1/10/19 FFT Committee Meeting
 - Tab 20 Cyberbit Range, UMA
 - Tab 21 Machine Tool Lab Building Replacement, UM
 - Tab 22 Master Plan, USM
 - Tab 23 Lease Request, Cooperative Extension, Greenland Point, UM
 - Tab 24 Real Property Acquisition, UMF
 - Tab 25 Bailey Hall Fire Protection and Electrical Upgrades, USM
 - Tab 26 Woodward Hall Renovation, USM
 - Tab 27 Schematic Design of Career and Student Success Center, USM

Discussion Topics

Tab 28 - State of IT Annual Report (15 minutes)

Lunch Break (20 minutes) (Timing of the lunch break will be at the discretion of the Chair.)

Executive Session (60 minutes) – Wells Conference Center, Room 3

Following the Executive Session, the public meeting will be reconvened to vote on the following items:

Tab 12 - Confirmation of Honorary Degree Nominations for 2020 (5 minutes)

Tab 14 - Approval of Tenure at time of hire:Dean of the Undergraduate School of Business, UM
(5 minutes)

Date of the Next Meeting: March 24 & 25, 2019 at the University of Maine at Machias

Attachments:

UM BOV Membership List (Confidential) Financial Update – Flash Reports

- Managed Investment Pool
- Pension Fund
- Operating Fund

UM Board of Agriculture Appointment - background materials
Honorary Degree Nominations for 2020

List (Confidential)
Narratives (Confidential)

UM Tenure at Time of Hire -background materials (Confidential)
Bachelor of Science in Public Health, USM - background materials
Ph.D. in Leadership Studies, USM – background materials
Draft Board Policy 203 - Chancellor Appointment and Responsibilities
Priorities and Preferred Characteristics for Chancellor Search - revised 1/26/2019
Cyberbit Sole Source Justification
Full Design, Engineering Education & Design Center, UM (approved at the 5/20-21/18 Board meeting)
USM Master Plan (on google drive)
Lease for Greenland Point Center, UM
Real Property Acquisition, UMF

Map

- Picture

Agenda Calendar

Reports:

UMS Interactive Dashboard Maine Employer Hiring Guide Maine Economic Improvement Fund (MEIF) Report FY2018 State of IT 2018 Report Degrees Conferred 2017-18 Annual Report Annual Report on Student Financial Aid Capital Project Status Report

- Executive Summary
- Capital Status Report

Competitive Procurement Legislative Report

- Executive Summary
- Cover Letter
- Report

Space Reduction Initiative Update

- Executive Summary
- January 2018 Approval

Security and Master Planning Update

- Executive Summary
- Report

Presentations:

State of IT 2018 Report Academic Partnerships Presentation UM BOV Presentation

Tabs noted in red text are action items.

Note: Times are estimated based upon the anticipated length for presentations or discussion of a particular topic. An item may be brought up earlier or the order of items changed for effective deliberation of matters before the Board.



- 1. NAME OF ITEM: Meeting with UM Board of Visitors
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:** X

BOARD ACTION:

4. OUTCOME:

BOARD POLICY: 102 Charter, Section 4B.5

5. BACKGROUND:

The Board of Trustees (BOT) and the Boards of Visitors (BOV) for the universities are collaborating to increase engagement. The BOT/BOV partnership increases advocacy and adds value for UMS, our students and the State.

One aspect of this engagement is a regularly scheduled meeting of the BOT with the local BOV when the BOT meets on a campus. Members of the UM BOV will meet with the BOT for a discussion of campus BOV strategic goals and concerns.

Attachment:

UM BOV Membership List for 2018-2019 (confidential)



- 1. NAME OF ITEM: Maine Employer Hiring Guide
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:** X
- 4. **OUTCOME:** University Workforce Engagement

BOARD POLICY:

BOARD ACTION:

5. BACKGROUND:

The University of Maine System Spring 2019 Hiring Guide for Maine Employers includes a schedule of career fairs and networking opportunities across our campuses where employers can connect with our professionally prepared, job-seeking students. The Hiring Guide for Maine Employers also provides links for posting available positions online and contact information for career service offices at each of the campuses.

The University of Maine System is helping to lead the State's response to our workforce and demographic challenges by recruiting record numbers of out-of-state students to our campuses, providing free access to higher education to students with the greatest need, and launching targeted initiatives like the Maine University Nursing Workforce Plan to address critical workforce needs.

UMS must also take advantage of every opportunity to connect the students earning a world class education on our campuses to existing and emerging Maine career opportunities. Together with our employer partners UMS will build a larger, more highly qualified workforce for Maine.

Attachment: Maine Employer Hiring Guide



- 1. NAME OF ITEM: Financial Update
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION: X**
- 4. OUTCOME: Enhance fiscal positioning

BOARD ACTION: BOARD POLICY:

5. BACKGROUND:

Vice Chancellor for Finance & Administration and Treasurer Ryan Low will provide a brief financial update at the January 27 & 28, 2019 Board of Trustees meeting.

Attachments:

Managed Investment Pool Flash Reports Pension Fund Flash Reports Operating Fund Flash Reports



- 1. NAME OF ITEM: 2018-2019 Program Innovation Fund Update
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:** X **BOARD ACTION:**
- 4. OUTCOME: Relevant Academic Programming and Student Success

BOARD POLICY:

5. BACKGROUND:

The UMS 2018-2019 Program Innovation Fund (PIF) process formally began on September 21, 2018 with a request for pre-proposals from interested faculty on each of the seven campuses. The request was sent for distribution to the Chief Academic Officers along with a scoring rubric so applicants could gauge the relative strengths of their ideas in advance. This year's criteria closely align with Board priorities: address workforce needs, increase adult attainment, and develop credentials of value, with enrollment growth, collaboration, feasibility and expediency completing the list.

A total of twenty pre-proposals were submitted. The Chief Academic Officers Council (CAOC) and members of the Vice Chancellor for Academic Affairs' office reviewed each and scored it based on how well it met the criteria. The CAOC met and discussed the relative merits of each at the December 6, 2018 face-to-face meeting, and selected fifteen to move forward to the full proposal stage. The Deputy Vice Chancellor for Academic Affairs will inform applicants of the collective recommendations from the CAOC, and ask for full proposals for those selected for further development by the end of December. Full proposals with budgets will be due March 11, 2019 for consideration and final selection at the May 2, 2019 CAOC meeting.



- 1. NAME OF ITEM: 2018-2019 Programs for Examination Update
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:** X **BOARD ACTION:**
- 4. OUTCOME: Relevant Academic Programming

BOARD POLICY: 305 – Program Inventory

5. BACKGROUND:

In accordance with UMS Board of Trustees (BOT) policy (Section 305), the University of Maine System provided on August 1, 2019 to all UMS campuses a listing of programs failing to meet two of the three *Programs for Examination* (PFE) criteria. In this first year of the PFE process, only the criteria 1 & 2 below were used in examining programs:

- 1. number of graduates per year
 - a. Undergraduate: average five graduates per year over three years
 - b. Master's: average of three graduates per year over three years
 - c. Doctorate: average of two graduates per year over three years
- 2. number of undergraduate majors: 15
- 3. number of tenure-track or just-cause eligible faculty: 3

The third criterion related to faculty was not implemented because such information is not captured in a systematic fashion in campus data systems, and thus, not readily available.

The 2018 PFE data for number of graduates per year and number of undergraduate majors identified 130 programs (72 undergraduate and 58 graduate programs). The UMS Chief Academic Officers (CAOs) evaluated these programs; and, in collaboration with the Vice Chancellor for Academic Affairs, recommended approximately 42 programs for further examination. The CAOs will finalize their recommendation of programs on January 3, 2019.

Programs were removed from the PFE list for a variety of reasons. The most obvious examples included programs already eliminated or merged, programs recently launched, as well as various individualized study programs requiring no additional faculty or courses - approximately, 30 programs fell into these groupings. The remaining programs were overlapping master's/doctoral programs or judged to generally meet a critical university, community or regional need.

Next Steps:

- January, 2019: CAOs finalize agreement on 2018 PFE program list
- March, 2019: Specific actions identified for any program remaining on the PFE list
- May, 2019: Each CAO will present their findings and recommendations to the Board of Trustees
- August, 2019: 2019 PFE process begins anew



BOARD ACTION:

BOARD POLICY:

- 1. NAME OF ITEM: Academic Partnerships Update
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION: X**
- 4. OUTCOME:

Increase enrollment Improve student success and completion Enhance fiscal positioning Maine workforce development

5. BACKGROUND:

The University of Maine System has partnered with a company named Academic Partnerships (AP) to address goals that are aligned with the new strategic priorities, namely: advancing workforce readiness by attracting adult learners for in demand credentials; transforming our online delivery of education to meet the needs of non-traditional adult students; providing wrap-around student services to improve student retention; and addressing our competiveness through innovative marketing techniques and program quality.

The implementation process began in November with a review of the readiness of the programs we wish to transform into the new approach. The agreement included an initial list of sixteen programs. The results of our review revealed that some programs could be launched in summer 2019, more in the fall, and the rest of the programs will come online as soon as possible. There are many factors to determine when a program will be ready to transform. For example: the current familiarity of the program faculty with teaching fully online and/or in a condensed eight week format. Another factor is the availability of faculty time to develop the new courses. Additional factors are the availability of administrative resources in areas like; advising, admissions, and financial aid.

AP has initiated its project kick-off meetings, so the actual work has begun in earnest. The Information Technology Services department, led by Chief Information Officer David Demers, had their initial meeting with AP about our data systems, which included issues, such as, pulling extracts for student success tracking. In addition to the project structure implemented by AP, UMS has initiated layers of committees to work on internal

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issues that will arise during the project. We have internal committees that have or will begin to meet from levels at the System, project management, and all campus stakeholders.

Attachment: Academic Partnerships Presentation

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- 1. NAME OF ITEM: Acceptance of Minutes
- 2. INITIATED BY: James R. Erwin, Chair
- **3. BOARD INFORMATION**:

BOARD ACTION: X

4. OUTCOME:

BOARD POLICY:

5. BACKGROUND:

The following minutes will be presented to the Board of Trustees for approval at the January 27 & 28, 2019 Board meeting:

November 18-19, 2018 – Board of Trustees Meeting December 19, 2018 – Special Board of Trustees Meeting December 20, 2018 – Investment Committee Meeting January 7, 2019 – Human Resources & Labor Relations Committee Meeting January 8, 2019 – Academic & Student Affairs Committee Meeting January 10, 2019 – Finance, Facilities, Technology Committee Meeting January 14, 2019 – Investment Committee Meeting January 18, 2019 – Audit Committee Meeting

The Board of Trustees website link to the minutes is: http://www.maine.edu/about-the-system/board-of-trustees/meeting-minutes/

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the minutes as presented.



- 1. NAME OF ITEM: Approval of Appointment to the University of Maine Board of Agriculture
- **2. INITIATED BY**: James H. Page, Chancellor
- **3. BOARD INFORMATION: BOARD ACTION:** X

4. BACKGROUND:

In 1998 the Maine Legislature formed the Board of Agriculture to advise the Chancellor and the University of Maine President on matters concerning agricultural research and extension. The legislation forming the board stipulates that members of the board serve five-year terms. They may be reappointed or replaced at the end of that five-year period.

The legislation provides that two research faculty members associated with agricultural research at UMaine serve on the Board, with the approval of the Board of Trustees. Currently Dr. M. Susan Erich serves as one of the research faculty and she term expires January 29, 2019.

The research faculty member recommended to succeed Dr. Erich is Dr. Robert Causey, Interim Director of the School of Food and Agriculture and Associate Professor of Animal and Veterinary Sciences. Dr. Causey will serve as a research faculty representative to the Board of Agriculture for a five-year term beginning January 30, 2019.

5. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the following research faculty appointment to the UMaine Board of Agriculture: Dr. Robert Causey for a five year term effective January 30, 2019.

Attachment: UM Board of Agriculture appointment request & Dr. Causey's vita



1. NAME OF ITEM: Approval of UMS External Audit Services

- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION: BOARD ACTION: X**
- 4. OUTCOME: BOARD POLICY: Primary Outcomes: Bylaws – Section 3 Enhance fiscal positioning

5. BACKGROUND:

In November 2018, the University of Maine System (UMS) issued Requests for Proposals (RFP) for external audit services for the purpose of conducting the financial statement and Uniform Guidance audits. After an in-depth review of the responses, the search committee forwarded the top two scoring proposals to the Audit Committee for interview at its January 18, 2019 meeting.

The Committee determined that both firms were qualified to perform external audit services for the UMS; therefore, the Committee recommends that the lower cost and higher scoring firm, CliftonLarsonAllen LLP (CLA), be engaged as the UMS external audit firm.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees agrees with the Audit Committee's selected respondent, CliftonLarsonAllen LLP, for appointment as the UMS external audit firm for audit years 2019 through 2025, at the fees indicated in their December 14, 2018 fee proposal.



UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: Recommendation for Private Equity Asset Allocation for the Managed Investment Pool
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:**

BOARD ACTION: X

4. OUTCOME: Primary Outcome: Enhance fiscal positioning **BOARD POLICY:** Section 709 - Investments

5. BACKGROUND:

During the last three Investment Committee meetings, New England Pension Consultants (NEPC) has provided information and education on private equity investing. At the December 20, 2019 Committee meeting, NEPC presented two asset allocation mixes – one with Private Equity and one without. The mix with Private Equity proposed a total 15% allocation to private markets (Private Equity and Private Real Estate). No action was taken at the December 20th meeting as the Committee opted for further discussion at a future meeting.

On January 14, 2019 the Investment Committee met by conference call for further discussion on Private Equity. Committee members raised several concerns about investing in this asset class. Among those concerns are the increased risk and liquidity considerations given that the Managed Investment Pool includes third party funds that are not held in perpetuity. As a result, the Committee members decided to recommend no increase in the Private Equity allocation for the Managed Investment Pool but rather allow the two current private market investments to continue in the portfolio until those investments wind down or until other due diligence action is appropriate.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the Investment Committee's recommendation to make no additional investment in Private Equity in the Managed Investment Pool, beyond those related to the two existing private market investments.



- NAME OF ITEM: Osher Map Library Foundation Ratification
 INITIATED BY: James H. Page, Chancellor
 BOARD INFORMATION: BOARD ACTION:
- 4. OUTCOME: BOARD POLICY:

5. BACKGROUND:

On June 22, 2018, the University of Southern Maine announced the execution of a new agreement between UMS and Dr. Harold L. Osher and other parties that committed \$12 million in new funds that, along with other funds already held by the USM Foundation, would be transferred to a new foundation to support the development of the Osher Map Library collection held at USM. The agreement also provides for the significant expansion of the Osher map collection and transfer of title to UMS of Dr. Osher's maps upon USM's successful development of the collection and its use over a five-year evaluation period.

A requirement of the June 22, 2018 Agreement was that UMS staff incorporate the USM Osher Map Library Foundation as a separate, non-profit 501(c)(3) public benefit entity that will be managed by an 11-member board, two members of which are selected by the USM President.

Acting in compliance with the Agreement, UMS Chief of Staff and General Counsel James Thelen prepared and executed Articles of Incorporation to establish the USM Osher Map Library Foundation, which were filed with the State of Maine on December 6, 2018. UMS Treasurer Ryan Low executed a certificate attesting to General Counsel Thelen's authority to execute and file the Articles of Incorporation.

As a measure of public accountability, Treasurer Low and General Counsel Thelen seek the UMS Board's ratification of the execution of the Articles of Incorporation for the USM Osher Map Library Foundation.

General Counsel Thelen will be available to answer Board questions regarding ratification.

6. TEXT OF PROPOSED RESOLUTION:

That the UMS Board of Trustees ratifies the execution and December 6, 2018 filing of Articles of Incorporation for the USM Osher Map Library Foundation to be in compliance with the June 22, 2018 UMS-Osher Agreement.

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- 1. NAME OF ITEM: Honorary Degree Nominations for 2020
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:**
- 4. OUTCOME:

BOARD ACTION: X

BOARD POLICY: 213 – Honorary Degrees

5. BACKGROUND:

Honorary Degree nominations from the University of Maine System campuses are presented annually for approval. In accordance with Board practice, the nominations are presented a year in advance and will be reviewed in Executive Session. Action will be taken in the public meeting without identification of the individual honorees. Publicity is the responsibility of the campus after arrangements for conferral of the degree are complete.

6. TEXT OF PROPOSED RESOLUTION

That the Board of Trustees approves the 2020 nominations for Honorary Degrees as presented.

Attachment: Honorary Degree Nominations for 2020 - List (*Confidential*) Honorary Degree Nominations for 2020 - Narratives (*Confidential*)



- 1. NAME OF ITEM: Approval of 2018 Maine Economic Improvement Fund Annual Report
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION: BOARD ACTION:**
- 4. OUTCOME: BOARD POLICY: Support Maine through Research & Economic Development

5. BACKGROUND:

Maine statute requires the University of Maine System to provide an annual report to the Governor and Legislature in January each year. In addition to listing the annual financial data, we also include an assessment of the achievement of the annual goals and objectives, and a summary of the research and development projects that have been funded.

The materials for the report were assembled before the Board of Trustees approved the Strategic Priorities; therefore, there is no mention of the priority areas. It is anticipated that the next report will incorporate them.

The annual report is included in the meeting materials for review and approval.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the 2018 Maine Economic Improvement Fund Annual Report as presented.

Attachment:

Maine Economic Improvement Fund Annual Report

01/17/2019

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UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: Approval of Tenure at the time of hire: Dean of the Undergraduate School of Business, University of Maine
- 2. INITIATED BY: James H. Page, Chancellor

3. BOARD INFORMATION: BOARD ACTION: X

4. BACKGROUND:

UM/UMM President Joan Ferrini-Mundy has requested approval of tenure at the rank of Professor, effective March 1, 2019, in support of the appointment of the Dean of the Undergraduate School of Business at the University of Maine.

According to Board tenure guidelines, the Board "will consider, on an exceptional basis, a nomination to tenure for an academic dean" provided "the nominee will have been accepted by an appropriate academic department and accorded faculty rank, at the time of appointment," and "the nomination will have been duly evaluated through the campus tenure processes." President Ferrini-Mundy and Provost Jeff Hecker have reviewed the candidate's credentials and record, and can attest that the candidate has met both criteria for approval.

Tenure would be effective if and when the administrative position ends and the individual assumes a full-time faculty position in the Undergraduate School of Business in accordance with Board policy.

The Academic and Student Affairs Committee approved this recommendation and agreed to forward it to the January 27-28, 2019 Board of Trustees meeting for approval.

5. TEXT OF PROPROSED RESOLUTION:

That the Board of Trustees approves tenure at the rank of Professor to the candidate for Dean of the Undergraduate College of Business at the University of Maine, with tenure to be effective if and when the administrative position ends and the individual assumes a full-time faculty position in the Undergraduate College of Business, in accordance with Board policy.

Attachment: UM Tenure at Time of Hire – Background Info - (*Confidential*)



- 1. NAME OF ITEM: Confirmation of Student Representative to the Board of Trustees
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION**:

BOARD ACTION: X

4. OUTCOME:

BOARD POLICY: Policy 205 - Faculty & Student Representatives to the Board of Trustees

5. BACKGROUND:

To create the environment for interaction among and between Faculty and Student Representatives, the Trustees and System administration, the Trustees have provided opportunities for participation in the meetings of the committees of the Board.

One faculty member and one undergraduate student from each of the seven universities and one graduate student from the University of Southern Maine and one graduate student from the University of Maine will be appointed by the Board as non-voting representatives to the Board of Trustees and invited to participate as non-voting members on the standing committees.

Normally, the representative is expected to complete a two year term; therefore, it is an expectation that the minimum term of service by Faculty and Student Representatives to the Board be two years. The nominations will be forwarded through the Presidents to the Chancellor for submission to the Board for Trustee approval.

The following nomination is being recommended by the President:

<u>Student Representative</u>: Nathan Carlow, USM undergraduate – two year term – January 2018 – January 2020

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the appointments of the following Student Representative to the Board of Trustees:

Student Representative:

Nathan Carlow, USM undergraduate - two year term - January 2018 - January 2020



UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: New Academic Program Proposal: Bachelor of Science in Public Health, USM
- 2. INITIATED BY: James H. Page, Chancellor

3. BOARD INFORMATION: BOARD ACTION: X

4. OUTCOME: Relevant Academic Programming

5. BACKGROUND:

The University of Southern Maine has submitted a proposal, unanimously endorsed by the Chief Academic Officers Council, to offer a Bachelor of Science in Public Health (BSPH). As described in the proposed program, Public Health has been ranked as the 9th fastest growing academic program nationally; yet, despite this growth, a need for bachelor's-trained public health professionals still remains. Thus, USM anticipates that this program will draw students to Maine, as well as meet essential workforce needs in the State. In addition, the proposed BSPH builds on the "successful foundation and resources of USM's accredited Master of Public Health Program."

BOARD POLICY:

One appealing aspect of the program is the possibility of collaboration with the University of Maine. The proposal indicates "Given the multi-disciplinary nature of public health, and preliminary conversations with academic programs at USM and with faculty at the University of Maine (UMaine), we are heartened by the enthusiasm and encouraged about the range of collaborative possibilities this new program would create."

The proposed BSPH program was reviewed by three leaders in the field of public health, who themselves are administrators of undergraduate public health program. Each was asked to provide their assessment in the areas of program need, program objectives and content, and program quality. USM has satisfactorily responded to those reviews with revision of their initial proposal.

The Academic and Student Affairs Committee approved this recommendation to be forwarded for approval at the January 27-28, 2019 Board of Trustees meeting

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Academic & Student Affairs Committee and authorizes the creation of the Bachelor of Science Degree in Public Health for the University of Southern Maine.

Attachment:

Bachelor of Science in Public Health, USM - Program Proposal Approval Letters



- 1. NAME OF ITEM: New Academic Program Proposal: Ph.D. in Leadership Studies, USM
- 2. INITIATED BY: James H. Page, Chancellor
- 3. BOARD INFORMATION:
- 4. OUTCOME: Relevant Academic Programming

5. BACKGROUND:

The University of Southern Maine has submitted a proposal, endorsed by the Chief Academic Officers Council, to offer a Ph.D. in Leadership Studies through their Department of Leadership and Organizational Studies. Some of the appealing aspects of this proposal include a low-residency approach with the use of both synchronous and asynchronous online modalities. The intent is to use web-conference enhanced, discussion-based approaches, as well as interactive technology. The delivery modality is a departure from typical Ph.D. offerings, and should be particularly appealing to working adults.

BOARD ACTION: X

BOARD POLICY:

USM anticipates 20 or more students by the second year of this program on the basis of internal USM comparisons and a supply of students from the dozens of master's programs in leadership throughout New England. Further, a Ph.D. in leadership studies at USM would have no competition in the New England region.

This proposal was reviewed by the CAOC during Spring, 2018 and then sent out for external review. On the basis of the external reviews, modifications were made to the program proposal, including most significantly a reduction in the credit hour requirements, removal of one concentration area, and changes to the distribution requirements across the required program areas.

This program is recommended for approval for the following reasons:

- non-traditional delivery of the Ph.D. program;
- disciplinary expertise at USM, building on their master's degree;
- strong enrollment projections;
- support from senior leadership at USM.

The attached material includes recent letters of support from President Cummings and Provost Uzzi. The Ph.D in Leadership Studies at USM academic program proposal was not reviewed by the Academic & Student Affairs Committee.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees authorizes the creation of the Doctor of Philosophy degree in Leadership Studies for the University of Southern Maine.

Attachment:

Ph.D in Leadership Studies, USM - Program Proposal Approval Letters 1/17/2019



- 1. NAME OF ITEM: Board Policy 203, Chancellor—Appointment and Responsibilities
- 2. INITIATED BY: Trustee James Erwin, Chair
- **3. BOARD INFORMATION:**

BOARD ACTION: X

4. OUTCOME:

BOARD POLICY: Policy 203, Chancellor— Appointment and Responsibilities

5. BACKGROUND:

With a search underway for the next Chancellor, the Board is developing priorities and expectations for the position. Board Policy 203, Chancellor—Appointment and Responsibilities is part of this review. Policy 203 was last revised in 1989. The proposed changes to the policy will bring it into line with current expectations of the Chancellor under the One University initiative and the needs of Maine for higher education leadership.

The proposed changes to Policy 203 were initially presented at the December 19, 2018 meeting of the Board for information. The draft revised policy was reviewed by staff and by the Chancellor Search Committee at their January 25 meeting. The attached draft may be further revised at the January meeting based on input by the Search Committee.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees adopts the proposed changes to Board Policy 203, Chancellor—Appointment and Responsibilities.

Attachment: Draft Board Policy 203 - Chancellor Appointment and Responsibilities



- 1. NAME OF ITEM: Chancellor Search: Priorities and Preferred Characteristics
- 2. INITIATED BY: Trustee James Erwin, Chair

3. BOARD INFORMATION:

BOARD ACTION: X

4. OUTCOME:

BOARD POLICY: Board Policy 203, Chancellor—

Appointment and Responsibilities

All primary and secondary outcomes Board Policy 20 Primary Outcomes: Appointment an Increase enrollment Improve student success and completion Enhance fiscal positioning Support Maine through research and economic development Secondary Outcomes: Relevant academic programming

University workforce engagement

5. BACKGROUND:

The Board of Trustees has initiated a search for the next UMS Chancellor. The Chancellor Search Committee, chaired by Trustee Collins, is conducting the search with the assistance of consultants from Academic Search.

At their December 19, 2018 meeting the Board of Trustees adopted priorities and preferred characteristics for the next Chancellor to guide the work of the Search Committee. The Search Committee and consultants have conducted listening sessions to provide opportunities for members of the University community and stakeholders to provide input to the Search Committee for their use in assessing candidates. The Search Committee met January 25, 2019 and reviewed the input from the listening sessions. The Search Committee is recommending changes to the Priorities and Preferred Characteristics to reflect input from the listening sessions. The revised document is attached for approval by the Board of Trustees.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees adopts the revised Priorities and Preferred Characteristics for the Chancellor as recommended by the Chancellor Search Committee.

Attachment:

Priorities and Preferred Characteristics UMS Chancellor - Revised 1/26/19



- 1. NAME OF ITEM: Cyberbit Range, UMA
- 2. INITIATED BY: James H. Page, Chancellor

3. BOARD INFORMATION:

4. OUTCOME:

Increase Enrollment Improve Student Success & Completion Relevant Academic Programming

BOARD ACTION: X

BOARD POLICY:

701 Financial Affairs-Operating & Capital Budget

5. BACKGROUND:

The University of Maine System acting through the University of Maine at Augusta requests authorization to expend up to \$855,000 over three years to procure a Cyberbit Range security and simulation platform to provide a virtual environment for teaching and learning in cyberwarfare training and cyber technology development. Funding for the Cyberbit Range would come initially through grants and campus resources, but also provides an opportunity for revenue generation through cybersecurity training for and leases to corporations and other entities.

This request is pursuant to Board of Trustees Policy 701 Financial Affairs, which requires projects with a total cost of more than \$250,000 to be considered by the Board of Trustees or its Finance, Facilities and Technology Committee. The request is to approve and to forward this matter to the Consent Agenda for the January 27 & 28, 2019 Board of Trustees meeting.

The project involves purchasing a turn-key hardware and software solution to be under the direction of the Maine Cybersecurity Center (MCC) and housed in the UMS-IT data center located on the Orono campus. The MCC was established by the University of Maine System as the designated Center for Cyber Education. The MCC, under the direction of Dr. Henry Felch, DCS, provides support and oversight for the core academic program in Cybersecurity recognized by the NSA currently offered at the University of Maine at Augusta, the University of Maine at Fort Kent and the University of Southern Maine. The MCC maintains a distributed and redundant network of servers accessible to all participating faculty and students within the University of Maine System over a virtual private network.

This project will position the University of Maine System as an educational leader in Cybersecurity and allow us to provide a high quality, hands-on learning experience for our students. Students would have as close to real world experience training as possible, making our students a top choice for employment upon graduation. The UMS Cybersecurity Academic Programs, including the shared Masters in Cybersecurity (UMA/USM) under development, the Maine Cybersecurity Center and its continuing designation as an NSA Center of Academic Excellence serve a critical state need for Cybersecurity education in a rapidly changing world. Additionally, each of these initiatives would be greatly supported by a tool designed to provide a dynamic and robust environment in which faculty and students may conduct research and educational delivery.

The total cost of the three-year lease for the Cyberbit Range is \$855,000: Year 1 \$295,000; Year 2 \$280,000; Year 3 \$280,000. Through the MCC, UMA has applied for a small campus Maine Economic Improvement Fund grant with a request for \$300,000 and a National Science Foundation grant for approximately \$1 million to fund the initiation of this project. This project will <u>not</u> be initiated until a funding plan is in place. Significant revenue generation opportunities exist to cover the ongoing cost of funding the platform, through cybersecurity training for and leases to corporations and other entities.

The Cyberbit Range is a user-ready tool that is unique in its features supporting the needs of higher education, in particular this tool is distinct from other user-ready products available in the market for business and industry, making it uniquely applicable for academic curricular support. In addition, this product is already NSA and Department of Homeland Security accredited aligning with our NSA designation as a Center of Academic Excellence. For these reasons, UMA will be submitting a sole source procurement justification.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 27 & 28, 2019, Board meeting.

5. TEST OF PROPOSED RESOLUTION:

That the Board of Trustees authorizes the University of Maine at Augusta, to expend up to \$855,000 over three years in grant and campus funds for the acquisition of the Cyberbit Range security training and simulation platform.

Attachment: Cyberbit Range Sole Source Justification



- 1. NAME OF ITEM: Machine Tool Lab Building Replacement, UM
- 2. INITIATED BY: James H. Page, Chancellor

3. BOARD INFORMATION:

BOARD ACTION:

4. OUTCOME:

BOARD POLICY:

Gross Square Foot Increase

Х

Increase EnrollmentGross SquImprove Student Success and CompletionEnhance Fiscal PositioningSupport Maine through Research and Economic DevelopmentRelevant Academic ProgrammingUniversity Workforce Engagement

5. BACKGROUND:

The University of Maine System acting through the University of Maine (UM) requests authorization to build an approximately 5,900 square foot building to house a portion of the functions of the existing Machine Tool Laboratory during the construction of the new Engineering Education and Design Center (EEDC). The request is pursuant to Trustee Policy prohibiting net increases in space without Trustee authorization.

This request then is part of a ballet of three different facilities: 1. the existing tool lab, which is to be demolished to make way for the new EEDC; 2. a new building to house, temporarily, the tool lab and, 3. the new EEDC facility which ultimately will be the new, permanent home of the existing tool lab functions.

The proposed temporary tool lab would include a teaching lab to house machine tools, two offices for faculty who directly support this lab, and a classroom tied to the lab, plus support spaces. This would be the key learning space for the approximately 170 students in UMaine's Mechanical Engineering Technology program. Discussions of how to accommodate the functions that cannot be supported in the temporary space are ongoing. Further temporary capital construction is not expected to be required to support those functions.

The final location for the new EEDC building was determined in April of 2018 to be at the site of the existing Machine Tool Laboratory building. This existing tool lab is approximately 12,800 square feet and was built in 1935. The current Net Asset Value (NAV) of the lab is reported by Sightlines at 2 percent.

The existing tool lab is expected to be removed in the winter of 2019-2020 to make way for the EEDC. At that point, the demolition would at least temporarily offset the increase

in square footage associated with the new facility, but that decline in space is expected to be overwhelmed ultimately by the construction and increase in space associated with the new EEDC.

While the new EEDC is being constructed, the temporary space is needed. Once the new EEDC is complete and the tool lab relocated there, the current plan is for the temporary tool lab building to be re-used as swing space during future renovations of three existing engineering teaching buildings (Boardman, Barrows, and Jenness Halls).

Design for this building to house the temporary tool lab is underway. The intention is to bid for construction in the spring of 2019 and to occupy the space before January 2020 when the existing Machine Tool Lab is slated for removal.

The cost of the new building is estimated to be approximately \$1.5 million and will be funded through the EEDC project and the budget approved by the Board in May, 2018. This project and the full design work for the EEDC can be completed within the \$9 million approved by Trustees in May 2018. The operating costs of the new structure are not expected to increase beyond those of the existing Machine Tool Lab. The net change in square footage will be tracked in the campus' list of assets.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 27-28, 2019 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee for the University of Maine System acting through the University of Maine to expend up to \$1.5 million from funds to be identified by the University of Maine Chief Business Officer and the University of Maine System Treasurer to construct a new facility of up to 5,900 square feet.

Attachment: Full Design, Engineering Education and Design Center, UM (approved at the 5/20-21/18 Board Meeting



- 1. NAME OF ITEM: Master Plan Acceptance, USM
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION**:
- 4. OUTCOME: All Primary & Secondary Outcomes

BOARD ACTION: X

BOARD POLICY: 701 – Budgets-Operating & Capital

5. BACKGROUND:

The Board of Trustees has encouraged all campuses to adopt master plans for their respective physical campuses as part of a series of facility-related recommendations adopted in March 2015. The University of Southern Maine initiated a master planning process in May 2017 and completed this process with a final presentation to the campus community in December 2018.

The master plan is part of a three-tiered planning process which Trustees have directed be undertaken and which requires a master plan, a 5-year capital plan and a 1-year capital work plan be maintained by each University and, taken together, for the System.

The master plan was broken down by campus: Portland, Gorham and Lewiston.

To accomplish the vision and transform the Portland Campus, the master plan creates a new campus quad and identifies iconic sites for the new large projects. The new campus quad will serve as the center of the new campus heart, surrounded by a new residence hall and a Career and Student Success Center. Serving both the needs of USM students and the community, the proposed Center for the Arts facility will be a premier arts venue; seating 1,000 in the theatrical performance hall, 600 in the music theatre, a black box theater, and fine arts gallery. The new Graduate Center is anticipated to accommodate and integrate three primary programs: The University of Maine School of Law, a University of Maine MBA program and possibly the Muskie School of Public Service.

The Gorham Campus master plan vision is to create transformational moves which improve the student experience. The master plan recommends renewal of the Gorham heart and identifies sites for the additional housing and academic sites as they are needed. Early in the process it was determined the University needed to complete an academic plan for the Lewiston Campus prior to engaging in the Facilities master plan process.

On Dec 4, 2018, the President's Cabinet approved the master plan and will be the administrator.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 27-28, 2019 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee and acknowledges the campus master plan from USM and, without granting Trustee approval for any specific expenditure or capital project that would otherwise require Trustee consideration, accepts the plan and encourages the University to continue its efforts to maintain and act in accordance with the plan as well as other applicable directives of the Trustees.

Attachments: Link: USM Master Plan on Google Drive



- 1. NAME OF ITEM: Lease Request – Cooperative Extension, Greenland Point, UM
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:**
- 4. **OUTCOME:** Increase Enrollment Improve Student Success and Completion

BOARD ACTION: Х

BOARD POLICY: 801 – Acquisition of Real Property Gross Square Foot Increase

5. **BACKGROUND:**

The University of Maine System acting through the University of Maine (UM) requests authorization to enter into a lease with the Pine Tree State 4-H Club Foundation for the use of land and buildings by the University of Maine Cooperative Extensions.

The property includes approximately 9,500 square feet of facility space located on 63 acres and is known as the Greenland Point Center. It is owned by the Foundation and located in Princeton, Maine. The lease agreement would extend the scope of the University's 4-H Youth Development program and learning opportunities for Maine youth and local schools.

This request is pursuant to Board Policy 801, the acquisition of real property, and pursuant to the Board's prohibition of increases in space without Trustee approval. Per policy, leases with a value of over \$100,000 or a term greater than five years must be considered by the Board or its Finance Facilities and Technology Committee. In this case, the lease exceeds those values, so the request is to approve and to forward this matter to the Consent Agenda for the January 27-28, 2019 Board of Trustees meeting.

Connecting young people to Maine's natural resources and nurturing resilience, leadership, and high aspirations for the future are central to the mission of the University of Maine's 4-H Youth Development Program. UMaine Cooperative Extension considers the lease of Greenland Point Center part of a strategic future in which the reach and capacity to achieve this mission is expanded, especially in underserved areas of the State. In particular, the long-standing legacy at Greenland Point Center of hosting quality conservation education and ecology-based programs aligns with the existing mission and strategic direction of the 4-H Camp program.

The terms of this lease include a ten-year initial term with two ten-year renewal options starting at a cost of \$8,000 per year for the first year. The rate will be renegotiated annually. Any increases require the mutual agreement of both parties and are capped at 4 percent each year. If all extensions were exercised and the maximum 4 percent increase were agreed each year, the final year lease payment would be \$24,949 and the total value of the base agreement over its full 30 years would be \$448,680. The foregoing lease rate and term notwithstanding, the University may terminate the lease at any time with 30 days' notice and Lessor may terminate with 180 days' notice.

The lease rate and any increases are intended to offset annual direct ownership costs incurred by the owner. The annual operating costs to be paid by Cooperative Extension are expected to be covered by camp tuition and fees, scholarship funds, and external grants.

Regarding the increase in space, the proposed lease will encompass approximately 63 acres of land on Long Lake with functioning camp buildings totaling approximately 9,500 gross square feet of facility space.

This site would be a companion operation to the activities at the Bryant Pond 4-H Center, which has reached tens of thousands of young people over its history and which now operates at capacity in summer. Bryant Pond was founded as the Maine Conservation School by Governor Ed Muskie in 1956. In 2008 Bryant Pond merged with Cooperative Extension; throughout its history, the Center has been known Statewide as a driver of innovation in the youth development field.

Bryant Pond is one of two recipients of significant funding of approximately \$200,000 annually from the Maine Department of Inland Fisheries and Wildlife for youth conservation education. The other recipient has traditionally been Greenland Point Center in Princeton.

Like Bryant Pond, the Greenland Point Center has a rich history of providing conservation education and youth development programming from its Washington County location.

The Pine Tree State 4-H Club Foundation recently closed on the Greenland Point property with the intention of leasing it to Cooperative Extension to expand on the success of Bryant Pond and to continue the legacy of programming for underserved youth in Washington County by bringing the 4-H Camp program here.

Greenland Point Center was formerly owned and operated by the University of Maine at Machias (UMM), now a regional campus of the University of Maine, for a number of years leading up to 2007. Outreach to UMM faculty and staff who were formerly

involved with the Center has led to keen interest in, and support for, a new University connection and management structure for the property. Faculty in the Outdoor Recreation programs at UMM have used Greenland Point Center as a base for field work, trips, and trainings. The camp has also provided summer employment to UMM students. At a minimum, it is likely these connections will re-kindle immediately and that other partnerships with UMM programs will develop within the first three years.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 27-28, 2019 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee for the University of Maine System acting through the University of Maine to enter into a lease agreement for the Greenland Point Center located in Princeton, Maine and its approximately 63 acres and approximately 9,500 gross square feet of facility space, for a term of up to thirty years including renewals, with all final terms and conditions subject to review and approval by General Counsel and University Treasurer.

Attachment:

Lease Agreement for Greenland Point Center, UM

23



AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: Real Property Acquisition, UMF
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:**
- 4. OUTCOME:

Increase Enrollment Increase Student Success and Completion Relevant Academic Programing University Workforce Engagement **BOARD ACTION:** X

BOARD POLICY:

801 – Acquisition of Real Property Gross Square Foot Increase

5. BACKGROUND:

The University of Maine System acting through the University of Maine at Farmington (UMF) requests approval to conduct a renovation by replacement of its Sweatt-Winter Childcare Center and early childhood programming and workforce training facilities.

This request is pursuant to Trustee Policy 801 regarding the acquisition of real property, and pursuant to the Board's prohibition of increases in space without Trustee approval.

Regarding Policy 801, any acquisition of real property with a total cost of more than \$200,000 must be considered by the Board of Trustees or its Finance, Facilities and Technology Committee. In this case, the request is to approve and to forward this matter to the Consent Agenda at the January 27-28, 2019 Board of Trustees meeting.

Regarding the increase in space, the new building is 10,384 square feet on a 3.18 acre parcel of land. The proposed purchase would constitute only a temporary increase in square footage as the University intends to offset the added space through demolition of two existing buildings totaling over 15,000 square feet and creating a net decrease in space of approximately 5,000 square feet.

The original project was identified on the recent bond request as Early Childhood Laboratory Space. It was identified as a renovation and expansion project at an estimated cost of \$1,908,785 and was to be approximately 10,000 square feet of combined renovated and expanded space.

The University has now become aware of commercial space available for purchase at 274 Front Street in Farmington, which is directly across the street from the existing Roberts Learning Center. The building is approximately 10,384 square feet, sits on a land parcel of approximately 3.18 acres and was built about nineteen years ago.

This building gives UMF the ability to be strategically nimble and make great progress towards the goals identified in the campus master plan that was adopted in 2017. Purchasing this property and renovating the space is expected to be less costly than constructing a new building, and will allow UMF to redirect funds to additional critical capital projects as outlined in its capital plan and consistent with the proposed bond projects.

In addition to the Sweatt-Winter Childcare Center, the renovation by replacement would allow the University to create more with the scarce resources, including laboratory, classroom and meeting space that will directly support the Early Childhood, Early Childhood/Special Education and Graduate programs. There is parking for 90-100 vehicles adjacent to the building.

The building's location creates a strong gateway to the University and downtown Farmington. It also allows the children's programs to utilize Prescott Fields for programming.

The University has taken initial steps to evaluate the facility and the feasibility of locating its project at this site in lieu of constructing a new building. That preliminary evaluation found the structure to be in very good condition, meeting or exceeding the program needs. In 2014 the appraised market value for the property was \$990,000. An updated appraisal is being completed now. UMF seeks authorization to purchase the building for \$849,000 plus customary closing costs, and plans to set aside up to \$475,000 for renovations to the space which will gain significant program benefits. A preliminary estimate of the cost to remove the two buildings which will offset the additional square footage is \$300,000. These two demolition projects were submitted to the Space Reduction Initiative subcommittee, have been reviewed and are under discussion and consideration. Should such funds not materialize or not cover the entirety of the cost, UMF would consider using bonds or other resources to pursue the demolition projects.

The buildings to be demolished are 110/112 Maguire Street and 228 Main Street (Brinkman House). The Maguire Street buildings have combined Net Asset Value (NAV) of approximately 24% and are currently vacant. Prior to September 1, 2018 the Early Childhood Development program and Office of Public Safety occupied the Maguire Street buildings. The Brinkman House has a NAV of 31% and is currently occupied by the Math Department. The NAV of the new building will help improve the overall campus NAV. Funds have been identified through the bond for renovating space in the existing Ricker Addition facility to be occupied by the displaced math department. That work constitutes a separate project and is not further detailed here. The Office of Public Safety already has relocated to 149 Quebec Street, (1469 GSF, NAV 64%).

Increased maintenance and utility costs are expected to be approximately \$35,000 annually and will be covered by the University from its central operating budget. Operating costs will be covered by the Early Childhood and Graduate programs operating budget and service revenue.

Consultations with legal counsel have indicated the proposed approach is workable.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 27-28, 2019 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee for the University of Maine System acting through the University of Maine at Farmington to purchase the property located at 274 Front Street in Farmington, Maine, comprised of approximately 10,384 square feet on 3.18 acres for the purpose of conducting a renovation by replacement of its Sweatt-Winter Childcare Center which includes early childhood programming and workforce training opportunities, with all final terms and conditions subject to review and approval of the University of Maine System Treasurer and General Counsel.

Attachments: Real Property Acquisition, UMF – map Real Property Acquisition, UMF - picture



UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: Bailey Hall Fire Protection and Electrical Upgrades, USM
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION**:
- 4. OUTCOME: Improve Student Success and Completion

BOARD POLICY:

BOARD ACTION:

701 – Budgets-Operating & Capital

Х

5. BACKGROUND:

The University of Maine System acting through the University of Southern Maine (USM) requests authorization to expend up to \$2,580,000 for upgrades to the Bailey Hall fire protection system and electrical service. Funding for this project includes \$250,000 from ITS, \$950,000 from Campus E&G sources, and \$1,380,000 from 2018 Bond funds.

This request is pursuant to Board Policy 701, which requires projects with a total cost of more than \$500,000 to be considered by the Board of Trustees or its Finance, Facilities and Technology Committee. In this case, the request is to approve and to forward this matter to the Consent Agenda for the January 27-28, 2019 Board of Trustees meeting.

The project consists of upgrades to the building fire protection system, fire panel and alarm system and building electrical service as well as abatement of related asbestos-containing building materials. The abatement is also made necessary in order to complete an Information Technology (IT) Infrastructure improvement project in Bailey Hall.

In March of 2015, the State Fire Marshal issued a directive to have an automatic sprinkler system installed in Bailey Hall by March of 2020 to meet current code for the type of building. The campus set aside capital improvement funds to meet this goal. As design for the project began it became apparent that additional improvements were needed to the building electrical service and fire alarm service in order to correctly address the sprinkler system work. The removal of asbestos-containing building materials to allow for this work and a building Information Technology infrastructure improvement also became apparent.

The 2018 Bond funds allocated for USM included approximately \$1,500,000 in building infrastructure and code improvements projects. The scope of work proposed here is consistent with the intent of the Bond funding although is being directed here at a different facility than previously anticipated. The campus still intends to address the other projects in other facilities through its five year capital plan and annual capital improvements budget over the next few years as part of its match to the bond funding.

With a Sightlines Net Asset Value (NAV) of approximately 41% for Bailey Hall, this project is an example of what Sightlines might refer to as a situation when "the projects start picking you". While the campus strives to plan for capital improvements that meet the needs and desires of the campus, at times, those failures due to deferred maintenance items reach a point where there is no other option but to address them.

Design is ongoing for the fire protection sprinkler upgrade. An asbestos survey has been completed with a timeline to complete the abatement ahead of the Fire Protection Sprinkler system work for the building. The timeline calls for construction and abatement to commence in the summer of 2019. The asbestos abatement will also precede the IT upgrade being done in the building during the summer of 2019. Information Technology Services (ITS) is helping to support the asbestos removal because of the IT upgrade project and a shared cost between the campus and ITS was agreed upon to fund this portion of the work.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 27-28, 2019 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee for the University of Maine System acting through the University of Southern Maine to spend up to \$2,580,000 in various funding sources, including Information Technology Services, Campus E&G, and 2018 Bond funds, to upgrade the Bailey Hall Fire protection and electrical systems.



UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: Woodward Hall Renovation, USM
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION**:
- 4. OUTCOME: Improve Student Success and Completion

BOARD ACTION: X

BOARD POLICY: 701 – Budgets-Operating & Capital

5. BACKGROUND:

The University of Maine System acting through the University of Southern Maine (USM) requests authorization to spend up to \$1,800,000 to renovate Woodward Hall on the Gorham Campus of the University of Southern Maine. Funding for this project will come from \$1,500,000 in 2018 Facilities and Infrastructure Improvement Bonds and \$300,000 in Campus E&G funds.

This request is pursuant to Board Policy 701, which requires projects with a total cost of more than \$500,000 to be considered by the Board of Trustees or its Finance, Facilities and Technology Committee. In this case, the request is to approve and to forward this matter to the Consent Agenda for the January 27-28, 2019 Board of Trustees meeting.

Woodward Hall currently houses 114 students in approximately 20,000 square feet. The facility was built in the 1950's and has a Sightlines Net Asset Value (NAV) of 22%, among the lowest at USM. The bathrooms and lighting system have not received updates in decades. Other small renovations have been completed over the years, with the most recent in the summer of 2018 to renovate classrooms into additional student rooms on the first floor.

The proposed renovation will include new bathrooms on all floors, an upgraded fire protection system, lighting upgrades, front entrance renovation, Resident Director apartment upgrades and installation of new online swipe cards to all dorm room doors to eliminate the use of keys.

Design is ongoing. Construction currently is scheduled to occur in the summer of 2019 with occupancy in time for the start of the fall semester.

No added operational expenses are expected as a result of this renovation.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 27-28, 2019 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee for the University of Maine System acting through the University of Southern Maine to spend up to \$1,800,000 from various funding sources, including Bond and Campus E&G funds, on a renovate project for Woodward Hall.



UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: Schematic Design of the Career and Student Success Center at the University of Southern Maine, USM
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION**:
- **BOARD ACTION:**

4. OUTCOME:

BOARD POLICY: 701 – Budgets-Operating & Capital

Х

Increase Enrollment Improve Student Success and Completion Relevant Academic Programming

5. BACKGROUND:

The University of Maine System acting through the University of Southern Maine (USM) requests authorization to expend up to a preliminary \$1 million to perform Conceptual and Schematic Design and related services for a new building to be known as the Career and Student Success Center at the University of Southern Maine. The funds to cover these costs are to be provided by 2018 Facilities and Infrastructure Improvement Bonds.

This request is pursuant to Board Policy 701, which requires projects with a total cost of more than \$500,000 to be considered by the Board of Trustees or its Finance, Facilities and Technology Committee. The request is also pursuant to Trustee Policy prohibiting net increases in space without Trustee authorization. In this case, the request is to approve and to forward this matter to the Consent Agenda for the January 27-28, 2019 Board of Trustees meeting.

USM allocated \$19 million from the 2018 Facilities and Infrastructure Improvement Bonds to build a new Career and Student Success Center on the Portland Campus. This current request is for approval to expend only the amount necessary to begin formal design and bid preparation work.

The Portland Campus, where the majority of USM students attend their classes, is approximately 34 acres with 1.25 million gross square feet of facilities. The current student center known as Woodbury Campus Center is approximately 28,000 square feet and was built in 1946. The recorded Sightlines Net Asset Value (NAV) of the building is 48%. It houses multiple student organizations, dining services, an art gallery, the bookstore, and the Dean of Students offices. The plan would be to demolish the current student center after the new Career and Student Success Center is occupied, making this a renovation through replacement project.

The exact size, design, programming, timeline, operating costs and other details of the new facility remain to be determined. However, the USM master plan is built around this building being the heart of campus with a new quad being built directly in front of the building.

USM reported to Trustees in November 2016 and continues to determine that the student experience on the Portland campus would be improved with the presence of student housing. USM previously anticipated beginning with the construction of a residence hall that includes a new student center. USM forecasted the project would include the demolition of the Dickey Wood residence hall in Gorham and the further demolition of the existing Woodbury Student Center in Portland. USM indicated the square footage of the combined new residence hall and student center would not exceed the combined square footage of Dickey Wood and Woodbury without explicit Board of Trustee approval. USM further indicated at the time that construction would not begin on the new building until the demolition of these buildings was funded and respective contracts executed. Occupancy was not to occur until demolition was complete.

At this time and in the context of prior discussions of this matter with Trustees, whether the new student center facility itself will be larger, smaller or approximately of the same size as Woodbury, and therefore the extent to which the new construction is off-set by the demolition of the existing facility, will be made clear in future requests to proceed with the project as that information becomes more clear.

The University may use a traditional design/bid/build construction method for this project. So-called alternative delivery methods are permitted under University practices and will be considered.

The funding for this phase of work will be the 2018 Legislative Bond that passed in November.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 27-28, 2019 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee for the expenditure of up to \$1 million to begin the Schematic Design of the Career and Student Success Center at the University of Southern Maine with funding from the 2018 Facilities and Infrastructure Improvement Bonds.





AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: State of IT 2018 Report
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION: X**

BOARD ACTION:

4. OUTCOME:

BOARD POLICY:

5. BACKGROUND:

Dr. David Demers, Chief Information Officer, will share highlights from the State of IT 2018 Report.

Attachments: State of IT 2018 Report State of IT 2018 Presentation

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
MIP Composite	317,592,718	100.0	100.0	0.8	-3.4	-3.3	-2.0	6.3	5.1	3.6	6.3	8.1
Allocation Index				1.0	-2.2	-2.2	-1.0	7.3	6.0	4.4	6.6	7.7
Policy Index				1.0	-2.0	-1.8	-0.5	8.0	6.7	4.8	6.9	7.9
Total Domestic Large Cap	60,640,753	19.1	16.0	2.0	2.4	5.1	6.2	14.2	12.1	11.1	14.1	14.8
S&P 500				2.0	2.4	5.1	6.3	14.3	12.2	11.1	14.4	14.3
SSgA S&P 500	60,640,753	19.1	16.0	2.0	2.4	5.1	6.2	14.2	12.1	11.1	14.3	14.3
S&P 500				2.0	2.4	5.1	6.3	14.3	12.2	11.1	14.4	14.3
Total Domestic Small/Mid Cap	19,763,570	6.2	6.0	1.3	-7.0	-0.4	0.8	10.5	9.8	7.5	12.9	14.5
Russell 2500				1.9	-4.2	1.1	1.4	9.7	10.0	8.2	12.9	15.1
Westfield Capital	9,273,447	2.9	3.0	0.9	-7.0	2.1	3.7	15.7	10.6	8.4	13.1	16.0
Russell 2500 Growth				1.9	-3.9	3.8	4.1	14.2	11.0	9.2	13.6	16.7
DFA	10,490,123	3.3	3.0	1.6	-7.0	-3.6	-3.0	4.2	8.0	6.0	12.2	
Russell 2000 Value				1.6	-6.0	-0.9	-1.8	5.5	10.1	6.7	11.9	12.5
Total International Equity (including emerging markets)	71,489,698	22.5	23.0	1.4	-9.3	-12.2	-10.3	6.6	3.4	1.1	4.9	7.9
MSCI EAFE				-0.1	-6.8	-9.4	-7.9	8.2	4.1	1.8	6.4	7.5
Morgan Stanley	19,836,355	6.2	6.3	0.5	-7.4	-9.0	-8.2	8.6	3.0	1.4	5.9	6.9
Globeflex	18,800,442	5.9	6.3	-2.7	-12.5	-13.3	-11.2	7.3	3.6	2.3	6.6	7.8
MSCI EAFE				-0.1	-6.8	-9.4	-7.9	8.2	4.1	1.8	6.4	7.5
Kabouter International Opportunities Offshore Fund II	10,859,836	3.4	3.5	2.0	-12.1	-12.6	-11.9					
MSCI EAFE Small Cap				-0.7	-11.0	-12.2	-9.9	9.6	6.3	4.9	9.5	12.0
Emerging Markets Equity	21,993,065	6.9	7.0	5.6	-6.3	-14.3	-11.0	3.6	3.5	-0.8	1.6	
MSCI Emerging Markets				4.1	-6.0	-12.2	-9.1	9.9	9.4	1.9	3.5	9.1
Aberdeen Emerging Mrkts	11,170,376	3.5	3.5	5.9	-2.6	-13.4	-9.3	6.7	7.2	0.8	2.8	
MSCI Emerging Markets				4.1	-6.0	-12.2	-9.1	9.9	9.4	1.9	3.5	9.1
Mondrian EM Small Cap	10,822,689	3.4	3.5	5.4	-9.9	-15.5	-12.8	0.2	-0.1			
MSCI Emerging Markets Small Cap				5.5	-9.6	-17.3	-14.2	5.1	4.3	1.2	3.8	11.4
Total Fixed Income	70,435,027	22.2	21.0	0.1	-0.4	-0.3	0.4	2.6	3.0	2.7	3.8	5.7
BBgBarc US Aggregate TR				0.6	-0.2	-1.8	-1.3	0.9	1.3	2.0	2.0	3.7
Commonfund	18,073,651	5.7	5.0	0.5	0.1	-0.8	-0.3	2.2	2.3	2.6	3.2	5.4
BBgBarc US Aggregate TR				0.6	-0.2	-1.8	-1.3	0.9	1.3	2.0	2.0	3.7
Vanguard Inflation-Protected Securities	26,309,259	8.3	8.0	0.4	-1.8	-1.9	-1.0	0.5				
BBgBarc US TIPS TR				0.5	-1.8	-1.8	-0.9	0.5	1.7	1.3	0.8	4.1
Blackrock Strategic Income Opportunities	10,079,382	3.2	3.0	-0.2	-0.1							
3-Month Libor Total Return USD				0.2	1.0	2.1	2.3	1.8	1.4	1.0	0.8	0.7

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Bain Capital Senior Loan Fund	14,373,683	4.5	5.0	-0.7								
Credit Suisse Leveraged Loans				-0.8	1.1	3.5	3.9	4.5	5.5	3.9	5.0	8.1
Guggenheim US Bank Loans	1,599,052	0.5										
Total GAA	71,551,447	22.5	23.0	0.7	-3.5	-4.8	-4.0	3.7	3.0	1.5	3.6	6.3
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				1.1	-1.9	-2.6	-1.5	7.8	6.4	4.3	6.5	8.1
GMO Global Absolute Return	24,527,831	7.7	7.7	0.8	-2.9	-5.0	-3.5	4.4	3.4	1.8	4.1	5.0
Blended Index				0.4	-0.1	-1.0	-0.5	2.5	3.2	3.0	3.5	6.0
Wellington	22,553,789	7.1	7.7	0.8	-7.6	-9.9	-9.1	3.4	3.2	2.6	4.7	7.2
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				1.1	-1.9	-2.6	-1.5	7.8	6.4	4.3	6.5	8.1
Newton Global Real Return	24,469,827	7.7	7.7	0.6	0.1	0.7	0.6	3.0				
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg				1.0	-1.9	-2.7	-1.6	7.3	6.1	4.0	6.1	7.7
Total Hedge Funds	17,889,986	5.6	6.0	-1.9	-6.7	-3.9	-2.7	1.1	1.3	0.7	2.0	2.8
HFRI Fund of Funds Composite Index				-0.7	-3.3	-2.6	-1.7	2.9	1.7	2.0	3.1	3.1
Lighthouse	17,889,986	5.6	6.0	-1.9	-6.7	-1.9	-0.9	2.8	2.4			
Credit Suisse Long Shrt Eqt USD				0.2	-2.8	-2.2	-1.4	5.8	2.3	3.6	5.7	6.2
Total Real Assets	2,355,663	0.7	3.0	0.0	-0.7	-1.2	3.0	-2.2	1.5	3.0	4.2	
NCREIF Timberland Index				0.0	1.0	2.4	4.0	3.6	3.6	6.0	6.0	4.0
John Hancock Timber Fund	2,355,663	0.7	3.0	0.0	-0.7	-1.2	3.0	-2.2	1.5	3.0	4.2	0.3
NCREIF Timberland Index				0.0	1.0	2.4	4.0	3.6	3.6	6.0	6.0	4.0
Private Equity	2,082,406	0.7	2.0	0.0	5.2	9.1	23.2	20.2	13.2			
Landmark Equity Partners XV	2,082,406	0.7	2.0	0.0	5.2	9.1	23.2	20.2	13.2			
Cambridge Associates US All PE (1 Qtr Lag)				0.0	5.8	14.2	18.7	17.8	12.7	13.8	13.1	10.8
Total Cash	1,384,167	0.4	0.0									
Distribution Account	1,384,167	0.4	0.0	0.2	0.7	1.4	1.5	1.0	0.7	0.4	0.3	0.3
91 Day T-Bills				0.2	0.9	1.7	1.8	1.3	1.0	0.6	0.4	0.3

Notes:

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+ Returns are net of manager fees John Hancock Timber market value as of 09/30/18 Landmark market value estimated as of 11/30/18

Cash account includes \$1,387 currently being held in the MetWest account and \$1,120 being held in the TCW account

Guggenheim market value is a holdback.

CASH FLOW SUMMARY

			Month E	nding November 30	, 2018		
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Aberdeen Emerging Mrkts	\$10,547,136	\$0	\$0	\$0	-\$10,240	\$623,240	\$11,170,376
Bain Capital Senior Loan Fund	\$14,480,914	\$0	\$0	\$0	-\$5,951	-\$107,231	\$14,373,683
Blackrock Strategic Income Opportunities	\$10,104,367	\$0	\$0	\$0	-\$4,452	-\$24,986	\$10,079,382
Commonfund	\$17,980,652	\$0	\$0	\$0	-\$2,410	\$92,999	\$18,073,651
DFA	\$10,327,247	\$0	\$0	\$0	-\$3,584	\$162,876	\$10,490,123
Distribution Account	\$2,053,681	\$138,379	-\$810,060	-\$671,681	\$0	\$2,167	\$1,384,167
Globeflex	\$19,323,408	\$0	\$0	\$0	-\$11,750	-\$522,966	\$18,800,442
GMO Global Absolute Return	\$24,317,296	\$0	\$0	\$0	-\$20,440	\$210,535	\$24,527,831
Guggenheim US Bank Loans	\$1,599,052	\$0	\$0	\$0	-\$666	\$0	\$1,599,052
John Hancock Timber Fund	\$2,355,663	\$0	\$0	\$0	\$0	\$0	\$2,355,663
Kabouter International Opportunities Offshore Fund II	\$10,643,057	\$0	\$0	\$0	-\$9,050	\$216,779	\$10,859,836
Landmark Equity Partners XV	\$2,211,786	\$0	-\$129,380	-\$129,380	\$0	\$0	\$2,082,406
Lighthouse	\$18,237,610	\$0	\$0	\$0	\$0	-\$347,624	\$17,889,986
Mondrian EM Small Cap	\$9,513,129	\$750,000	\$0	\$750,000	-\$13,528	\$559,560	\$10,822,689
Morgan Stanley	\$19,739,177	\$0	\$0	\$0	-\$15,704	\$97,177	\$19,836,355
Newton Global Real Return	\$24,317,735	\$0	\$0	\$0	-\$16,313	\$152,091	\$24,469,827
SSgA S&P 500	\$59,422,562	\$0	\$0	\$0	-\$2,438	\$1,218,190	\$60,640,753
Vanguard Inflation-Protected Securities	\$26,204,546	\$0	\$0	\$0	-\$1,535	\$104,713	\$26,309,259
Wellington	\$22,397,365	\$0	-\$39,315	-\$39,315	-\$20,674	\$195,739	\$22,553,789
Westfield Capital	\$9,184,640	\$0	\$0	\$0	-\$5,796	\$88,807	\$9,273,447
Total	\$314,961,025	\$888,379	-\$978,755	-\$90,376	-\$144,531	\$2,722,068	\$317,592,718



FEE SCHEDULE

Account	Fee Schedule	Market Value As of 11/30/2018	% of Portfolio	Est. Minimum Annual Fee (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Total Domestic Large Cap	No Fee	\$60,640,753	19.1%			
SSgA S&P 500	0.05% of First 50.0 Mil, 0.04% of Next 50.0 Mil, 0.02% Thereafter	\$60,640,753	19.1%		\$29,256	0.05%
Total Domestic Small/Mid Cap	No Fee	\$19,763,570	6.2%			
Westfield Capital	0.75% of First 10.0 Mil, 0.05% Thereafter	\$9,273,447	2.9%		\$69,551	0.75%
DFA	0.41% of Assets	\$10,490,123	3.3%		\$43,010	0.41%
Total International Equity (including emerging markets)	No Fee	\$71,489,698	22.5%		-	-
Morgan Stanley	0.95% of Assets	\$19,836,355	6.2%		\$188,445	0.95%
Globeflex	0.75% of First 50.0 Mil, 0.70% of Next 50.0 Mil, 0.65% Thereafter	\$18,800,442	5.9%		\$141,003	0.75%
Kabouter International Opportunities Offshore Fund II	1.00% of Assets	\$10,859,836	3.4%		\$108,598	1.00%
Emerging Markets Equity	No Fee	\$21,993,065	6.9%			
Aberdeen Emerging Mrkts	1.10% of Assets	\$11,170,376	3.5%		\$122,874	1.10%
Mondrian EM Small Cap	1.50% of Assets	\$10,822,689	3.4%		\$162,340	1.50%
Total Fixed Income	No Fee	\$70,435,027	22.2%			
Commonfund	0.16% of Assets	\$18,073,651	5.7%		\$28,918	0.16%
Vanguard Inflation-Protected Securities	0.07% of Assets	\$26,309,259	8.3%		\$18,416	0.07%
Blackrock Strategic Income Opportunities	0.53% of Assets	\$10,079,382	3.2%		\$53,421	0.53%
Bain Capital Senior Loan Fund	0.50% of Assets	\$14,373,683	4.5%		\$71,868	0.50%



FEE SCHEDULE

Account	Fee Schedule	Market Value As of 11/30/2018	% of Portfolio	Est. Minimum Annual Fee (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Guggenheim US Bank Loans	0.50% of Assets	\$1,599,052	0.5%		\$7,995	0.50%
Total GAA	No Fee	\$71,551,447	22.5%			
GMO Global Absolute Return	1.00% of First 100.0 Mil, 0.90% Thereafter	\$24,527,831	7.7%		\$245,278	1.00%
Wellington	1.10% of Assets	\$22,553,789	7.1%		\$248,092	1.10%
Newton Global Real Return	0.80% of Assets	\$24,469,827	7.7%		\$195,759	0.80%
Total Hedge Funds	No Fee	\$17,889,986	5.6%			-
Lighthouse	1.15% of Assets	\$17,889,986	5.6%		\$205,735	1.15%
Total Real Assets	No Fee	\$2,355,663	0.7%			-
John Hancock Timber Fund	No Fee	\$2,355,663	0.7%			
Private Equity	No Fee	\$2,082,406	0.7%			
Landmark Equity Partners XV	No Fee	\$2,082,406	0.7%			
Total Cash	No Fee	\$1,384,167	0.4%			
Distribution Account	No Fee	\$1,384,167	0.4%			
Investment Management Fee		\$317,592,718	100.0%		\$1,940,560	0.61%



University of Maine System Pension Plan

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Pension Composite	26,922,115	100.0	100.0	0.6	-2.1	-1.8	-1.2	4.5	3.9	3.1	5.7	6.9
Allocation Index				0.8	-1.5	-1.3	-0.3	6.0	5.1	4.2	6.4	7.3
Policy Index				0.8	-1.4	-1.4	-0.4	5.9	5.3	4.3	6.5	7.6
Total Domestic Large Cap	2,169,414	8.1	8.0	2.0	2.4	5.1	6.3	14.3	12.1	11.1	14.2	13.3
S&P 500				2.0	2.4	5.1	6.3	14.3	12.2	11.1	14.4	14.3
Vanguard S&P 500 Index	2,169,414	8.1	8.0	2.0	2.4	5.1	6.3	14.3	12.1	11.1		
S&P 500				2.0	2.4	5.1	6.3	14.3	12.2	11.1	14.4	14.3
Total Small Cap Composite	970,382	3.6	4.0	1.6	-6.2	1.0	0.5	9.1	10.1	7.3	12.3	
Russell 2000				1.6	-6.2	1.0	0.6	9.1	10.1	7.5	12.6	14.0
SSgA R2000 Index Fund Non Lending	970,382	3.6	4.0	1.6	-6.2	1.0	0.5	9.1	10.1	7.3	12.4	
Russell 2000				1.6	-6.2	1.0	0.6	9.1	10.1	7.5	12.6	14.0
Total International Equity (including emerging markets)	2,552,068	9.5	10.0	1.9	-8.1	-10.9	-9.4	5.9	2.2	0.4	4.2	5.7
MSCI EAFE				-0.1	-6.8	-9.4	-7.9	8.2	4.1	1.8	6.4	7.5
Morgan Stanley Int'l	1,784,269	6.6	7.0	0.5	-7.4	-9.0	-8.1	8.6	3.2	1.5	6.0	7.0
MSCI EAFE				-0.1	-6.8	-9.4	-7.9	8.2	4.1	1.8	6.4	7.5
Emerging Markets Equity	767,799	2.9	3.0	5.4	-9.9	-15.4	-12.7	0.2	-0.1	-2.4		
MSCI Emerging Markets				4.1	-6.0	-12.2	-9.1	9.9	9.4	1.9	3.5	9.1
Mondrian EM Small Cap	767,799	2.9	3.0	5.4	-9.9	-15.4	-12.7	0.2	-0.1			
MSCI Emerging Markets Small Cap				5.5	-9.6	-17.3	-14.2	5.1	4.3	1.2	3.8	11.4
Total Fixed Income	9,947,445	36.9	35.0	0.3	-0.3	-1.1	-0.6	1.7	2.0	2.0	3.1	4.9
BBgBarc US Aggregate TR				0.6	-0.2	-1.8	-1.3	0.9	1.3	2.0	2.0	3.7
Vanguard Total Bond Market Index	5,822,215	21.6	20.0	0.5	-0.2	-1.8	-1.4	1.0	1.3			
BBgBarc US Aggregate TR				0.6	-0.2	-1.8	-1.3	0.9	1.3	2.0	2.0	3.7
Vanguard Inflation-Protected Securities	1,833,082	6.8	7.0	0.4	-1.8	-1.9	-1.0					
BBgBarc US TIPS TR				0.5	-1.8	-1.8	-0.9	0.5	1.7	1.3	0.8	4.1
BlackRock Strategic Income Opportunities	748,409	2.8	3.0	-0.2	-0.1							
3-Month Libor Total Return USD				0.2	1.0	2.1	2.3	1.8	1.4	1.0	0.8	0.7
Bain Capital Senior Loan Fund	1,388,424	5.2	5.0	-0.7								
Credit Suisse Leveraged Loans				-0.8	1.1	3.5	3.9	4.5	5.5	3.9	5.0	8.1
Guggenheim US Bank Loans	155,315	0.6										



University of Maine System Pension Plan

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total GAA	7,535,546	28.0	27.5	0.7	-3.7	-4.5	-4.2	3.4	2.9	1.5	3.6	6.7
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				1.1	-1.9	-2.6	-1.5	7.8	6.4	4.3	6.5	8.1
Wellington	3,559,046	13.2	13.8	0.8	-7.6	-9.7	-9.0	3.4	3.3	2.7	4.8	7.3
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				1.1	-1.9	-2.6	-1.5	7.8	6.4	4.3	6.5	8.1
Newton Global Real Return	3,976,500	14.8	13.8	0.6	0.1	0.7	0.6	3.1				
60% MSCI ACWI (Net) / 40% FTSE WGBI				1.1	-2.1	-2.7	-1.7	7.3	6.1	3.8	5.7	7.3
Total Alternative Investments	1,532,803	5.7	4.5	-1.9	-6.7	-3.9	-2.7	1.1	1.2	1.3	2.4	3.1
HFRI Fund of Funds Composite Index				-0.7	-3.3	-2.6	-1.7	2.9	1.7	2.0	3.1	3.1
Lighthouse	1,532,803	5.7	4.5	-1.9	-6.7	-1.9	-0.9	2.8	2.4			
Credit Suisse Long Shrt Eqt USD				0.2	-2.8	-2.2	-1.4	5.8	2.3	3.6	5.7	6.2
Total Real Assets	2,208,465	8.2	8.0									
Principal	2,208,465	8.2	8.0	0.3	3.1	7.4	7.8	8.0	8.6	10.4	10.9	5.6
NCREIF ODCE				0.0	2.1	6.5	8.7	8.2	8.8	10.7	11.2	5.6
Total Cash	5,991	0.0	3.0									
Distribution Account	5,991	0.0	3.0	0.2	0.8	1.5	1.6	1.0	0.7	0.4	0.3	0.3
91 Day T-Bills				0.2	0.9	1.7	1.8	1.3	1.0	0.6	0.4	0.3

Notes:

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate, 30% BC U.S. TIPS 1-10YR, 10% S&P 500, 10% BC High Yield, 10% JPM EMBI+

Returns are net of manager fees



University of Maine System Operating Fund

TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Operating Funds Composite	289,482,590	100.0	100.0	0.2	-0.1	0.2	2.6	2.6	1.7	2.5	3.2
Allocation Index				0.3	0.2	0.5	2.9	2.5	2.0	2.5	
Liquidity Pool Composite	88,105,294	30.4	25.0	0.2	0.7	1.4	1.2	0.9	0.6	0.5	0.5
State Pool	60,815,896	21.0		0.2	0.7	1.4	1.2	1.0	0.7	0.6	0.6
BOA General Fund	1,512,297	0.5		0.0	0.3	0.5	0.3	0.2	0.1	0.1	
Federated Gov't Obligations	17,914,788	6.2		0.2	0.8	1.5	1.1				
JP Morgan US Gov't Money Market Fund	7,862,313	2.7		0.2	0.8	1.5	1.1				
FTSE T-Bill 3 Months TR				0.2	0.9	1.7	1.3	0.9	0.6	0.4	0.3
Income Pool Composite	136,154,698	47.0	50.0	0.1	0.3	0.2	1.4	1.8	1.6	2.5	4.5
Income Research + Management	74,880,319	25.9	26.7	0.2	0.7	0.7	0.9	1.0	0.9		
BBgBarc US Govt/Credit 1-3 Yr. TR				0.3	0.7	0.8	0.9	0.9	0.8	0.9	1.6
BlackRock Strategic Income Opportunities	17,298,835	6.0	6.7	-0.2	-0.1	-0.6	2.5	2.4			
3-Month Libor Total Return USD				0.2	1.0	2.1	1.8	1.4	1.0	0.8	0.7
Loomis Sayles Bank Loans	18,802,425	6.5	6.7	-0.9	0.6	2.0	3.0	4.0	3.0	3.9	6.8
Loomis Bank Loans Custom Index				-0.9	0.6	2.2	3.2	4.2	3.6	4.7	8.5
Vanguard Total Bond Market Instl' Fund	12,703,811	4.4	5.0	0.5	-0.2	-1.8	1.0	1.3	2.0	2.0	
BBgBarc US Aggregate TR				0.6	-0.2	-1.8	0.9	1.3	2.0	2.0	3.7
Vanguard Inflation-Protected Securities	12,469,308	4.3	5.0	0.4	-1.8	-1.9					
BBgBarc US TIPS TR				0.5	-1.8	-1.8	0.5	1.7	1.3	0.8	4.1
Total Return Pool Composite	65,222,598	22.5	25.0	0.4	-2.5	-2.1	5.9	5.5	3.2	4.9	6.4
Lighthouse	13,829,331	4.8	5.0	-1.9	-6.7	-1.9	2.8	2.4			
Credit Suisse Long Shrt Eqt USD				0.2	-2.8	-2.2	5.8	2.3	3.6	5.7	6.2
Newton Global Real Return	17,220,048	5.9	6.3	0.6	0.1	0.7	3.1				
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg				1.0	-1.9	-2.7	7.3	6.1	4.0	6.1	7.7
PIMCO All Asset	16,771,689	5.8	6.3	0.9	-1.9	-4.0	5.6	6.9	2.7	4.2	7.6
Blended Index				0.4	-0.1	-1.0	2.5	3.2	3.0	3.5	6.0
Vanguard Total World Stock Index	17,401,530	6.0	7.5	1.7	-2.5	-2.6	11.1	8.8	6.5		
FTSE Global All Cap Index				1.5	-2.6	-2.6	10.9	7.8	4.9	8.0	9.2



University of Maine System Operating Fund TOTAL PLAN PERFORMANCE

Notes:

Returns are net of manager fees.

The inception date for the allocation index is 07/01/2009

Fiscal YTD begins 7/1

Blended Index: 40% BC Aggregate / 30% BC U.S. TIPS 1-10YR / 10% S&P 500 / 10% BC High Yield / 10% JPM EMBI+

Loomis Bank Loans Custom Index blends performance of "S&P/LSTA Leveraged Loan Index" before 9/1/2014 and "S&P/LSTA Leveraged BB Loan Index" after 9/1/2014.

Composite excludes external loans.

Blackrock SIO changed its share class in May 2018 to BSIKX



Office of the Dean and Director

College of Natural Sciences, Forestry, and Agriculture Maine Agricultural and Forest Experiment Station



JOK

1-11-19

5782 Winslow Hall Orono, Maine 04469-5782 Tel: 207-581-3202 Fax: 207-581-3207 www.umaine.edu

January 9, 2019

James H. Page, Chancellor University of Maine System 267 Estabrooke Hall Orono, ME 04469

Dear Chancellor Page:

As you know, the Maine Legislature created the Board of Agriculture to advise the chancellor of the University of Maine System and president of the University of Maine on research and extension education needs related to Maine agriculture. The legislation (see attached) forming the Board of Agriculture stipulates that members of the Board serve five-year terms, and the members have to be reappointed or replaced at the end of their terms.

The legislation also stipulates that two research faculty members associated with agricultural research at the University of Maine serve on the Board of Agriculture, with the approval of the Board of Trustees of the University of Maine System. Currently, Dr. M. Susan Erich holds seat number 18, one of the Board of Trustees appointments. Her term expires January 29, 2019. We recommend Dr. Robert Causey, Interim Director of the School of Food and Agriculture and Associate Professor of Animal and Veterinary Sciences, to succeed Dr. Erich. Dr. Causey's vita is enclosed.

Thank you for your assistance with facilitating the Board of Trustees' consideration of this appointment. If the Board of Trustees approves the appointment, please inform me and we will notify Dr. Causey. If you have any questions, please do not hesitate to contact me.

Sincerely,

Franker a Securit

Frederick A. Servello Dean and Director

Attachments (2)

cc: Joan Ferrini-Mundy, President Jeffrey Hecker, Executive Vice President for Academic Affairs & Provost Lisa Phelps, University of Maine Cooperative Extension Interim Director Mark Hutton, Associate Dean of Research Assistant Director of Research & Clerk to the Board of Agriculture John Dieffenbacher-Krall Dr. Robert Causey, Interim Director of the School of Food and Agriculture

> MAINE'S LAND GRANT AND SEA GRANT UNIVERSITY A Member of the University of Maine System

Curriculum Vitae

Name:

Robert C. Causey

Current Position:

Interim Director and Associate Professor, School of Food and Agriculture - Animal and Veterinary Sciences, University of Maine; Equine Program Coordinator, University of Maine

Education/Professional Qualifications:

BS, University of Minnesota, St Paul MN, 1985, Animal Science DVM, University of Minnesota, St Paul MN, 1989, Veterinary Degree Member of the Royal College of Veterinary Surgeons, 1992 PhD, Louisiana State University, Baton Rouge LA, 1995, Veterinary Microbiology Diplomate of the American College of Theriogenologists, 1996

Previous Positions:

Residency Theriogenology, Veterinary Clin Sci, Louisiana State University 1989 - 1992

Primary Theriogenology case responsibility by species: Reproductive management of brood mare and stallion 40% Beef and dairy reproductive herd health 40% Canine and feline breeding management 10% Obstetrics (bovine, equine, canine) 10%

Large animal emergency duty, by species: Equine (colics, traumatic injuries, obstetrics etc) 75% Bovine (obstetrics, preputial injuries etc) 25%

Other clinical experience: Veterinary services at local 4-H livestock show of LSU and the Central South

Research experience: Formulation of Research Grants Development of a PCR based assay to detect IBR virus SDS PAGE, western blotting and PCR of equine streptococcal isolates

Teaching experience:

Lectures delivered to third year veterinary students:

-Canine breeding management

-Beef and dairy reproductive herd health

-Estrus detection in cattle

-Sheep and goat reproduction

-Reproduction in the male

Instructor in laboratory portion of third year theriogenology course.

Supervision and instruction of fourth year veterinary students during clinical theriogenology rotation.

1

Research Assistant, Veterinary Microbiology, Louisiana State University 1992 - 1995

Doctoral research concerning the virulence properties of equine uterine isolates of Streptococcus zooepidemicus. Department of Veterinary Microbiology and Parasitology, Louisiana State University, Baton Rouge, LA. August 1989 to December 1995.

Research experience: Formulation of intramural research grants. Development of a simple assay to determine the bactericidal properties of blood of a given horse to specific isolates of *Streptococcus zooepidemicus*; analysis of the roles of antibody, white cells and complement in phagocytosis of this organism; direct measurement of phagocytosis by light microscopy, and evaluation of intracellular killing of bacteria by fluorescent microscopy with acridine orange; ultrastructural morphology of *Streptococcus zooepidemicus* by electron microscopy; assessment of the protective effect of circulating bactericidal responses in resistance to uterine infection; a preliminary study of mucus production at the equine endometrial surface, and the role of mucus in promoting clearance of carbon powder from the uterus; scanning electron microscopy of the equine endometrium; genetic screening of isolates by polymerase chain reaction, antigenic analysis by polyacrylamide gel electrophoresis and western blotting.

Teaching Experience:

Lectures delivered in graduate level classes: -Streptococcal M protein (Bacterial Pathogenesis) -Toxins and Toxoids (Immune Response to Infection)

Lectures to Veterinary Students: -Interpretation of bacterial cultures (Bacteriology) -Relative Risk and Odds Ratios (Epidemiology)

Primary case responsibility for equine reproductive cases in house and in the field. Large caseload referred by Ocala practitioners, including breeding management of problem mares, embryo transfer, chilled and frozen semen breeding, obstetrics, stallion collection for freezing, evaluation, and transport of chilled semen. Telephone consultation with referring veterinarians. Clinical instruction of reproduction residents and veterinary students. Endometrial biopsy epicrisis for referring veterinarians. Lecturing in agricultural extension programs in equine reproduction, and undergraduate labs in equine reproduction, infectious diseases and vaccination.

Lectures delivered in veterinary curriculum (course title in parentheses):

-Reproductive biology of the mare (equine repro special elective)

-Reproductive biology of the stallion (equine repro special elective)

-Drug use in equine reproduction (equine repro special elective)

-Ultrasonography (equine repro special elective)

-Problems of pregnancy (equine repro special elective)

-Clinical aspects of swine reproduction (theriogenology)

-Reproductive patterns of the horse (veterinary reproduction) -Reproductive patterns of swine (veterinary reproduction) Responsible for all equine lectures and labs in 1997 theriogenology course.

Research efforts included successful application for intramural funding to compare endometrial mucus production in normal mares and mares with delay in uterine clearance. Results subsequently presented at Seventh ISER in Pretoria and published.

Judge at 1997 4-H State Congress, Gainesville, Florida. Advisor for two veterinary students in their senior research projects.

Assistant Professor, Animal and Veterinary Sciences, University of Maine...... 1998 - 2006

Principal Research Efforts:

-Collaboration with the University of Kentucky Gluck Center for Equine Research to test uterine mucosal antibody responses to intranasal vaccination of horses with a live *Salmonella typhimurium* mutant expressing *Streptococcus zooepidemicus* antigens. This project provided the basis of a successful \$75,000 USDA-CSREES seed grant application.

-Collaboration with Rutgers University (Ken McKeever) to study the effects of exercise on the pregnant mare.

-Collaborator with Dr Sarah Lyle and Dale Paccamonti at Louisiana State University College of Veterinary Medicine looking at inflammatory mediators in streptococcal placentitis of the mare. We provided streptococcal inocula for 3 experimental infected groups.

-Principal investigator for the Maine Agricultural and Forest Exeriment Station Project: "Epithelial-Bacterial Interactions in the Equine Uterus" with the following research objectives:

-Study factors affecting endometrial ciliary beating

-Determine the impact of medications on endometrial ciliary beating

-Anatomic study of the mucociliary apparatus of the equine uterus

-Confirm the role of specific antibody in streptococcal phagocytosis

-Determine the basis for opsonic variation of S zooepidemicus

Diagnostic Services:

Diagnostic Laboratory duties include necropsy, gross and histologic diagnosis of sheep, cattle, horses, dogs, cats and wildlife. Epicrisis of Microbiological and Histological samples. Telephone consultations with agricultural producers, pet owners, and local veterinarians. Collaboration with state and federal veterinarians to strengthen Maine's animal health and biosecurity.

Clinical Activities:

Clinical efforts include offering equine reproductive services to local horse owners on a referral basis, including mare breeding management, pregnancy diagnosis, stallion breeding soundness evaluation, telephone consultations with equine veterinarians and horse producers, semen collection and breeding management of the university owned Standardbred stallion "Night Country." Breeding, foaling and reproductive health management of the University research horses. Canine breeding management and pregnancy diagnosis. Sitting veterinarian on the Institutional Animal Care and Use Committee.

Teaching Responsibilities:

Coordinator of the University of Maine Equine program including the development of a minor in Equine Studies for undergraduate students, a certificate in Equine Studies for adult education, and development of a major concentration in Equine Business Management in the Department of Rural Economic Policy.

Instructor for the following preexisting classes:

NFA 117 Issues and Opportunities 1 cr.

AVS 249 Laboratory Animal Technology 3 cr.

Introduced the following classes to the AVS curriculum, recruiting instructors from other faculty and equine industry as necessary.

AVS 253 Principles of Western Riding 3 cr.

AVS 303 Equine Management Cooperative 4 cr.

AVS 433 Equine Exercise Physiology 3 cr.

AVS 353 Equine Reproduction 3 cr.

AVS 393 Training the Standardbred Horse 3 cr.

AVS 368 Independent Study - Advanced Equine Repro 4 cr.

AVS 343 Draft Horses in Forestry and Agriculture 2 cr.

AVS 397 Equine Internship 4 cr.

AVS 243 Centered Riding Principles of Equitation 3 cr.

Advisor to class of 2002 in AVS curriculum (35 incoming students) and class of 2006 in AVS curriculum (45 incoming students)

Advisor for the following Senior Student Research Projects (1998-2005).

Design of the Planned UMaine Livestock Arena. (Vachon) Reduction of Traumatic Injuries in stables. (Card) Heritability of Speed in Harness Race Horses. (Wormwood) Factors Affecting Hoof Strength and Resilience. (Mantooth) Effect of Exercise on the Pregnant Mare and her Fetus. (Oliver) Factors Affecting Equine Endometrial Ciliary Beating. (Sweeny) Comparing bacteria of Equine Nose and Human Throat. (Haley) Pulsed Field Gel Electrophoresis of S zooepidemicus. (Woolev) SDS PAGE of S zooepidemicus. (Prosser) Western Blotting of S zooepidemicus. (Pelletier) The Effect of Oxytocin on Endometrial Ciliary Beating.(Green) Instructional Materials for Equine Semen Collection. (Curtis) Physical exam of S typhimurium vaccinated horses (Guilmain) Shedding of S typhimurium by vaccinated horses. (Grotti) Expression of SzP MB9 by S typhimurium vaccine. (Susi) Bactericidal Responses to S zooepidemicus. (Estabrooke) Serum IgG responses to S zooepidemicus (O'Connor) Effect of Exercise on Pregnant Mare and Fetus (Finucane) PFGE of S zooepidemicus (Hanson)

Position Changes of Fetus During Equine Pregnancy (Graef) Immune Response of S typhimurium vaccinated horses (Hebert) Prevention of abortion by intranasal vaccination (Farrington) Intranasal vaccination to protect respiratory tract (Benevento) Control of uterine infection in mares (Walker) Clinical benefit of a therapeutic riding program (Harmon) PFGE of S zooepidemicus (Finson) Laboratory Assessment of equine synovial fluid (Vachon)

Program development and public service;

Secured \$8000 from the Maine Harness Racing Promotions Board to sponsor a University of Maine Harness Race horse to compete at Bangor Raceway and the Maine fairs. Attended student organization and equine industry meetings. Organized local trainers and equine industry professionals to provide assistance with the horse program and in funding for the new livestock arena. Coordinator for Equine Judging competition for Maine State FFA convention May 1999 - 2005. Actively solicited the Maine Harness Racing community and the Standardbred Pleasure Horse Organization to donate horses for research and retraining. Over \$40,000 received for sale of retrained pleasure horses, all having been used on research projects. Proceeds from sales support equine teaching and research programs.

Associate Professor, Animal and Veterinary Sciences, University of Maine ... 2007 - to date

Teaching:

- Delivery and coordination of all on-farm equine instruction at the University of Maine, including student safety, equine welfare, and supervision of equine trainer.

- Since 2010 responsible for coordinating and assisting students in year round care of teaching herd of 15 horses.

- Successful integration of equine courses into required curriculum for undergraduate students in the AVS and pre-vet majors.

- Introduced learning objectives on musculoskeletal anatomy, biomechanics, lameness examination, infectious diseases, and colic.

- Adapted delivery of class materials to Google Drive, using Google Forms for class quizzes.

- Advisor to approximately 40 undergraduate advisees each year.

- Advisor for 5 or more senior projects each year.

- Since 2008 supervised students in construction of a PVC horse skeleton to illustrate the weight bearing role of soft tissue structures in the horse, with model detail including the navicular bone, coffin joint, sacroiliac joint, reciprocal apparatus, suspension of neck and head, and relaxation of sacrosciatic ligament.

Principal Research Efforts:

- Testing at UMaine of a prototype *Salmonella* vector intranasal vaccine for intrauterine immunity against *S. zooepidemicus*, including an intrauterine challenge study - conducted in collaboration with John Timoney at the University of Kentucky and completed in 2010.

- The effect of N-acetylcysteine on the equine endometrium in collaboration with Michelle LeBlanc, Lexington KY; project included image analysis of endometrial biopsies from infertile and normal mares before and after N-acetylcysteine administration,

a systematic method to assess pathology of the mucociliary apparatus, followed by clinical trial, on Kentucky horse farms, completed in 2013.

- Validation of a diagnostic test for *S. equi*, in collaboration with Maine Biotechnology Services, John Timoney, Andrew Waller, Equine Diagnostic Solutions and local Maine veterinarians.

- Surveillance for S. equi using samples of equine drinking water.

- Determination of endometrial levels of orally administered Sulfadiazine/Trimethoprim; piloted at UMaine. Full study performed at Louisiana State University in 2015-2016.

- Elimination of *S. equi* by microflora in equine compost (Alexandria Garcia MS Thesis Project completed 2016).

- Comparison of microbiome of composted stall waste from horses receiving and not receiving oral Sulfadiazine/Trimethoprim (completed 2016).

- Assessment of fertility benchmarks in Thoroughbred mares from 2014/2015 foaling data supplied by Jockey Club. Data analysis completed 2017 in collaboration with Louisiana State University (Dale Paccamonti).

- Effect of Equine Assisted Psychotherapy on Socialization and Sleep Patterns in Children with Autism Spectrum Disorder (Amy Hofmann PhD Thesis Project - due to graduate December 2017).

- USDA Multistate Activity: North East Equine Clinical Studies Coordinating Committee - Principal Investigator, formerly NECC1200 (2012-2017) and renewed as NECC1700 (2017 - 2022).

- USDA Multistate project: Environmental Impacts of Equine Operations, NE1441, active member since 2015.

- High magnification video-endoscopy of the ciliary currents in the genital tract of the standing mare, including stabilization of the endoscope, microscopic movement of carbon powder consistent with ciliary currents, and testing of various microspheres (*in progress*).

- Effect on mastication and saliva production of short stem forage added to grain. (*in progress*).

- Effect of Sodium bisulfate on ammonia production on horse stalls (in progress).

Service:

- Reviewer for Research in Veterinary Science, Reproduction in Domestic Animals, Vaccine, Theriogenology, Veterinary Microbiology, Journal of Equine Veterinary Science, The Veterinary Journal, and the Equine Veterinary Journal.

- School of Food and Agriculture Peer Review Committee, current.

- School of Food and Agriculture Policy Advisory Committee, current.

- Agriculture and Forest Experiment Station Research Council (2007-2010).

- Farm superintendent search committees (2008 and 2016).

- Animal and Veterinary Science Nutritionist Search Committee (2015).

- Chaired Reproduction Program of the North East Association of Equine Practitioners (NEAEP) 2011, 2012, 2013, 2017.

- NEAEP Board of Directors 2013, Vice President 2014-2015, President-Elect, 2015-2016.

- NEAEP President 2016-2017 with responsibility for September 2017 Symposium in Norfolk VA.

6

-Primary administrative responsibility for approximately 40 faculty, spread across 3 subunits (Food Science and Human Nutrition; Plant, Soil, and Environmental Sciences; Animal and Veterinary Sciences). Faculty have appointments split between Teaching, Research, and Extension. The School of Food and Agriculture is guided by the State Land Grant Mission, reflecting the needs of Maine's Agricultural Stakeholders and Maine's Rural Economy.

-Oversight of day to day operations within the school, including teaching, research and outreach programs; reappointment, promotion and tenure procedures; development; and outreach to stakeholders.

7

Grants Received

- 1. Causey RC, Knight C, Sorrentino V. 2018. Preventing Gastric Ulcers in the Horse by Adding Chopped Forage to Grain and Improved Pasture Usage. \$3,945. Integrated Research and Extension Grant, Maine Food and Agriculture Center.
- 2. Sorrentino V*, Causey RC. 2017. Preventing Gastric Ulcers in the Horse by Adding Chopped Forage to Grain. \$423. J. F. Witter Fall Research Grant.
- 3. Richard A*, Causey RC. 2017. Assessing Microparticles for Endoscopic Studies of Mucociliary Clearance in the Mare. \$885. J. F. Witter Summer Research Grant.
- 4. Poulin A**, Causey RC. Competitively awarded PhD Graduate Assistantship. 2016. \$60,000. for 3 years. School of Food and Agriculture.
- 5. Causey RC. Establishing Benchmarks for Equine Fertility. 2016. Hamm Campus Activity Fund. \$4000.UMaine Foundation.
- 6. Folsom AJ*, Causey RC. 2015. A Comparison of ELISA and PCR in Detecting *Streptococcus equi*. \$1000. J. F. Witter Summer Research Grant.
- 7. Edwards A*, Causey RC. 2015. Killing of *Streptococcus equi* by Different Moisture Content of Compost. \$1000. Center for Undergraduate Research.
- Mitchell SD*, Causey RC. 2014. Comparison of culture, ELISA and PCR in detection of Streptococcus equi in compost consisting of equine manure and soiled bedding. 2015.
 \$1000. J. F. Witter Summer Research Grant.
- 9. Mitchell SD*, Causey RC. 2014. The use of PLFA analysis to detect differences in microbial activity in compost from horses treated with and without antibiotics. \$4000. Center for Undergraduate Research, Summer Research Fellowship.
- 10. Causey RC, Hutchinson M, Garcia A**. Survival of *Streptococcus equi* and *zooepidemicus* in Equine Compost. 2014. \$3,800. Maine Agricultural Center.
- 11. Causey RC, Weber JA, Lichtenwalner A, Timoney JF, Paradis MR. Commercialization of New Technologies for Animal Disease Surveillance. 2011-2016 \$497,392. Maine Technology Asset Fund.
- 12. Intranasal vaccination to immunize uterine mucosae. 2002-2006 Hatch project \$4000 per annum
- Intranasal Vaccination to Immunize Uterine Mucosae. Causey, RC. (2002). USDA-CSREES. \$75,000 requested. Funded in full.

Grants Not Funded

- 1. Sorrentino S*, Causey RC. 2017. Effect on mastication and saliva production of short stem forage added to grain. \$1000. Center for Undergraduate Research.
- 2. Causey RC, Hawkes M^{**}, Richard A^{*}, Stokes M. Improving Techniques to Study Equine Cervical Mucociliary Clearance. 2017. Theriogenology Foundation. \$5000.
- 3. Causey R, Sullivan D, Morrow R, Nelson D. 2017. Towards Commercialization of a Rapid Test for Equine Strangles.University of Maine Research and Reinvestment Fund. \$62,290.
- 4. Causey R, Biddle A, Williams C, Burk A. Making Clinical Sense of the Equine Microbiome. USDA-AFRI. 2016. \$49,050.
- 5. Causey R, Nayak B, Sullivan S, Amar F, Ladenheim M. One Farm: Interdisciplinary Learning Opportunities. USDA 2016. \$298,342.
- 6. Causey RC and Waller A. Evaluation of antigens SeM and SEQ2190 as targets for rapid strangles detection. Grayson Jockey Club Research Foundation. 2015. \$72,850.
- 7. Causey RC, Hutchinson M, Bernard E, Nayak B, Biddle A, Williams C. Remediation Of An-

tibiotics And Antibiotic Resistant Bacteria In Compost Used On Small Farms. USDA-AFRI 2015.\$149,617.

- 8. Causey RC, Lichtenwalner A, Brzozowski RJ. Strengthening Surveillance Of Pathogens On Small Farms. USDA-AFRI 2015. \$149,656
- 9. Causey RC and Waller A. Rapid test for *Streptococcus equi*: genomic comparison of US & UK strains. Morris Animal Foundation. 2014. \$49,464.

Graduate Advisees Awarded Degrees

- 1. Hawkes M. Improving Techniques to Study Equine Mucociliary Clearance. MS, 2018.
- 2. Poulin A. Survival of Streptococcus equi in Equine Compost. MS, 2016.
- 3. Seger R. Elucidating the Mechanism for Maintaining Eucalcemia Despite Immobility and Anuria in the Hibernating Black Bear (Ursus americanus). PhD, 2008.
- Crowley I. Intranasal Vaccination to Boost Equine Immunity to Uterine Streptococcal Infection. MS, 2007.

Doctoral Candidates in Progress

- 1. Hofmann A. *The Efficacy of Equine Assisted Psychotherapy*. Expected Completion, August 2018.
- 2. Garcia-Poulin A. Prevalence and Abatement of Antibiotics and Antibiotic Resistant Bacteria in Composted Soiled Equine Bedding. Start Date, January 2017.

Peer-Reviewed Publications

*** Corresponding Author

- 1. Poulin A, Hutchinson M, Dube M, Stokes M, Mitchell S, Edwards A, Harvey K, Myer A, Causey R***. Abatement of Streptococcus equi in Soiled Equine Bedding and Compost. Journal of Equine Veterinary Science. 2018;70:117-122.
- 2. Davolli GM, Beavers K, Medina V, Sones JL, Pinto CRF, D. Paccamonti D***, Causey R. Concentrations of sulfadiazine-trimethoprim in the circulation and endometrium of mares treated with an oral suspension. Journal of Equine Veterinary Science. 2018;67:27-30.
- Coffin D***, Causey R, Staniar B, Williams C, McKeever K, Gradil C, Nadeau J, Sanchez A, Lichtenwalner A, Biddle A. Assessing Research and Education Needs to Improve Equine Gastrointestinal Health. Journal of the National Association of County Agricultural Agents. 2017;10:1.
- 4. Poulin A**, Hutchinson M, Mitchell SD*, Myer A*, Harvey K*, Causey R***. A sustainable approach to the control of pathogens: the fate of *Streptococci* in equine compost. European Scientific Journal. Special Edition, August 2015, 310-400.
- Gores-Lindholm AR**, LeBlanc MM, Causey RC***, Hitchborn A, Fayrer-Hosken RA, Kruger M, Vandenplas M, Flores P, Ahlschwede S. Relationships between intrauterine infusion of N-acetylcysteine, equine endometrial pathology, neutrophil function, post-breeding therapy, and reproductive performance. Theriogenology. 2013;80:218-27.
- Seger RL**, Cross RA, Rosen CJ, Causey RC, Gundberg CM, Carpenter TO, Chen TC, Halteman WA, Holick MF, Jakubas WJ, Keisler DH, Seger RM, Servello FA. Investigating the mechanism for maintaining eucalcemia despite immobility and anuria in the hibernating American black bear (Ursus americanus) Bone. 2011;49: 1205-1212.
- Causey RC***, Artiushin SC, Crowley IF**, Weber JA, Homola AD, Kelley A*, Stephenson LA, Opitz HM, Guilmain S*, Timoney JF. Immunisation of the equine uterus against Streptococcus equi subspecies zooepidemicus using an intranasal attenuated Salmonella vector. The Veterinary Journal. 2010;184:156-161.

- 8. Leblanc MM, Causey RC, Clinical and subclinical endometritis in the mare: both threats to fertility. Reproduction in Domestic Animals. 2009; 44 Suppl. 3:10-22
- 9. Lehnhard RA, Manso Filho HC, Causey RC, Watford M, McKeever KH. Maternal and foetal heart rates during exercise in horses. Comparative Exercise Physiology. 2009;6:43-48.
- 10. Causey R, Ruksznis D, Miles R. Field management of equine uterine prolapse in a Thoroughbred mare. Equine Veterinary Education. 2007;19:254-259.
- 11. Causey R, Mucus and the Mare: How little we know. Theriogenology. 2007;68:386-394.
- 12. Causey RC. Making sense of equine uterine infections: the many faces of physical clearance. The Veterinary Journal 2006; 172: 405-421.
- 13. Causey RC, Weber JA, Emmans EE**, Stephenson LA, Homola AD, Knapp KR*, Crowley IF**, Pelletier DC*, Wooley NA*. The equine immune response to *Streptococcus equi* subspecies *zooepidemicus* during uterine infection. The Veterinary Journal. 2006;172:248-57.
- 14. Causey RC, Lehnhard RA, Finucane KA*, Oilver T *. Effects of exercise on maternal and fetal heart rate in pregnant mares. Equine and Comparative Exercise Physiology 2005;2:225-228.
- 15. Congleton WR, Pearce BR, Parker MR, Causey RC. Mariculture siting tidal currents and growth of Mya arenaria. Journal of Shellfish Research. 2003;22:75-83.
- 16. Causey R, Weber J, Emmans E*, Small P*, Pelletier D*. Immunoblotting of *Streptococcus zooepidemicus* antigens following intrauterine inoculation in mares. Theriogenology. 2002;58:487-489.
- 17. Haley A*, Emmans E*, Kennedy-Wade B, Henry L, Jackson M, Weber J and Causey R. The Dangers of Horse Kissing: Comparison of bacteria obtained from the oropharynx of the human being and the nasopharynx of the horse. Maine Agricultural and Forestry Experiment Station, 2001; Miscellaneous Report 423.
- 18. Weber JA, Causey RC, Emmans EE* Induction of Luteolysis in Mares by Ultrasound-Guided Intraluteal Treatment with PGF2alpha. Theriogenology. 2001; 55:1759-1766.
- 19. Causey RC, Ginn PS, Katz BP*, Hall BJ, Anderson KJ, and LeBlanc MM (2000) Mucus production by endometrium of reproductively healthy mares and mares with delayed uterine clearance. Journal of Reproduction and Fertility Supplement 2000;56:333-339.
- 20. Causey RC, Paccamonti DL, Todd WJ. Antiphagocytic properties of uterine isolates of *Streptococcus zooepidemicus* and mechanisms of killing in freshly obtained blood of horses. American Journal of Veterinary Research. 1995;56:321-327.
- 21. Eilts BE, Scholl DT, Paccamonti DL, Causey RC, Klimczak JC, Corley JR. Prevalence of endometrial cysts and their effect on fertility. Biology of Reproduction Monograph Series 1: Equine Reproduction VI. 1995; 527-532.
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7 §125. BOARD OF AGRICULTURE 7 §125. BOARD OF AGRICULTURE

1. Establishment; duties. The Board of Agriculture, referred to in this section as the "board," as established in Title 5, section 12004-G, subsection 4-A, is created within the University of Maine System. The board shall advise the Chancellor of the University of Maine System and the President of the University of Maine at Orono on matters concerning the operation and management of agricultural research conducted by the Maine Agricultural Experiment Station and university farm-based programs, including those of the University of Maine Cooperative Extension Service. The board's duties are limited to advising the chancellor and the president on research and programs relating to agriculture. The board does not advise the Director of the Maine Agricultural Experiment Station or have a role in the operation of research and programs within the Maine Agricultural Experiment Station that relate to forestry, wildlife, or fisheries and aquaculture. The board shall assist the chancellor and the president in articulating the mission of the Maine Agricultural Experiment Station as it pertains to agriculture. The director, with the agreement of the board, shall develop a budget for the station. The board and the director shall seek agreement on all issues. In the event that agreement can not be reached, final authority rests with the director. The board may not interfere with funding and grants for commodity research programs brought to the University of Maine System directly or through the efforts of commodity groups. The board shall respect the expertise of the various commodity groups and shall maintain the integrity of the research being recommended and reviewed by specific commodity groups. The board shall assist in the coordination of activities with commodity groups interested in or supporting agricultural research. The board shall consult with the following agricultural commodity advisory committees on agricultural research and extension priorities:

A. The University of Maine System Wild Blueberry Advisory Committee; and [1997, c. 711, \$5 (NEW).]

B. The Maine Potato Board Research and Product Development Committee. [1997, c. 711, §5 (NEW).]

[1997, c. 711, §5 (NEW) .]

2. Membership. The board consists of the following 20 members:

A. A designee of the President of the University of Maine at Orono; [1997, c. 711, §5 (NEW).]

B. A designee of the Chancellor of the University of Maine System; [1997, c. 711, §5 (NEW).]

C. The Commissioner of Agriculture, Food and Rural Resources or the commissioner's designee; [1997, c. 711, §5 (NEW).]

D. The president of a statewide farm bureau or the president's designee; [2009, c. 393, \$1 (AMD).]

E. The president of a statewide agricultural council or the president's designee; [2009, c. 393, \$1 (AMD).]

F. Eight members representing the agricultural industry, one person designated by each of the following:

(1) The Maine Potato Board;

(2) The Wild Blueberry Commission of Maine;

(3) A statewide pomological society;

(4) A statewide vegetable and small fruit growers association;

(5) A statewide dairy industry association;

(6) A statewide landscape and nursery association;

(7) A statewide florist and growers association; and

(8) A statewide organic farmers and gardeners association; [1997, c. 711, §5 (NEW).]

G. Two members of the joint standing committee of the Legislature having jurisdiction over agricultural matters, one appointed by the President of the Senate and one appointed by the Speaker of the House; [1997, c. 711, §5 (NEW).]

H. One farmer with livestock experience in an area other than dairy farming, chosen from a list of 3 nominees submitted by a statewide beef and sheep producers association, appointed by the Governor; [1997, c. 711, §5 (NEW).]

I. Two research faculty members associated with agricultural research at the University of Maine at Orono, appointed by the Board of Trustees of the University of Maine System; [2009, c. 393, \$1 (AMD).]

J. The Director of the University of Maine Cooperative Extension Service; and [2009, c. 393, \$1 (AMD).]

K. One member representing the aquaculture industry designated by a statewide aquaculture industry association. [2009, c. 393, §1 (NEW).]

[2009, c. 393, §1 (AMD) .]

3. Terms. Each member serves a term of 5 years, except that the terms of legislative members expire the first Wednesday in December of even-numbered years. Vacancies must be filled by the appointing authority to complete the term of the preceding appointee.

[1997, c. 711, §5 (NEW) .]

4. Chair; secretary. The board shall select annually one of its members to serve as chair. The Director of the Agricultural Experiment Station shall serve as secretary to the board but the director is not a member of the board and has no vote.

[1997, c. 711, §5 (NEW) .]

5. Compensation. The board members are entitled to legislative per diem compensation for attendance at board meetings in accordance with Title 5, chapter 379.

[1997, c. 711, §5 (NEW) .]

6. Report. The Board of Agriculture shall report at least annually to the joint standing committee of the Legislature having jurisdiction over agricultural matters and to the Board of Trustees of the University of Maine System. The report must include an accounting of meetings and actions of the Board of Agriculture, including agreements entered into, status of demonstration projects, research findings, informational activities and an evaluation of the Maine Agricultural Experiment Station and Cooperative Extension Service programs, with recommendations regarding changes or improvements in the programs and the budget. The Board of Agriculture shall submit annually to the Board of Trustees of the University of Maine System proposals for additional funding for capital building projects at the research farms.

[1997, c. 711, §5 (NEW) .]

7. Long-range plan. By January 15, 2000, the board shall establish a long-range plan for operation of the Agricultural Experiment Station and the Cooperative Extension Service programs that includes but is not limited to plans for each of the research farms, joint appointments for experiment station and extension

faculty, better utilization of research farms and objectives for research for each agricultural commodity in the State. The plan developed by the board does not include operations, research and programs relating to forestry, wildlife, aquaculture and fisheries.

[1999, c. 72, §1 (AMD) .]

SECTION HISTORY

1997, c. 711, §5 (NEW). 1999, c. 72, §1 (AMD). 2009, c. 393, §1 (AMD).

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Vice Chancellor for Date: December 20, 2018 Academic Affairs 15 Estabrooke Drive Orono, ME 04469 To:

Tel: 207-581-5842 Fax: 207-581-9212 www.maine.edu

Dr. James Page, Chancellor University of Maine System (UMS) From: Robert Neely, VCAA

Regarding: USM Academic Program Proposal: Bachelor of Science in Public Health

University of Maine

The University of Maine

University of Maine at Farmington

University of Maine at Fort Kent

University of Maine at Machias

University of Maine

Southern Maine

at Augusta Please find attached a program proposal from the University of Southern Maine to offer a Bachelor of Science in Public Health (BSPH). The attached material includes recent letters of support from President Cummings and Provost Uzzi, as well the full proposal. As described in the proposed program, Public Health has been ranked as the 9th fastest growing academic program nationally, yet, despite this growth, a need for bachelor's-trained public health professionals still remains. Thus, USM anticipates that this program will draw students to Maine, as well as meet essential workforce needs in the State. In addition, the proposed BSPH builds on the "successful foundation and resources of USM's accredited Master of Public Health Program."

at Presque Isle One appealing aspect of the program is the possibility of collaboration with the University of Maine. The proposal indicates "Given the multi-disciplinary nature University of of public health, and preliminary conversations with academic programs at USM and with faculty at the University of Maine (UMaine), we are heartened by the enthusiasm and encouraged about the range of collaborative possibilities this new program would create."

> The proposed BSPH program was reviewed by three leaders in the field of public health, who themselves are administrators of undergraduate public health program in the areas of: Each was asked to provide their assessment in the areas of program need, program objectives and content, and program quality. USM has satisfactorily responded to those reviews with revision of their initial proposal. There may be need for further detail regarding program assessment, but my office will communicate with Provost Uzzi regarding that issue, which can be further defined as the program is launched.

> The Chief Academic Officers Council reviewed the revisions at their 20 December. 2019 meeting and have recommended approval. Thus, I am happy also to recommend this program proposal for your approval.



Vice Chancellor for **Academic Affairs** 15 Estabrooke Drive Orono, ME 04469 I approve I do not approve Additional Action for the reasons information Tel: 207-581-5842 Fax: 207-581-9212 listed below needed for a www.maine.edu decision Approval of USM BSPH program proposal The University of Maine University of Maine 12-21-18 át Augusta University of Maine Chancellor James H. Page Date at Farmington University of Maine

University of Maine at Machias

at Fort Kent

University of Maine at Presque Isle

> University of Southern Maine



Muskie School of Public Service P.O. Box 9300, Portland, Maine 04104-9300 (207) 780-4430, FAX (207) 780-4549, TTY (207) 780-5646 www.muskie.usm.maine.edu

November 20, 2018

Dr. Jeannine Uzzi, Provost University of Southern Maine 124 Wishcamper Building PO Box 9300, Portland, Me 04104-9300

Dear Provost Uzzi,

On behalf of the Muskie School's graduate program in public health (MPH), I am pleased to submit a revised version of our plan to offer an undergraduate major in public health at USM. We believe that the proposed Bachelor of Science in Public Health (BSPH) presents an exciting opportunity for students from Maine and the region and will help to fill current and emerging workforce needs in our state.

The BSPH plan has been revised in response to national review by academic leaders from undergraduate public health programs at universities across the country, specifically: New Mexico State University, Mercer University, and University of North Carolina at Wilmington. We are grateful to Drs. Rao, Lundquist, and Elliott for their careful review of our plan and the thoughtful comments they offered to strengthen its objectives, need, and curriculum content. While each of these universities is in a different state and has a different organizational context, we found multiple synergies across the three reviews. To the extent possible given USM resources, we have addressed each of the individual comments as delineated in the attached table of responses.

Thank you again for your ongoing support for the MPH program and our efforts to expand public health educational opportunities to students within USM and the University of Maine System.

Cordially,

Anda Ziller

Erika Ziller, Assistant Professor and Chair of Public Health

cc: Jo Williams, Dean, College of Management and Human Services Firooza Pavri, Director, Muskie School of Public Service

Enclosures

A member of the University of Maine System

UNIVERSITY OF SOUTHERN MAINE College of Management & Human Service

Date: December 7, 2018

To: Jeannine Uzzi, VP for Academic Affairs & Provost

From: Jo Williams, Dean, CMHS

Jame William

Re: Bachelor of Public Health Proposal

I have reviewed the external reviewers' comments related to the Department of Public Health's proposal to offer Bachelors degree in Public Health. I have also assessed the department's detailed response to the reviewers comments and the updated version of the new degree proposal that was provided.

The current document addresses many of the external reviewers' suggestions and has resulted in a strong proposal that has my full support.

Please let me know if you need further information and also what the next steps are in moving this proposal towards approval at university and system levels.

cc: Erika Ziller, Department Chair, Public Health Sally Meredith, Chief of Staff, Office of the Provost

P.O. Box 9300, Portland, Maine 04104-9300 PHONE (207) 780-4563, FAX (207) 780-4060, TTY (207) 780-5646 usm.maine.edu/cmhs A member of the University of Maine System Public Health Faculty Responses to External Review Comments on the Proposed BSPH

	External Review Comment	Faculty Response
	eviewer #1: Satya Rao, PhD, MCHES, Professor & U ew Mexico State University	Indergraduate Program Coordinator, Department of Public Health Sciences,
Pi	ogram Objectives	
「「「「「「「「「」」」「「」」」「「」」」」」」」	Proposal does not clearly delineate how this proposed program would fit into the other public health educational offerings, about its unique significance in educating Maine students. What specific gap does this new proposed program fill? How does it differ from other offerings and how is it similar?	We have clarified the unique role the BSPH will play in educating undergraduate students from Maine and beyond. Some of this language has been added to Goal #2 (page 1) and to the new discussion of USM and the Muskie School's missions (page 2) that was added to address Comment #6. The original proposal also includes a detailed description (now on page 7) about the paucity of undergraduate public health degrees in Maine (none within the UMS; one in a private university) and the New England region. This description has been enhanced by the map developed in response to Comment #7 (Figure 3, page 7) that requested a graphical depiction of the existing programs.
2.	Program goals are cursory and incomplete. Suggest separating the first goal into two.	We have separated the first goal into two and developed them each in more detail (Page 1-2). The first of these goals now speaks to the program benefits for enrolled students (see comment #5). The second of the goals focuses on Maine's workforce and public health infrastructure needs and also helps to address comment #1.
3.	The list of jobs included on page 5 includes those that would not be available without a master's degree or other additional training.	This point was also raised by Reviewer #2. We have edited this section of the proposal to include listings that are more directly relevant to public health and appropriate for recent graduates with somewhat limited experience (see page 6).
4.	It is unclear how student outcomes (p. 2) align with state workforce needs. To meet the workforce gaps in health care identified by the Maine Department of Labor, the student outcomes should include at least one that is related to the healthcare industry and healthcare finances/administration.	The Maine Department of Labor data include public health within the broader category of health care. We have clarified on page 1-2, Goal #2, that while many of the jobs filled by BSPH graduates will be in the health care sector, the workforce needs are much broader than this. As a result, we have proposed a generalist BSPH degree that meets the needs of varied health and public health employers across the state.
5.	Program Goals should be expanded to include one or two more that reflect the specific benefits of the program to the enrolled students.	We have expanded the program goals as suggested by comment #2 and Goal #1 now speaks to the benefits of the program for students (see page 1).
6.	Program Goals should demonstrate how the BSPH is aligned with the overall mission of the University and the Muskie School of Public Service.	We have added a paragraph after the three specific goals to demonstrate how this program aligns with USM and the Muskic School missions (see page 2).

External Review Comment	Faculty Response
 Prepare a visual representation of the various existing programs in relationship to the proposed program. 	We have prepared and included a map of New England (Figure 3) that indicates the locations of other undergraduate programs in public health on page 7.
Program Need	
 The state's data on health care and economic growth trends should be augmented my qualitative data from regional and state public health and health care employers. 	In addition to the data from the Department of Labor that we originally provided, we have now included qualitative information from a 2016 update to Maine's Public Health Workforce Development Plan. In addition, we have clarified that as part of our planning process we sought input from our program's Advisory Board. As indicated in Appendix G, this Board consists of organizational leadership from many of Maine's most important public health and health care employers. As part of their advisory function, the Board indicated strong support for the BSPH, their belief that the degree would meet an important workforce need, and their interest in hiring our future graduates. See page 5 for the qualitative data from these resources.
9. Southern New Hampshire University and others appear to offer similar programs, How does the proposed BSPH fit into this landscape?	In the response to Comment #6 that describes alignment of the BSPH with USM's mission, we further define the gaps that a BSPH at USM would fill. This is also documented by the addition of Figure 3, a map of undergraduate public health degrees in New England. The referenced SNHU degree is only online. And as noted on page 26, the University of New England eutrently offers the only undergraduate public health degree in Maine at a total annual estimated cost of \$55,000 for the 2018-19 academic year. Students would otherwise need to leave the state for an undergraduate degree, and the programs in CT and MA are higher priced than USM. Given Maine's aging population, every undergraduate student who can be kept in Maine (or attracted from outside Maine) is a critical piece of the solution to the state's demographic crisis.
 Enrollment projection numbers may be unrealistic and more data on program demand are needed. 	We respectfully disagree with this comment given the experience of other BSPH programs nationally and the fact that no comparable degree exists within the University of Mane System. As the two other external reviewers indicate below, national data demonstrate that the demand for undergraduate majors in public health has been steadily increasing. Each of these reviewers describe the exponential growth of their own programs that greatly exceeded expectations. In addition, we have experienced strong enrollment in the few undergraduate courses that we have offered at USM, and have a list of nearly 20 students who have expressed interest in the public health major if it becomes available.

External Review Comment	Faculty Response
Program Content	
 Based on the availability of jobs in the healthcare industry, add at least one upper division course that covers the healthcare industry and health care financing. 	The BSPH that we have proposed will be a generalist public health degree and, as such, does not contain specialized upper division courses. However, students may obtain additional relevant coursework through the 9-credits of pre-approved electives from outside the major. To meet the spirit of this suggestion, we will work with additional USM departments to expand the list of approved courses to include relevant offerings in economics, business, management, accounting, or leadership studies.
 The program is missing a core course in behavioral change theories and models. 	Rather than having one course dedicated to behavioral change theories and models, we have distributed this important content across several courses that introduce and reinforce the theories and their application. This content will be introduced in <i>BPH 201: Fundamental of Public Health</i> , reinforced through the social marketing content of <i>BPH 205: Health Communication and Marketing</i> , and in <i>BPH 315: Population Health Improvement</i> . The latter course will include content that demonstrates how this theory may be applied to organizational and community interventions that improve population health.
13. Cross-listed courses are of concern.	Given USM's resource realities, it will be challenging and inefficient to have no cross-listed courses, particularly in the program's early years. We currently open a few MPH courses to undergraduates as cross-listed courses and have policies for ensuring that graduate and undergraduate assignments are materially different. We have added this information to page 8. For cross-listed courses from other departments, the MPH has a process for syllabus review and approval by faculty vote.
14. The program is missing core courses in environmental health and infectious/non-infectious diseases. The related pre-approved electives are not sufficient.	While we don't have specific courses in environmental health, the CEPH defined competencies in this area are covered by other coursework, including <i>Introduction to Epidemiology</i> . Additionally, the content on infectious and non-infectious disease is covered in both BPH 160/61, <i>Biology of Human Health</i> plus lab, <i>Epidemiology</i> , and BPH 315 <i>Population Health Improvement</i> .
15. How many hours is the Field Experience? According to Table 1, there is some variation in students' learning of cross-cutting and hands on experiences. This may need attention to ensure uniformity of experience for all students.	We have clarified that the Field Experience is 120 hours of internship plus a written product (page 8 and the Field Experience course description on page 13). By Table 1, we assume that the reviewer is referencing the Curriculum Map that is the first document in Appendix A. While Field Experience placements are expected to have uniformity for most learning objectives, others may vary based on individual students' career objectives and we see this as a strength of the

External Review Comment	Faculty Response
	program. By the time students reach the Field Experience, the required functional domains, competencies and cross-cutting experiences have been introduced and reinforced. Thus, we believe that some tailoring is appropriate at this point.
16. Who will serve as the advisor for BSPH students?	We have added a new section on page 11 that describes the advising process at USM and the distribution of responsibilities between professional and faculty advisors.
17. How will data on student learning and program outcomes be tracked?	As described on page 26-27, we will use the processes and systems developed for our MPH program to track student learning and progress towards program learning objectives
 The current faculty resources may be insufficient to nurture the BSPH. 	We understand the reviewer's concern. Since the plan was submitted, we have received final approval for an additional full-time tenure track faculty member and are currently in search for that position (page 13). We recently have also hired two research faculty with appointments in the public health program. Although these positions are supported by soft money, they are a mentoring resource for student capstones and funded research assistant positions. As the program grows, we will seek additional faculty resources as appropriate.
	n and Professor, College of Health Professions, Mercer University
A. Program Objectives	
 The proposal notes the program objectives are linked to the Council on Education for Public Health (CEPH) foundational domains, competencies, and cross-cutting concepts and experiences. The proposal clearly demonstrates how this will be accomplished 	No response necessary.
 Course descriptions and syllabi should clarify how the cross-cutting concepts and experiences of professionalism, community dynamics and networking will be reinforced, particularly in cross- listed courses. 	This is an important point and as course syllabi are developed, we will be certain to do this. As noted for Reviewer #1's Comment #13, we have a process within the MPH program for syllabus approval of cross-listed courses.
 Public health faculty should contribute language to cross-listed syllabi to ensure that CEPH requirements are met. 	This point was also made by Reviewer #1 (see Comment #13). At this point, all cross-listed courses are shared with the CEPH-accredited MPH program, which has policy for cross-listing (see page 8). The other course that we expect to cross-list in early years of the program is <i>SBS 337: Introduction to Epidemiology</i> . The course is currently taught by an established public health professional who was

	External Review Comment	Faculty Response	
State La		recruited to teach for the SBS program by MPH faculty. We fully expect this course to meet CEPH criteria, but will also review the syllabus per program policy.	
B.	Program Need		
4.	According to the reviewer's own examination of CEPH documentation, there are only two MPH programs and no accredited undergraduate programs in Maine. These data strongly support the need for the proposed undergraduate public health program.	No response necessary.	
5.	As additional supporting evidence for program need, you might consider eiting <i>Healthy People 2020</i> [which] details the need to improve public health infrastructure and includes goals to increase the number of undergraduate public health programs.	We have included this addition to our program Rationale (p. 1)	
6.	Enrollment estimates could be conservative. Mercer University has exceeded projections every year with 75+ undergraduate majors in its 4 th program year. Recent national undergraduate summit reported that undergraduate public health enrollments tend to exceed expectations.	This comment reiterates what we have heard and read about other undergraduate public health programs. Given the high level of interest in our current, limited undergraduate course offerings, we expect that demand for the major will exceed projects. No response necessary.	
7.	The Indeed employment search engine may provide overly generalized results and the salaries may be higher than typical salary range for undergraduate public health graduates. Consider sources related specifically to public health.	This point was also raised by Reviewer #1. We have edited this section of the proposal to include listings that are more directly relevant to public health and appropriate for recent graduates with somewhat limited experience (see page 6).	
C.	Program Content		
8.	The proposed program content and quality appears comprehensive and in alignment with the requirements of CEPH.	No response necessary.	
9.	Regarding elective courses, the program should consider assigning course levels. The range of electives is from 100-level to 300-level; you could	We have changed the approved list of electives to require that all courses be 200- level or higher (page 10). Because so many 300-level courses have prerequisites, we are concerned that requiring 300/400-level courses may create too many	

External Review Comment	Faculty Response
consider requiring a higher level elective to deepen concepts related to public health coursework.	barriers for students.
10. The course <i>BPH 339: Topics in Public Health</i> is cross-listed with MPH program. With the different CEPH competency expectations between the BSPH and the MPH, the two degree levels should be differentiated in this course if undergraduates and graduates will be taking the courses together.	Review #1 raised a similar point. We currently open a few MPH courses to undergraduates as cross-listed courses and have policies for ensuring that graduate and undergraduate assignments are materially different. We have added this information to page 8.
11. Summary: Overall the BSPH proposal was thorough and complete, appears fully supported by numerous academic units; and, will provide students an additional undergraduate degree option with great employability upon graduation or continuation to	No response necessary.
MPH other health sciences graduate program.	
Reviewer #3: Steve Elliott, PhD, Director, School of He	ealth and Applied Human Sciences, University of North Carolina at
Reviewer #3: Steve Elliott, PhD, Director, School of He Wilmington	ealth and Applied Human Sciences, University of North Carolina at
Reviewer #3: Steve Elliott, PhD, Director, School of He Wilmington A. Program Objectives	
 Reviewer #3: Steve Elliott, PhD, Director, School of He Wilmington A. Program Objectives I. It is evident that the BSPH proposal was designed so that the program would align closely with the foundational domains and competencies required for accreditation by the Council on Education for Public Health The documentation that you provided clearly shows that you are proposing a competency-based program with well-written program goals and student outcomes. 	ealth and Applied Human Sciences, University of North Carolina at No response necessary.
 Reviewer #3: Steve Elliott, PhD, Director, School of He Wilmington A. Program Objectives I. It is evident that the BSPH proposal was designed so that the program would align closely with the foundational domains and competencies required for accreditation by the Council on Education for Public Health The documentation that you provided clearly shows that you are proposing a competency-based program with well-written program goals and 	

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External Review Comment	Faculty Response
3. The proposed BSPH curriculum is well-designed and builds upon the general undergraduate program. The course descriptions indicate that graduates of the program will have strong content knowledge in the field of Public Health. The detailed crosswalk clearly shows how the CEPH domains and competencies are mapped to the proposed curriculum.	No response necessary. We adhered strongly to public health accreditation standards in our program design and appreciate the reviewer's recognition of this.
4. With the national focus on accessibility and affordability, I applaud the program designers for considering the pathway of students from high school and community colleges entering the proposed program.	No response necessary.
C. Program Content	
5. Consider adding a Biostatistics course. At UNCW, we included Biostatistics in the BSPH core and successfully petitioned for the course to be recognized in the Math / Statistics category of our General Education program. Many graduates indicated the course helped prepare them to be successful in graduate degree programs.	We initially had a Biostatistics course in our proposed BSPH core. However, we learned during the planning process that many students transfer to USM having already completed an undergraduate statistics course. To avoid unnecessary duplication, we opted to accept most introductory statistics courses. However, we remain interested in developing a public health-specific course. As the program matures the Public Health faculty will explore the benefits of delivering an applied Biostatistics course that could also meet Quantitative Reasoning requirements for a broad range of USM students.
6. Summary: the BSPH proposal writers should be commended for producing a comprehensive plan with a well-constructed curriculum. This proposal gives the University of Southern Maine the opportunity to meet the workforce needs of the local region, the state, and the nation. It was a pleasure reviewing this proposal, and I fully support this program.	No response necessary. We appreciate the strong commendation and recognition of our effort.

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Vice Chancellor for Academic Affairs 15 Estabrooke Drive Orono, ME 04469

> Tel: 207-581-5842 Fax: 207-581-9212 www.maine.edu

Date: November 6, 2018

To: Dr. James Page, Chancellor University of Maine System (UMS)

From: Robert Neely, VCAA

The University of Maine Regarding: USM Academic Program Proposal: Ph.D. in Leadership

University of Maine at Augusta

University of Maine at Farmington

University of Maine at Fort Kent

University of Maine at Machias

University of Maine at Presque Isle

> University of Southern Maine

offer a Ph.D. in Leadership Studies through their Department of Leadership and Organizational Studies. The attached material include recent letters of support from President Cummings and Provost Uzzi. Some of the appealing aspects of this proposal include a low-residency approach with the use of both synchronous and asynchronous online modalities. The intent is to use web-conference enhanced, discussion-based approaches, as well as interactive technology. The delivery modality is a departure from typical Ph.D. offerings, and should be particularly appealing to working adults.

Please find attached a program proposal from the University of Southern Maine to

USM anticipates 20 or more students by the second year of this program, on the basis of internal USM comparisons and a supply of students from the dozens of master's programs in leadership throughout New England. Further, a Ph.D. in
 ne leadership studies at USM would have no competition in the New England region.

This proposal was reviewed by the CAOC during Spring, 2018 and then sent out for external review. On the basis of the external reviews, modifications were made to the program proposal, including most significantly a reduction in the credit hour requirements, removal of one concentration area, and changes to the distribution requirements across the required program areas. As you are aware, the original proposal also included a suggested faculty compensation model for supervision of doctoral students. That model has been removed from the proposal.

I recommend program approval to you for the following reasons:

- non-traditional delivery of the Ph.D. program;
- disciplinary expertise at USM, building on their master's degree;
- strong enrollment projections;
- support from senior leadership at USM.



UNIVERSITY OF MAINE SYSTEM

Vice Chancellor for Academic Affairs 15 Estabrooke Drive Orono, ME 04469

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Tel: 207-581-5842 Fax: 207-581-9212 www.maine.edu

1 approve	reasons listed below	needed for a decision	Action
~			Approval of USM Ph.D. in Leadership Studies

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The University of Maine

University of Maine at Augusta

University of Maine at Farmington

University of Maine at Fort Kent

University of Maine at Machias

University of Maine at Presque Isle

> University of Southern Maine

Chancellor James H. Page

11-20.18

Date

Cc: Glenn Cummings, President, USM Jeannine Uzzi, Provost, USM

UNIVERSITY OF

Office of the President

Dr. Robert Neely Vice Chancellor for Academic and Student Affairs University of Maine System 16 Central Street Bangor, ME 04401

September 27, 2018

Dear Vice Chancellor Neely:

The University of Southern Maine (USM) is pleased to submit a revised Program Proposal to the University of Maine System.

The faculty and the Dean of the Lewiston Auburn College at USM have developed a Ph.D. in Leadership Studies Program Proposal. The initial proposal was forwarded to the University of Maine System earlier this year and was distributed for external review. The reviewer comments were shared with the program faculty and the proposal was subsequently revised to address these comments.

The Dean of Lewiston-Auburn College has reviewed the revised proposal and supports it moving forward. Further, the revised Program Proposal has the full support of Provost Jeannine Uzzi.

As with the Intent to Plan we submitted for this degree, the Program Proposal for the Ph.D. in Leadership Studies at LAC has my unequivocal support.

I request that the enclosed revised Program Proposal move to the next step of the approval process, review by the Chief Academic Officers.

Sincerely,

Glenn A. Cummings

President University of Southern Maine

ENC.

CC: Provost Uzzi Dean Toy Professor Turesky Professor Jenkins File

P.O. Box 9300, Portland, ME 04104-9300 PHONE (207) 780-4480, TTY (207) 780-5646, FAX (207) 780-4561 www.usm.malne.edu A member of the University of Maine System



UNIVERSITY OF

Provost and Vice President for Academic Affairs

Dr. Glenn Cummings President University of Southern Maine 93 Falmouth Street Portland, ME 04104

September 26, 2018

Dear President Cummings:

As you remember, the Lewiston Auburn College and the Department of Leadership & Organizational Studies have developed a program proposal for a Ph.D. in Leadership. The proposal was forwarded to the University of Maine System to move forward in the approval process.

The Office of the Vice Chancellor for Academic Affairs submitted the proposal for external review, in accordance with the process for approving a new degree-granting program.

The external review yielded several comments and concerns, which were then shared with the Leadership and Organizational Studies faculty. Over the summer, the faculty have rewritten portions of the proposal and have addressed the comments of the external reviewers. Further, the Dean has provided a letter of support for the revised proposal

I have read the original proposal, the reviewer's comments, and the revised program proposal. I am gratified by the thoughtful approach the USM faculty have taken in responding to the comments and by the changes made to the proposal.

I am pleased to forward this Leadership Studies Ph.D. Program Proposal to you with my full support.

Sincerely, Jean vost and Vice Presiden for Academic Affairs ENC. cc: Dean Toy

Professor Jenkins File

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Proposal for Ph.D. in Leadership

I. Full program title.

Doctor of Philosophy (Ph.D.) in Leadership.

II. Program objectives.

A. Narrative description of program rationale.

The need for this proposed doctoral program was spurred by several events, including a 2013 review of our current undergraduate- and graduate-level Leadership and Organizational Studies (LOS) degree programs, new national dialogue about the function of the doctorate in leadership studies, and an absence of terminal leadership programs in the New England region, nationally, and internationally. Additionally, the doctoral proposal aligns with the mission of the University of Southern Maine (USM) as a center for discovery, scholarship, and creativity for the state, the nation, and the world, that will positively impact the Lewiston-Auburn College, the regional communities of our three USM campuses, and the institution. Our increasingly complex, diverse, and changing world is producing unprecedented challenges for communities, governments, businesses, nonprofit organizations, and nations. Organizations in all sectors are seeking greater agility and flexibility, in order to adapt to change, innovate, and enhance their durability. In the United States, divides are escalating between "haves" and "have nots", and between racial, ethnic, and religious minorities, and those in the majority. Governments are finding it more and more difficult to acquire resources required to address pressing community, societal, and environmental issues and to develop quality workforces. The increasing tension around value differences is polarizing views and stymying needed action. Globally, war, disease, poverty, famine, genocide, and disappearing natural resources threaten the future of nations and regions such as sub-Saharan Africa. Often, the effects of entwined, knotty challenges combine and amplify the magnitude of dilemmas. There has never been a more pressing need for scholar leaders who are equipped with knowledge and skills needed to work across global and disciplinary boundaries to find points of agreement, to research issues, and to contribute applied research to lead the way toward resilience and sustainability at every level.

The University of Southern Maine's Leadership and Organizational Studies faculty are proposing a doctoral program in leadership. The program will feature a strong core of study in leadership theory and practice. The program will be distinguished from other programs that have "leadership" titles by an intentional interdisciplinarity programmatic focus. We will draw upon the diverse backgrounds of leadership studies faculty and partner with other programs at USM (and perhaps other UMS campuses) incorporating academic lenses from two or more disciplines (e.g., social and behavioral sciences, business, law, public administration, public health, and technology and science) to study leadership challenges that transcend singular disciplines, sectors, and nations.

We will seek students with the passion and dedication to become extraordinary leader scholars. Candidates accepted for doctoral study in leadership typically will hold a master's degree and have several years of practical experience in a variety of fields in either business, government, non-profits, community service or international relations in such fields as foreign service, philanthropic and social enterprises, advocacy organizations, nursing, public health, planning, and community and economic development. Students' diversity of backgrounds and experiences will provide exposure to various world views and promote innovative thinking.

The proposed program will prepare graduates to assume future roles as local and global managers and leaders, practitioners, or as leadership scholars and faculty. Most graduates are likely to assume

leadership roles in a variety of fields such as business, public administration, corrections, community planning and development, nursing, social work, engineering, public health, advocacy, and environmental and climate sciences. Some excellent graduates of a variety of master's programs at USM have been working in their fields and are ready to assume larger roles and greater responsibilities. The doctoral program in leadership will provide master's students with a pathway for advanced study that can fulfill this need. Completing the doctorate will benefit students and the Maine private, public, and nonprofit organizations in which they work and the communities where they reside.

A second, related factor underlying the new degree proposal is based in the emergence of a national dialogue about the nature of the leadership doctorate. For example, at the 2013 International Leadership Association (ILA) Global Conference in Montreal, Québec, a panel representative of four doctoral programs, three in the United States (University of Nebraska-Lincoln, Bellevue University, and Marian University) and one in the United Kingdom (University of Edinburgh) hosted a conversation titled, "Leadership Education as Doctoral Study: What Does this Really Mean?" The panel explored questions such as: "What people and purpose do leadership focused doctoral programs serve?"; "What factors lead to candidate completion of programs?"; "What are graduates of doctoral programs in leadership doing after they graduate, and how has the program impacted both their lives and the organizations in which they are working or communities in which they reside?"; and "Have their doctoral programs adequately prepared them?" This conversation spawned a full-day pre-conference workshop at the 2014 ILA Global conference titled, "Preparing Stewards of the Leadership Field: A Workshop on Doctoral Education." This workshop was offered by faculty from Indiana Wesleyan University, Regent University, the university of Nebraska-Lincoln, and Marian University. And finally, a half-day workshop at the ILA 2015 Global Conference titled, "Crossing Boundaries in Doctoral Education: A Workshop for Doctoral Administrators & Faculty," facilitated by faculty at Indiana Wesleyan University and the International Leadership University in Kenya. Subsequently a "Doctoral Program Faculty and Leaders Learning Community" was established. The purpose of the Community is to promote an exchange of ideas between faculty and administrators who work in leadership doctoral programs. Also, at the 2015 ILA Global Conference were two symposia presentations related to the emergence of doctoral education. The first titled, "Is There a Leadership Doctor in the House," offered insights into aspects of doctoral education including online doctoral education effectiveness, an assessment using a thriving instrument, and teaching scientific integrity to doctoral students who may fall victim to predatory publishing. This symposium included faculty leaders from Indiana Wesleyan University, Eastern University, Yonsei University, Indiana Tech, and Azusa Pacific University. The second symposium, "Exploring Leadership in Doctoral Education," included presentations on writing and pedagogy, philosophy, and mentoring. This symposium included faculty leaders from RMIT University, Clarkson College, Indiana Wesleyan University, the University of Phoenix, and Union University. In the preparation of this Leadership PhD Program proposal, members of the planning team arranged phone and Skype meetings with several faculty and doctoral program directors from the above mentioned universities. Many other faculty from additional doctoral programs were also contacted to learn more about their experiences in developing new programs and lessons learned. A summary of the recommendations gleaned from these conversations is included in section III. C. of this proposal and integrated throughout.

The global dialogue about doctoral programs in leadership described above is consistent with and parallel to conversations among LOS faculty. Consequently, this proposal has been developed in response to local, regional, national and global needs for a clearly distinguished leadership doctorate program.

A third factor that has served as a catalyst for this proposed degree is the absence of terminal leadership programs nationally and internationally and particularly in the New England region. According to Jenkins's (2016) global study of more than 1,000 leadership educators, less than 15% of faculty teaching in academic leadership programs have terminal degrees in Leadership. Additionally, U.S. businesses spend more than \$170 Billion dollars on leadership-based curriculum, with the majority of those dollars

being spent on "Leadership Training" (American Society of Training and Development, 2012). Thus, there is a demonstrated need for doctorally prepared leadership practitioners in executive leadership, nonprofit organizations, and as faculty in the more than 2,000 academic leadership programs worldwide. Much research and many discussions have provided a framework for this work and guided the development of this proposal.

B. General program goals.

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The University of Southern Maine's Ph.D. in Leadership aims to center on three dimensions of leadership, arrived through a rigorous research-based interdisciplinary focus: (a) the leader as person; (b) the leader in organizational systems; and (c) the leader in global systems. To do so, the proposed program curriculum is designed to promote the development of leadership knowledge and skills by those seeking to exercise leadership in organizations and communities. Accordingly, the proposed program will provide a multidisciplinary study of the local, regional, national, and global contexts confronting us today through research-based practice and practice-based research. Moreover, students and faculty will explore the wealth of interpretive frameworks for leadership to increase our understanding of this complex and multifaceted phenomenon that has challenged humanity throughout the ages. Pervasive, programmatic inquiry include: How are leaders (or are they) different from followers? What are the ends or purposes of leadership: that is, leadership for <u>what</u> and <u>why</u> might one want to lead? What sort of leadership is needed today? and How can we make sense of the field of "leadership and organizational studies?" In sum, while one must know oneself to exercise leadership; it is ultimately about effective engagement with others, so learning to understand and build relationships with others is essential.

The aim of the doctoral program is to develop researcher/practitioners' expertise in distinguishing the processes involved in leadership, testing these processes through systematic inquiries, and sharing findings with others on a broad scale. Individuals served by the doctorate in Leadership include persons in leadership positions or seeking such positions in governmental, community, business, or nonprofit settings. These individuals must have a commitment to advancing practice through scholarship and sharing results of that scholarship.

The Planning Committee recognized the need for an innovative form of doctoral education, as the conventional route to the research Ph.D. (five to seven years or more) does not always meet the needs of organizational professionals and/or their employers. What is needed is a professional doctorate of advanced study and research, which is designed to meet the specific needs of organizational professionals. A comparison with the traditional Ph.D. and the professional doctorate must recognize that a paradigm shift has occurred and the constructions of knowledge in the social scenes is not limited to the type of doctoral program through which it is developed (Drake & Heath, 2010). In addition, the fundamental basis of a professional doctorate is that candidates must solve problems relevant to their organization and thus make a contribution to the contemporary knowledge base.

Program Delivery: This program will be low-residency and courses will be accessible to students in faceto-face, asynchronous, and synchronous online modalities. Correspondingly, program faculty aim to teach through cutting edge pedagogical methods. The LOS program already delivers a Master's of Leadership Studies through innovative technology-enhanced instructional strategies ranging from integrated media, web-conference enhanced discussion-based seminars, and interactive utilization of the

suite of Google (e.g., Docs, Slides, and Sheets). Program faculty will partner with USM's Center for Technology Enhanced Learning to remain on the front end of intentional technology-enhanced pedagogical methods.

C. Specific student outcomes or behavioral objectives.

The primary focus of the proposed doctoral program is to develop thought leaders who are committed to exploring leading-edge issues in innovative ways, combining scholarship, creativity, and self-inquiry. The core knowledge and skills required to explore these issues requires a transdisciplinary understanding of local, regional, national, and global organizational contexts and challenges and includes:

- A. Knowledge and skills to lead diverse people and organizations
- B. Professional integrity and reflective, ethical practice
- C. Ability to lead change and innovation
- D. Systems, complexity, adaptive, and associated theories and models of leadership
- E. Practice based research
- F. Research methods

Accordingly, the proposed program of study is broad in scope, interdisciplinary in nature, and will utilize the faculty strengths of Leadership & Organizational Studies and our strategic partner Social & Behavioral Sciences as well as the Muskie School of Public Service, School of Business, and School of Education and Human Development. Representatives from these departments within USM, USM Corporate Partners, and leaders from for- and non-profit organizations, government, health and human services in the region will be involved on an Advisory Committee for the program and build networks that support doctoral research. As such, two Concentrations of Study will be offered: (a) Leadership Studies; and (b) Organizational Leadership. Please see section IV of this proposal for a detailed description of each concentration area.

Graduates of this program will utilize conceptual framework that includes the following leadership dimensions: (a) the leader as person; (b) the leader in organizational systems; and (c) the leader in global systems, to become strong theoreticians who conduct research that substantially improves and informs practice. They will engage in role modeling to raise consciousness of the importance of leading for change in the flow of working with others. Also, they will deliberately develop other leaders willing to work at changing the organizational culture by practicing principles of systems change. The program of study will place strong emphasis on the conduct of systematic inquiry to strengthen expertise in leadership in a contemporary global context and to produce new knowledge that informs practice for the field at large. Organizational settings are significant laboratories for forming and testing explanations, practices, and theories of leadership.

The program will develop research practitioners whose theories are encountered every day and whose ideas are woven into daily interactions that make a difference to individuals, organizations, and communities without compromising the development of others in surrounding contexts. These research practitioners will focus on developing ideas and strategies that address real problems in their field with a dual commitment to short and long-term results. Through this program, candidates will develop the

knowledge and skills to see underlying patterns, model new actions, and function as mentors to promote a culture of change in their workplace (Fullan, 2005).

Typical candidates in this program will take two courses per term and be employed in a full-time position within an organization where they can conduct research and apply their learning from the program. Those students who are not employed will work with faculty to secure field assignments as a venue for conducting research and applying learning concepts. In keeping with a research practitioner model, the program will include core coursework in leadership theory, organizational studies, research design, systems theory, psychology and organizing urban studies to support each participant's core interests. The program will offer opportunities to study in depth the perspectives, methodologies, and vocabularies necessary to infuse the concept and principles of leadership in the study of organizational initiatives and interventions, program planning and evaluation, consultation, and resource utilization. The growing body of literature addressing applications of leadership in organizations provides strong support for this degree (Bersin and Associates, 2009; Brighouse & Woods, 1999; Chapman, 2003; Costley & Stephenson, 2005; DeGues; 1997; Frame, 2007; Fullan, 2005; Goldstein, J.A., 2009; Hargreaves & Fink, 2006; Hazy, J.K., 2007; Hopkins, 2001; Jantsch, 2006; Mendenhall, M., Osland, J., Bird, A., Oddou, G., & Maznevski, M. (2008), Montastersky, 2006; Perkins, 2003; Pink, D., 2006; Richardson, K.A., 2005; Wheatley, 2006).

Finally, graduates of this Ph.D. program will be able to do the following:

- 1. Make an original contribution to their chosen area of inquiry
- 2. Demonstrate the ability to write publishable articles and participate in the scholarly discourse of their area of inquiry
- 3. Understand and apply systems perspective to inquiry
- 4. Engage in transdisciplinary research and create a knowledge base that is pertinent for this specific area of inquiry
- 5. Understand how knowledge is constructed in social science
- 6. Apply, evaluate, and synthesize knowledge from multiple disciplines, critically engage with their literatures, approaches to knowledge, underlying assumptions, and theories
- 7. Have sufficient understanding of method to be able to apply the appropriate method to a research question and evaluate the appropriateness of various methods in the exploration of different kinds of questions
- 8. Work effectively in a collaborative context, creating and evaluating groups to support learning, and also be self-motivated with self-directed inquiries and are responsible for their learning process
- 9. To critically reflect and act on one's own ideas, analyses, and values as ascholar-practitioner.

III. Evidence of program need.

A. Existence of educational, economic and social needs to include citations or specific authorities or studies consulted.

According to the American Society of Training and Development, U.S. businesses spend more than \$170 billion dollars on leadership-based curriculum, with the majority of those dollars being spent on

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"Leadership Training." In higher education, academic leadership programs ranging from minors and certificates to bachelor's, master's, and doctoral programs, are found in business schools, education, academic affairs and honors, STEM programs, health and human services, agriculture and extension, liberal arts, social sciences, religion, and student affairs; supporting the premise that leaders are needed in all areas. Accordingly, there is a demonstrated need for doctorally prepared leadership practitioners in executive leadership, training and development, higher education student and academic affairs administration, nonprofit organizations, and as faculty in the more than 2,000 academic leadership programs worldwide.

Additional impetus for this proposal stems from an emergence of dialogue around the leadership doctorate during the annual and topical conferences of the International Leadership Association (ILA)— the largest international and interdisciplinary membership organization devoted solely to the study and development of leadership. Following an inaugural panel on the topic of "Leadership Education as Doctoral Study: What Does this Really Mean?" in 2013, dozens of sessions and academic papers as well as a "Doctoral Program Faculty and Leaders Learning Community" have surfaced. This global dialogue is consistent with and parallel to conversations among LOS faculty. Thus, this proposal has been developed in response to regional, national, and global needs to clearly distinguish the purpose and function of the leadership doctorate to align more closely to the needs of organizational leaders. Much scholarship and publications have provided a framework for this work and guided the development of this proposal. Hence, USM has an opportunity to be on the cutting edge of doctoral leadership education.

In e-mail correspondence offered in support of the Intent to Plan that preceded this program proposal, Andrew King, USM Director of Admissions, had this to say: "What I can say anecdotally is that there is a significant demand for doctoral programs in the southern Maine region, as we've seen with the PhD in Public Policy/Ed Leadership." Specifically, the Ph.D. in Public Policy/Ed Leadership at USM attracted 48 applicants for the 2013-2016 cohort and 46 for the 2016-2019 cohort, enrolling 22 and 25, respectively. Andrew concluded, "Leadership has, I believe, the potential to reach an even broader audience."

For 2-year programs, indicate potential employers who have requested the program and their specific employment projections. (Support data to be attached.)

n/a

B.

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

The proposed program would be unique in the UMS and there are no similar programs offered at other higher education institutions or agencies in Maine. Please see Appendix A for additional information regarding similar programs in the region as well as nationally.

Analysis of Competing Programs:

In Massachusetts, Boston College offers a Ph.D. in Organization Studies and Harvard offers a Ph.D. in Organizational Behavior as well as a Doctor of Business Administration. Relatedly, the University of

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Connecticut offers a Ph.D. in Industrial/Organizational Psychology. However, there are no institutions of higher education in the New England region that currently offer a Ph.D. in leadership studies or organizational leadership. Additionally, all of the aforementioned programs are classroom-based. Distinction between the proposed program in Leadership and related programs in the region:

- *A Ph.D. in Organization Studies*, e.g., Boston College, emphasizes organizational theory, research methods, and statistics, versus the bridge between theory and practice. Students inan Organizational Studies program demonstrate knowledge of the core areas of organizational behavior, research methods, high-level research skills, and high-quality teaching skills.
- A Doctor of Business Administration, e.g., Harvard, is a heavily financial and economic versus and applied social and behavioral advanced degree that focuses study on information and measurement systems for allocating resources among firms in the economy; formulating, executing and evaluating strategy; and understanding the profitability of suppliers, products, customers, distribution channels, and business units; and the use of economic analysis and statistical methods for dealing effectively with management problems in applied business fields such as capital markets, financial institutions, corporate finance, experimental and behavioral economics, business strategy and industrial organization.
- *A Ph.D. in Organizational Behavior*, e.g., Harvard, is a research versus an applied advanced degree program that trains scholars to draw on the concepts and methods of psychology and sociology in conducting research on behavior and management within complex organizations. It combines training in the theory and methods of psychology and sociology, the study of business administration, and empirical research on organizational phenomena. Students focus their research on either the micro (i.e. psychological, interpersonal) or macro (i.e. sociological, organizational) level.

There is only a sparse collection of fully online Ph.D. programs in leadership studies or organizational leadership nationally: North Central University (AZ), The Chicago School for Professional Psychology (DC), Andrews University (MI), Capella University (MN), Walden University (MN), Robert Morris University (PA), Johnson University (TN), and Our Lady of the Lake University (TX).

Additionally, while a few blended leadership studies or organizational leadership programs exist nationally—i.e., Alliant International University (CA), Antioch University (OH), Eastern University (PA), and University of Charleston (WV)—none are currently offered in the New England region.

Also, there are dozens of master's programs in leadership studies, organizational leadership, and related fields, in the New England region, that would feed enrollment for USM's Ph.D. These include, but are not limited to, USM's M.A. in Leadership Studies[1], American International College's M.S. in Leadership (ME), Saint Joseph's College's MBA (ME), Antioch University's M.S. in Organizational Leadership & Management (NH), Franklin Pierce University's MBA in Leadership (NH), Granite State College's M.S. in Leadership (NH), New England College's MBA in Nonprofit as well as Strategic Leadership (NH), Southern New Hampshire University's M.S. in Organizational Leadership, Norwich University's M.S. in Leadership (VT), Albertus Magnus College's M.A. in Leadership and M.S. in

Management and Organizational Leadership (CT), Eastern Connecticut State University's M.S. in Organizational Management, Quinnipiac University's M.S. in Organizational Leadership (CT), Yale's MBA, Johnson and Wales University's MBA in Global Leadership (RI), Northeastern University's Executive M.S. and M.S. in Leadership (MA), Wheelock College's M.S. in Nonprofit as well as Organizational Leadership (MA), and Massachusetts's MBA programs at American International College, Assumption College, and Harvard.

A Clear Distinction Between Educational Leadership and Leadership Studies: USM offers a Ph.D. in Public Policy with a Concentration in Educational Leadership and has brought in two cohorts of students focused on Educational Leadership that have served the K-12 education market primarily. There are clear distinctions in purpose between the public policy program's educational leadership focus and our program's emphasis on leadership in the private, nonprofit, and public sectors and in communities. According to USM 2018-19 Catalog, this doctorate is

a post-master's 45 credit hour cohort program designed for experienced educational leaders... The program integrates courses in public policy, educational policy and leadership, and dissertation research. Through the program, educational leaders develop the policy and research skills to influence educational policy and practice. Core public policy courses in the Ph.D. are complemented with training in education leadership and policy... The concentration in educational leadership and policy encompasses a range of educational policy and leadership topics and issues. (USM Ph.D. in Public Policy)

It is clear that the Ph.D. in Public Policy with a Concentration in Educational Leadership aims to prepare students for leadership roles in K-12 education and policy. In fact, the "Frequently Asked Questions" area of the Ph.D. in Public Policy with a Concentration in Educational Leadership program website includes the following:

Would this Ph.D. be a good fit for me?

The Ph.D. in Public Policy with a concentration in educational leadership and policy is designed for working professionals with experience and interest in educational policy who wish to attain a doctorate.

Is there going to be a focus on K-12 educators or will higher education also be included?

We are looking for a diverse cross-section of applicants across the spectrum of K-12, higher education, and non-profits.

Conversely, the proposed Ph.D. in Leadership is not an educational leadership doctorate nor a public policy doctorate. Instead, the proposed Ph.D. in Leadership seeks to prepare leaders capable of addressing various challenges that cross disciplinary boundaries and sectors. Graduates of the Ph.D. in Leadership will be equipped with expertise to lead within diverse contexts, from business and non-profit to government and community organizations, with knowledge and skills to work across disciplinary and sectoral boundaries, to facilitate productive dialog towards consensus, to conduct research and evaluate research done by others, and to foster resilience and sustainability within the environment they lead.

Interviews with Doctoral Program Directors:

In September 2017, the planning team met with the following individuals to learn more about the challenges associated with developing a doctoral program in leadership as well as best practices and "lessons learned" (See Appendix X for our interview protocol):

- Dr. Linda Klonsky, Chair and Associate Professor, Business Psychology and Organizational Leadership, The Chicago School of Professional Psychology
- Dr. L. J. McElravy, Graduate Chair and Assistant Professor of Youth Civic Leadership, Agricultural Leadership, Education & Communication, University of Nebraska – Lincoln
- Dr. Rhonda McClellan, Director and Professor, Ph.D. in Leadership, University of Central Arkansas
- Dr. Alicia Crumpton, Professor of Leadership Studies, Ph.D. Program Director, Johnson University
- Dr. Brian Myers, Professor and Chair, Agricultural Education and Communication, University of Florida
- Dr. Carmen McCrink, Associate Professor and Department Chair, Higher Education Administration, Barry University

Accordingly, the following themes emerged and are embedded in our proposal:

- Articulate a clear distinction between the expectations and outcomes of the program with respect to research/scholarship and application (i.e., individual leadership development): The proposed program, while rich in research methods and theoretical foundations of leadership and organizational theory, also provides opportunities for self-inquiry and individual leadership development.
- Provide support for graduate-level writing and research methods, specifically for higher level statistical analysis: The proposed program requires a Foundations of Research course on the front end prior to subsequent required coursework in quantitative, qualitative, and mixed methods, and concluding with a Research Design / Proposal Seminar on the back end. Once students have completed the four aforementioned methods courses, they will complete an advanced quantitative or qualitative--in consultation with their advisor--methods course. Repeatedly, program faculty will consider the idea of faculty "candidacy coaches" that advise students and check in with them regularly about dissertation topics. Also, a requirement for candidacy in addition to Comprehensive Exams, will be a 30-page research proposal in the Research Design / Proposal Seminar course. Additionally, the LOS faculty plan to initiate conversations with the graduate faculty of the USM Statistics department to determine the viability of a shared coursework delivery in quantitative methods. Finally, the program faculty will initiate conversations with the USM Learning Commons and LAC Writing Center to determine the viability of additional services specifically associated with writing support and statistics.
- Emphasize the potential for conducting research as well as relevant work experience in admissions criteria: The proposed admissions requirements include a written statement from the

applicant that outlines their proposed area of research and inquiry. Additionally, all applicants will provide a CV/Resume and preference will be given to students with at least three years relevant work experience.

- *Provide opportunities for participation in academic conferences:* The proposed curriculum includes a required Global Immersion experience which can be satisfied through LOS 7XX International Leadership Association Global Conference.
- *Provide opportunities for students to engage in research projects prior to candidacy:* The proposed program aims to involve students in research activity through participation in the ILA Global Conference (presenting research individually or in teams, ideally with faculty and/or other graduate students).

D. Enrollment projections for five years.

Please see Appendix F which includes memos from Nancy Griffin, USM Vice President for Enrollment Management & Student Affairs, and Andrew King, USM Director of Admissions.

IV. Program content.

The proposed Ph.D. in Leadership program is designed to develop individuals who have established their expertise in their professional field and seek to take on leadership roles in a variety of settings. Further, it aims to provide an environment where professionals from a variety of organizations can advance their leadership skills while sharing ideas and experiences amongst one another. The program has applications to Leadership as a Social Science discipline, as well as to Leadership as a practice, in organizations in the public, private, non-profit sectors and community

In order to provide students with tools to function effectively as leaders in today's environment, technology-enhanced pedagogy will be used throughout the curriculum. Correspondingly, faculty and students will work cooperatively in small groups, both face-to-face and via electronic media.

This program would be low-residency and courses would be accessible to students in face-to-face, asynchronous online, and synchronous online modalities. Specifically, students may complete all required coursework in any combination of the following modalities: (a) face-to-face on a USM campus; (b) synchronously via UMS web conferencing platform (i.e., Zoom); or (c) asynchronously online. Electives and Concentration courses would be offered through our current MLS program or through other USM programs in their current modalities. Additionally, each semester prior to dissertation hours, students would attend an extended weekend residency beginning on a Friday and ending on a Sunday afternoon. An additional week-long residency would be required each summer prior to dissertation hours.

Concentrations of Study will include:

• *Leadership Studies*: an interdisciplinary, academic and applied field of study that focuses on the fluid process and components of the interaction between leaders and followers in a

particular context. Specifically, this concentration of study will focus on the conceptual, philosophical, theoretical, and empirical grounding of leadership.

• Organizational Leadership: an interdisciplinary focus on leadership theory and practice for students seeking academic positions in research and teaching at leading universities, and for those seeking leadership opportunities in corporations, entrepreneurial businesses, health care, government, community, and nonprofit organizations. Specifically, this concentration study provides advanced graduate training based upon knowledge and research from business, sociology, communication, organizational behavior, leadership theory, psychology, and political science. The program emphasizes application: students have the opportunity to develop and refine administrative knowledge and leadership skills applicable to a variety of modern organizations within both the public (i.e., managing community challenges, leading non-profits, organizing, program evaluation, grant writing, mobilizing, and community development) and private sectors (i.e., managing change, maximizing social capital, facilitating innovation, and promoting sustainable enterprises).

Admissions Criteria:

Admissions criteria for the Ph.D. in Leadership will include the following:

- 1. An earned master's degree.
- 2. Official Transcripts of all prior academic work.
- 3. Graduate Record Examination (GRE) score.
- 4. Preference will be given to students with a GPA of 3.5 or higher in all graduate-level academic work.
- 5. CV or Resume. Preference will be given to students with at least three years of relevant work experience.
- 6. An essay that includes two separate, distinct parts:
 - a. A description of the applicant's scholarly area of interest and an outline of a plan for conducting an applied research project in the area of inquiry. This will allow the admissions committee to evaluate the applicant's potential for applied research.
 - b. A personal statement that describes the applicant's intent for applying to the program and how their personal and professional goals align with the program's mission/vision/values.
- 7. Two letters of recommendation, with at least one from an academic advisor or someone familiar with the applicant's ability to do advanced academic work.

Successful applicants will have demonstrated skills and competencies in their academic careers as well as their field of work, which may be in such areas as health care, the arts, social activism, organizational development, or corporate management.

Statement regarding transferability:

Up to 27 credits of credit may be transferred in from:

- Master's of Leadership Studies
- Other academic programs upon review of program faculty

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

The curriculum for this doctoral program will be structured to enable students to develop research skills as well as scholarly relationships with peers, faculty, and community of leaders in various types of organizations. We view "leadership" as a process and an activity, not a position. Consistent with the program philosophy, a major goal of the doctoral program is to prepare candidates to become research practitioners using systematic inquiry research and emerging knowledge to advance their work and to share what is learned with others. Some graduates of the program may elect to teach in university settings, but the majority will seek career opportunities in a variety of organizations. The program goals will be achieved through core courses in leadership and organizational studies, a concentration area, and a research course sequence for developing an inquiry agenda that includes a doctoral dissertation seminar. The total required hours of study will be 72 semester hours beyond the master's degree:

Area	Required Credit Hours
Leadership Core	24
Research Methods	15
Concentration	24
Dissertation	9
Total	72

Program for Leadership Ph.D.

Leadership Core		
Students will complete 24 credit hours in foundational leadership and organizational theory courses, including seminars in ethics, global leadership, and human development, and three one-credit weekend-intensive residencies (orientation, research, and pre-dissertation).		
LOS 700 Foundations of Leadership Studies I: Theory and Practice (Leadership Theory)		
LOS 701	Foundations of Leadership Studies II: Theory and Practice (Organizational and Group Dynamics/Behavior)	
LOS 702	Foundations of Leadership Studies III: Theory and Practice (Systems Theory, Organizational Development, and Change)	
LOS 7XX Leadership & Applied Ethics		

LOS 7XX	Leadership in a Global Society
LOS 7XX	Practicum in Human Development
LOS 7XX	Global Immersion (Students will complete one of the following: Leadership Study Abroad; International Leadership Association Global Conference; or Global Field Work)
LOS 7XX	Residencies (Students will attend three required one-credit Fri-Sun intensives at the beginning of each pre-dissertation year of study)

Program Concentrations

Students will develop their Program of Study by selecting 24 credits of coursework in either Leadership Studies or Organizational Leadership. Student will complete the 18 credits from the courses listed under each concentration list below and work with their faculty advisor to select an additional six credits of non-LOS courses (e.g., PPM, HRD, EDU, BUS, CPD).

Leadership Studies	Organizational Leadership
LOS 712 Deliberate Creativity and Innovation*	LOS 711 Communication and Relationship Building*
LOS 741 – 743 Exploring Leadership Series*	LOS 712 Deliberate Creativity and Innovation*
LOS 744 – 746 Exploring Leadership Series*	LOS 765 Organizational Consulting: A Perspective on Leadership*
LOS 761 Ethical and Spiritual Dimensions of Leadership*	LOS 7XX Organizational Finance & Budgeting
LOS 7XX Comparative Leadership Theory	LOS 7XX Training and Development*
LOS 7XX Comparative Organizational Theory	LOS 7XX Strategic Planning, Visioning, & Design

*Cross-listed with 500- or 600-level course in Master's of Leadership Studies program

Research Methods						
Students must complete a minimum of 15 credits of Methods courses.						
LOS 7XX	Foundations of Research*					
LOS 7XX	Statistical Methods for Leadership Studies I* (pre-req: Foundations of Research)					
LOS 7XX	Qualitative & Mixed Methods for Leadership Studies* (pre-req: Foundations of Research)					

LOS 8XX	Research Design / Pro Seminar*(pre-reqs: Foundations of Research; Statistical Methods for Leadership Studies I; and Qualitative & Mixed Methods for Leadership Studies)
LOS 8XX	Statistical Methods for Leadership Studies II** (option a; pre-req: Research Design / Pro Seminar)
LOS 8XX	Advanced Qualitative Methods for Leadership Studies** (option b; pre-req: Research Design / Pro Seminar)
LOS 7XX	Program Evaluation & Assessment** (option c; pre-req: Research Design / Pro Seminar)

*Indicates required courses.

**Students must take one of the following.

Dissertation

Students will complete one full dissertation. Additionally, students will complete a minimum of nine credits of Dissertation courses. LOS Faculty will maintain a 5:1 ratio (or less) of dissertation supervision. Finally, students will have seven years from their first semester in the program to complete all degree requirements.

LOS 8XX	Dissertation Proposal
LOS 8XX	Dissertation Continuation
LOS 8XX	Dissertation Completion

Statement Regarding Dissertation Supervision:

The LOS Faculty have made a determination that no faculty member will be unduly burdened by dissertation supervision. Thus, we have agreed that dissertation supervision assignments will be divided equitably among all faculty members in the program.

B. development of new courses and/or what they may displace;

The proposed program will require the development of the following new courses:

- LOS 7XX Leadership and Applied Ethics
- LOS 7XX Leadership in a Global Society
- LOS 7XX Organizational Finance and Budgeting .
- LOS 7XX Strategic Planning, Vision, & Design .
- LOS 7XX Practicum in Human Development .
- LOS 7XX Foundations of Research
- LOS 7XX Statistical Methods for Leadership Studies I .
- LOS 7XX Statistical Methods for Leadership Studies II .
- LOS 7XX Qualitative & Mixed Methods for Leadership Studies I .
- LOS 7XX Advanced Qualitative Methods for Leadership Studies II .
- LOS 8XX Research Design / Pro Seminar .
- LOS 7XX Program Evaluation & Assessment .
- LOS 7XX Comparative Leadership Theory •
- LOS 7XX Comparative Organizational Theory .
- LOS 8XX Dissertation Proposal .
- LOS 8XX Dissertation Continuation .
- LOS 8XX Dissertation Completion .

No current courses will be displaced. On the contrary, with the exception of the dissertation courses, all other courses listed above will be available to students in our MLS and graduate certificate programs at the 500- or 600-level in a cross-listed format. This will allow for more diversity of electives for our graduate students and foster the sustainability of a larger portfolio of graduate-level courses. Finally, LOS faculty will engage with the graduate faculty of USM's Muskie School of Public Service and Statistics program to evaluate opportunities for shared enrollment in existing research methods courses.

Declaration of Candidacy:

- 1. Students who successfully complete the fifth Research Methods course in the sequence— Research Design / ProSeminar--will also complete a proposal for their dissertation. The dissertation proposal process is embedded in LOS 8XX Dissertation Proposal. 2.
 - A passing score on Comprehensive Exams are required and will include:
 - a. Part 1: Completion of three out of five essay questions related to curricular content, with at least one question related to the student's program concentration.
 - b. Part 2: Intensive/Integrated case study analysis in small groups.
 - c. Part 3: Students are assigned an additional intensive/integrated case to analyze as if they were the leader of an organization or consulting an organization on the issues in the case. Three weeks after the completion of parts one and two, the student must meet with program faculty who will play the roles of members of the fictitious organization, and give a presentation / facilitate a conversation, i.e., here's your problem and what are you going to do?

C. type of research activity, if any, in program design;

Each student admitted into candidacy will complete a research-intensive dissertation. In addition, the doctoral program will employ strategic partnerships with USM's research centers and organizations in the communities USM serves to provide a cadre of faculty and doctoral students for applied research projects.

Courses that are cross-listed (500/700 or 600/800) will require that all doctoral students enrolled in these courses to complete additional work in the form of a research proposal that demonstrates the integration of course concepts into an applied research project. Additional research assignments will be delivered in

the program's mandatory 15 credit block of research courses and via relationships with mentors throughout the program.

D. nature of independent study, clinical experience, and/or field practicumsemployed in curriculum design;

For elective credit, students will have the option to design directed studies (courses in which students partner with a faculty member to do a deep immersion in a particular area of expertise) and independent studies (courses in which students create and implement a learning contract for a specific program of study, supervised by a faculty member). Faculty overseeing directed and independent studies will be compensated as is detailed in the AFUM contract.

E. impact of program on existing programs on the campus.

The proposed doctoral program will enrich multiple graduate and undergraduate entities as its reach will extend far beyond the doctoral graduates, providing opportunities for faculty in multiple programs including teaching and mentoring at the doctoral level and, as content experts, implementing multiple applied research initiatives while strengthening partnerships with a variety of corporate and community organizations.

However, there is a positive potential for impact on other USM graduate programs through shared coursework such as electives and quantitative methods.

Any budgetary implications are illustrated in Section IV. A. below.

V. Program resources.

A. Personnel.

1. Vita of faculty who will assume major role for program to be included in appendix.

Please see Appendix F.

2. Specific effect on existing programs of faculty assignments to new program. List necessary faculty adjustments.

The proposed degree program will not require faculty reassignment. Accordingly, current full- and parttime faculty of the Leadership & Organizational Studies program, full-time faculty and staff of the Lewiston-Auburn College, associated faculty of the University of Southern Maine, retired faculty of USM, and community partners will deliver all program curriculum. Specifically, we would develop the curriculum in a way that fosters opportunities for collaboration. For example, students pursuing the Community Leadership concentration may take courses offered in the Public Policy & Management (PPM) program. The LOS program has already partnered with the Muskie School to cross list courses that are of interest to graduate students in both programs.

B. Current library acquisitions available for new programs.

USM's research librarians and associated UMS databases:

- Academic Search Complete
- Annual Reviews Online
- Business Insights Essentials
- Business Source Complete
- Communication & Mass Media Complete
- ProQuest Dissertations & Theses
- PsycINFO

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

The proposed degree program will not require any new equipment. However, it will be necessary that the program has prioritized access to classrooms on the USM Portland and Lewiston campuses that are set up for web-conferencing. Specifications for these classrooms include a dedicated in-room computer, webcam (not ATV), ceiling microphones, and video projector. As of the date of this proposal, the following classrooms meet this need:

USM Portland Campus:

- Wishcamper 211
- Luther Bonney 241

USM Lewiston Campus:

- LAC 283
- LAC 287

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

The proposed degree program will not require any renovations of current space. However, one shared office for all LOS faculty with access to a networked printer/copier on the USM Portland campus will be needed.

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

The proposed degree program aims to collaborate with and has either had ongoing conversations with or plans to initiate conversations with the following USM graduate programs to cross list courses and allow opportunities for students to earn elective credit:

- Policy, Planning, and Management
- Statistics
- Adult and Higher Education
- Educational Leadership

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- Business Administration
- Public Policy
- Law

VI. Total financial consideration.

A. Estimate of anticipated cost and anticipated income of the program for five years.

Anticipated cost:

Table 1 below illustrates total operating costs of the proposed program. Please note that the aim of the proposed program is to be cost neutral and does not account for an additional six courses taught by part-time faculty annually.

Table 1. Projected ROI, 2019 - 2023

	Expens	e			Revenue				
Year	FY	TotalTotalAnnualCumulatCostive Cost		Year	FY	Program Revenue	Cumulative Revenue		
		9	Sk			\$k			
1	2019	19.6	19.6	1	2019	79.7	*79.7		
2	2020	122.3	141.9	2	2020	138.2	218.0		
3	2021	133.6	275.5	3	2021	178.1	396.1		
4	2022	246.2	521.7	4	2022	218.0	614.0		
5	2023	254.8	776.5	5	2023	276.5	890.5		

*Denotes ROI has been achieved

Table 2.

Projected Expense, 2019-2023

		Facul	Facul		Staff			Progra	Profess			Total	Total
Year	FY	ty -	ty -	Staff	¥∰	Suppl	Market	m	ional	Stipe	GA's	Annu	Cumu
rear		Salar	Bene		Bene	ies	ing**	Develo	Develo	nds*	***	al	lative
		у	fits		fits			pment	pment*			Cost	Cost
		\$k											
1	2019	2.8	0.0	0.0	0.0	0.0	9.8	2.5	0.0	0.0	4.5	19.6	19.6
2	2020	60.7	29.0	0.0	0.0	0.1	0.0	2.5	1.0	20.0	9.0	122.3	141.9
3	2021	66.4	29.0	0.0	0.0	0.2	0.0	2.5	2.0	20.0	13.5	133.6	275.5
4	2022	121.4	58.0	14.0	8.0	0.3	0.0	2.5	2.0	22.0	18.0	246.2	521.7
5	2023	127.0	58.0	14.0	8.0	0.3	0.0	2.5	2.0	25.0	18.0	254.8	776.5

*Provost's Budget: Under the current model

**Marketing costs for new programs are funded by USM Marketing.

***Office of Graduate Studies: Under the current model

Note: Part time faculty projections = Year One: one @ \$2,841; Year Two: two @ \$2,841 each; Year Three: four @ \$2,841 each; Year Four: four @ \$2,841 each; and Year Five: six @ \$2,841 each

Projected Revenue, 2019-2023

Table 3 below illustrates the revenue generated across the first five years of the proposed program according to the enrollment projections (see Appendix F) produced by USM Vice President for Enrollment Management & Student Affairs, Nancy Davis Griffin, with students taking six credits per term. It is important to reiterate the following from Dr. Griffin's projections: "...enrollment data with predicative models for doctoral programs is very hard to obtain." Thus, these projections are conservative and assume some attrition as well as 80% in-state and 20% out-of-state tuition rates. (Note: According to the UMS Student Tuition Report, 25.4% of USM graduate students were out-of-state. https://usm.maine.edu/sites/default/files/oir/Fall_Student_Tuition_Reports.pdf) As indicated below by Buster Neel, USM and **not** Lewiston-Auburn College will assume responsibility for any additional funding.

Per Buster Neel: "The institution agrees to add a new program. The institution will find the funding for the program if the revenue generated does not cover the operational budget. The CBO and Provost will need to make a decision every year how to fund this new program, if it does not meet the revenue projections or to create a fully funded base budget."

Table 3

Tuition Revenue Projections based on graduate in-state tuition at six credits per term (fall and spring), 2019 - 2023

Year	FY	Overall Enroll-	In- state	Out-of- state	Graduat e Tuition Revenue *	Unified Fee**	Graduate Profession al Developm ent Fee***	Total	Total, cumulative
		#	#	#	\$				
1	2019	12	10	2	72,672	4,176	2,880	79,728	79,728
2	2020	20	16	4	126,480	6,960	4,800	138,240	217,968
3	2021	26	21	5	162,816	9,048	6,240	178,104	396,072
4	2022	32	26	6	199,152	11,136	7,680	217,968	614,040
5	2023	40	32	8	252,960	13,920	9,600	276,480	890,520

*Graduate Tuition Revenue: In-state = \$393 per credit hour; Out-of-state = \$1,063 per credit hour

**Unified Fee: \$29 per credit hour

***Graduate Professional Development Fee: \$20 per credit hour

Please note: Additional revenue could be derived from the following sources:

• Additional students at the out-of-state or NEBHE / Canadian graduate tuition rates beyond

current conservative estimates

- Additional SCH beyond 12-credits per fall/spring
- External funding through grants or sponsorships

B. Detailed information on first-year costs, including:

1. new personnel requirements (include employee benefits);

Courses will be taught in load by full-time faculty and by highly qualified part-time faculty. Joyce Gibson, currently Dean of LAC, will be relinquishing the deanship at the end of AY 2017-18, returning to the LOS faculty for AY 2018-2019 and beyond, where she will teach a 3+3. Additionally, Associate Professor of Policy, Planning, and Management Josephine LaPlante in the Muskie School of Public Service (per her March 3, 2017, appointment) will teach at least one course per semester in Leadership. Dissertation supervisors will be compensated using the model already in place for other units at the university. Demand is anticipated as such that 10-12 students should be admitted every year.

2. first-year revenue and identity of source;

Funding to cover program costs will be derived from tuition revenue. No faculty will be exclusively designated to the doctoral program; all full-time LOS Faculty will collectively share responsibility for the program. Although students will move through the program at their own pace, they will be closely advised, so it will be a simple matter to allocate professors from the unit's faculty to teach as needed in the doctoral program. On average, tuition revenue should slightly exceed faculty salary & benefits as it does in the model deployed for our master's degree program. This overage will more than pay for the funding needed to cover stipends for dissertation supervision.

Please see Table 1 above for first-year revenue.

USM Graduate tuition rates can be accessed here: <u>https://usm.maine.edu/sites/default/files/student-financial-services/Graduate1718.pdf</u>

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

Please see Tables 1 and 2 above.

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

None has been identified at this time.

lifetime of outside or independent funding and plan for how and when~ becomes part of E&G budget.

n/a

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5.

VII. Program evaluation.

Evaluation and assessment procedures are integral to successful, effective academic leadership programs. Accordingly, the doctoral faculty of the proposed program will employ the following processes:

Regular Program Evaluations:	Intentional program evaluation will be a keystone of the program. Specifically, program faculty will evaluate each graduating group through a methodical process that reflectively and developmentally assesses course outcomes, content, and procedures for teaching and learning. Changes to curriculum, content, pedagogy, and assessment, will be made as needed.
Formative:	Testing the merits of our model will be an ongoing process and include methods of observation, pre-post evaluations, tiered feedback, and learning goals.
Summative:	Equally, rendering judgments on our models of assessment will be critical. Thus, the faculty will engage in biennial reflective assessment, measuring learning outcomes and associated curricula, holding focus groups with recent graduates, and evaluating student dissertations.
A. A post audit of an app	proved new program must be made after two years.

B. The results of the audit must be reported to the Vice Chancellor for Academic Affairs.

Appendix A – Regional and Modal Analysis of Similar Programs

New England Region

In Massachusetts, Boston College offers a Ph.D. in Organization Studies and Harvard offers a Ph.D. in Organizational Behavior. Relatedly, the University of Connecticut offers a Ph.D. in Industrial/Organizational Psychology. However, there are no institutions of higher education in the New England region that currently offer a Ph.D. in leadership studies or organizational leadership. Additionally, all of the aforementioned programs are classroom-based.

Online Ph.D. Programs in Leadership or a Related Field

There is only a sparse collection of fully online Ph.D. programs in leadership studies or organizational leadership nationally: North Central University (AZ), The Chicago School for Professional Psychology (DC), Andrews University (MI), Capella University (MN), Walden University (MN), Robert Morris University (PA), Johnson University (TN), and Our Lady of the Lake University (TX).

Blended Ph.D. Programs in Leadership or a Related Field

Additionally, while a few blended leadership studies or organizational leadership programs exist nationally—i.e., Alliant International University (CA), Antioch University (OH), Eastern University (PA), and University of Charleston (WV)—none are currently offered in the New England region.

Targeted Master's Programs in Leadership or a Related Field for Recruitment

Finally, there are dozens of master's programs in leadership studies, organizational leadership, and related fields, in the New England region, that would feed enrollment for USM's Ph.D. These include, but are not limited to, USM's M.A. in Leadership Studies, American International College's M.S. in Leadership (ME), Saint Joseph College's MBA (ME), Antioch University's M.S. in Organizational Leadership & Management (NH), Franklin Pierce University's MBA in Leadership (NH), Granite State College's M.S. in Leadership (NH), New England College's MBA in Nonprofit as well as Strategic Leadership (NH), Southern New Hampshire University's M.S. in Organizational Leadership (NH), Southern New Hampshire University's M.S. in Organizational Leadership (VT), Albertus Magnus College's M.A. in Leadership and M.S. in Management and Organizational Leadership (CT), Eastern Connecticut State University's M.S. in Organizational Management, Quinnipiac University's M.S. in Organizational Leadership (CT), Yale's MBA, Johnson and Wales University's MBA in Global Leadership (RI), Northeastern University's Executive M.S. and M.S. in Leadership (MA), Wheelock College's M.S. in Nonprofit as well as Organizational Leadership (MA), and Massachusetts's MBA programs at American International College, Assumption College, and Harvard.

Appendix B – Supporters

The following individuals have assisted in the development of this proposed program through one or more of the following:

- Provided insight regarding program curricula and administration
- Offered to supervise dissertations
- Teach courses in the program

Internal to USM:

- Dr. Josie LaPlante; USM Associate Professor of Public Policy; (207) 780-4863; josephine.maskarinetz@maine.edu
- Dr. Elizabeth Turesky; USM Associate Professor of Leadership & Organizational Studies; (207) 753-6606; <u>eturesky@maine.edu</u>
- Dr. Jeannine Uzzi; USM Provost and VP for Academic Affairs; 207-780-4485; usm.provost@maine.edu
- Dr. Dan Jenkins; USM Chair and Associate Professor of Leadership & Organizational Studies; (207) 753-6592; <u>daniel.m.jenkins@maine.edu</u>
- Dr. Carol Nemeroff; USM Professor of Social & Behavioral Sciences; (207) 753-6671;_ cnemeroff@maine.edu
- Dr. Marv Druker; USM Professor Emeritus; (207) 233-3265; druker@maine.edu
- Dr. Betty Robinson; USM Professor Emeritus; (207) 831-4774; brobinso@maine.edu
- Dr. Mary Anne Peabody; USM Assistant Professor of Social & Behavioral Sciences; (207) 753-6672; <u>maryanne.peabody@maine.edu</u>
- Dr. Christy Hammer; USM Associate Professor of Social & Behavioral Sciences; (207)753-6518; <u>chammer@maine.edu</u>
- Dr. Mark Lapping; USM Professor Emeritus; (207) 228-8180; mlapping@maine.edu
- Dr. Glenn Cummings, President; 207-780-4480, president@maine.edu
- Dr. Tara Coste; Associate Professor of Leadership & Organizational Studies; (207) 753-6596; tcoste@maine.edu
- Dr. Lydia Savage; USM Professor of Geography; (207) 780-5321; lsavage@maine.edu
- Dr. Sharon Timberlake; Lecturer, Leadership & Organizational Studies; (207) 753-6586; Sharon.timberlake@maine.edu
- Dr. Elizabeth Goryunova; USM Assistant Professor of Leadership & Organizational Studies; (207) 753-6509; <u>elizabeth.goryunova@maine.edu</u>
- Dr. Russell Kivatisky; USM Assistant Professor of Communication; (207) 780-5035; russellk@maine.edu
- Dr. Joyce Gibson; USM Dean of Lewiston-Auburn College; (207) 753-6594; jgibson@maine.edu
- Maureen Perry; USM Research Librarian; (207) 753-6546; <u>mperry@maine.edu</u>
- Dr. Paul Cochrane; USM Director of Online Teaching and Learning; (207) 780-4540; paul.cochrane@maine.edu
- Dr. Rucha Modak; USM CTEL Learning Designer; (207) 228-8598; rucha.modak@maine.edu
- Michael Matis; USM CTEL Learning Designer; (207) 780-4238; <u>mmatis@maine.edu</u>
- Damien Michaud; USM CTEL Learning Designer; (207) 228-8001; damien.che.michaud@maine.edu
- Dr. Joanne Williams, Dean, College of Management and Human Service and Associate Professor of Sport Marketing; (207) 780-4665; joanne.williams@maine.edu
- Dr. Catherine Fallona, USM Professor, Literacy, Language, and Culture; School of Education& Human Development; (207) 228-8326; <u>catherin.fallona@maine.edu</u>
- Dr. Robert Heiser, USM Associate Professor of Marketing; (207) 228-8364; <u>Robert.heiser@maine.edu</u>
- Corey Hascall, USM Director of Alumni Engagement & Annual Giving; (207) 780-4833;

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corey.hascall@maine.edu

 Ainsley Wallace, USM Vice-President, Employer Relations & Foundation; (207) 780-4119; ainsley.wallace@maine.edu

External to USM:

- University of Southern Maine Lewiston-Auburn, Portland, and Gorham campuses
- International Leadership Association; Shelly Wilsey, COO; 1110 Bonifant Street, Suite #510, Silver Spring, MD 20910-3358; (202) 470-4818 ext. 101; swilsey@ila-net.org
- Association of Leadership Educators; Dr. Jill Arensdorf, President; (785) 628-4303; jrarensdorf@fhsu.edu
- Rebecca Swanson Conrad; Androscoggin County Chamber of Commerce President & CEO; (207) 783-2249; <u>Beckie@LAMetroChamber.com</u>
- Lewiston-Auburn Economic Growth Council; John Holden, President; (207) 784-0161; jholden@economicgrowth.org
- Dr. Linda Klonsky, Chair and Associate Professor, Business Psychology and Organizational Leadership, The Chicago School of Professional Psychology; (202) 706-5064; <u>lklonsky@thechicagoschool.edu</u>
- Dr. L. J. McElravy, Graduate Chair and Assistant Professor of Youth Civic Leadership, Agricultural Leadership, Education & Communication, University of Nebraska – Lincoln; (402) 472-8058; <u>li.mcelravy@unl.edu</u>
- Dr. Rhonda McClellan, Director and Professor, Ph.D. in Leadership, University of Central Arkansas; (501) 852-0910; <u>rmcclellan@uca.edu</u>
- Dr. Alicia Crumpton, Professor of Leadership Studies, Ph.D. Program Director, Johnson University; <u>acrumpton@johnsonu.edu</u>
- Dr. Brian Myers, Professor and Chair, Agricultural Education and Communication, University of Florida; (352) 273-2567; <u>bmyers@ufl.edu</u>
- Dr. Carmen McCrink, Associate Professor and Department Chair, Higher Education Administration, Barry University; (305) 899-3702; <u>cmccrink@barry.edu</u>

Appendix C – Analysis of similar programs offered outside of Maine the University System as well as other higher education institutions nationwide.

A. In Massachusetts, Boston College offers a Ph.D. in Organization Studies and Harvard offers a Ph.D. in Organizational Behavior. Relatedly, the University of Connecticut offers a Ph.D. in Industrial/Organizational Psychology. However, there are no institutions of higher education in the New England region that currently offer a Ph.D. in leadership studies or organizational leadership. Additionally, all of the aforementioned programs are classroom-based.

There is only a sparse collection of fully online Ph.D. programs in leadership studies or organizational leadership nationally: North Central University (AZ), The Chicago School for Professional Psychology (DC), Andrews University (MI), Capella University (MN), Walden University (MN), Robert Morris University (PA), Johnson University (TN), and Our Lady of the Lake University (TX).

Additionally, while a few blended leadership studies or organizational leadership programs exist nationally—i.e., Alliant International University (CA), Antioch University (OH), Eastern University (PA), and University of Charleston (WV)—none are currently offered in the New England region.

Finally, there are dozens of master's programs in leadership studies, organizational leadership, and related fields, in the New England region, that would feed enrollment for USM's Ph.D. These include, but are not limited to, USM's M.A. in Leadership Studies₁, American International College's M.S. in Leadership (ME), Saint Joseph College's MBA (ME), Antioch University's M.S. in Organizational Leadership & Management (NH), Franklin Pierce University's MBA in Leadership (NH), Granite State College's M.S. in Leadership (NH), New England College's MBA in Nonprofit as well as Strategic Leadership (NH), Southern New Hampshire University's M.S. in Organizational Leadership (NH), Southern New Hampshire University's M.S. in Organizational Leadership, Norwich University's M.S. in Leadership (VT), Albertus Magnus College's M.A. in Leadership and M.S. in Management and Organizational Leadership (CT), Eastern Connecticut State University's M.S. in Organizational Management, Quinnipiac University's M.S. in Organizational Leadership (CT), Yale's MBA, Johnson and Wales University's MBA in Global Leadership(RI), Northeastern University's Executive M.S. and M.S. in Leadership (MA), Wheelock College's M.S. in Nonprofit as well as Organizational Leadership (MA), and Massachusetts's MBA programs at American International College, Assumption College, and Harvard.

¹ A survey of USM's current Leadership Studies graduate students and alumni of the Master's Degree in Leadership Studies program demonstrated a clear demand for the doctoral degree. Within in 24 hours of a communication being sent out, over 50 individuals indicated that they would be interested in the program. Additionally, the planning team receives 1-2 inquiries weekly.

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School	Program	Degree
Alliant International University	Leadership	PhD
Alvernia University	Leadership	PhD
Andrews University	Leadership	PhD/EdD
Antioch University	Leadership & Change	PhD
Arizona State	Leadership and Innovation	EdD
Benedictine University	Values-Driven Leadership	PhD/DBA
Binghamton University	Organizational Behavior/Leadership	PhD
Bowling Green State University	Leadership Studies	EdD
California Institute of Integral Studies	Transformative Leadership	PhD
Cardinal Strich University	Leadership for the Advancement of Learning and Service	PhD/EdD
The Chicago School of Professional Psychology	Organizational Leadership	PhD
City University of Seattle	Leadership	EdD
Columbia University	Adult Learning & Leadership	EdD
Concordia University Chicago	Leadership	PhD/EdD
Creighton University	Interdisciplinary EdD. in Leadership	EdD.
Dallas Baptist University	Leadership Studies	PhD
Eastern University	Organizational Leadership	PhD
Gannon University	Organizational Learning and Leadership	PhD
George Washington University	Executive Leadership Doctoral Program	EdD
Gonzaga	Leadership Studies	Ph. D.
Harvard	Education Leadership	Ed. L.D.
Indiana Tech	Global Leadership	PhD
Indiana University of Pennsylvania	Admin & Leadership Studies, Nonprofit & Public Sectors	PhD
Indiana Wesleyan University	Organizational Leadership	PhD
James Madison University	Leadership for Nonprofit & Community	PhD

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Johnson University	Organizational Leadership	PhD
Lincoln Memorial University	Executive Leadership	EdD
Louisiana State University-Shreveport	Leadership Studies	EdD
Marian University (WI)	Admin. & Leadership	PhD
North Carolina A&T State University	Leadership Studies	PhD
Northcentral University	Bus Admin/Organizational Leadership	PhD
Northeastern University	Organizational Leadership Studies concentration	EdD
Nova Southeastern University Our Lady of the Lake University	Organizational Leadership concentration Leadership Studies	EdD PhD
Pepperdine University	Organizational Leadership	EdD
Regent University	Organizational Leadership	PhD/DSL
Saint John Fisher College	Executive Leadership	EdD
Saint Mary's University of Minnesota	Leadership	EdD
Saybrook University	Organizational Systems	PhD
Shenandoah University	Organizational Leadership	Dprof
Spalding University	Leadership Education	EdD
University of Central Arkansas	Interdisciplinary PHD in Leadership	PhD
University of Colorado	Leadership, Research, & Policy	PhD
University of the Cumberlands	Leadership	PhD
University of LaVerne	Organizational Leadership	EdD
University of Maryland Eastern Shore (UMES)	Organizational Leadership (ORLD)	PhD
University of Nebraska	Human Sciences: Leadership Studies (specialty)	PhD
University of Nevada, Las Vegas	Workforce Development & Organizational Leadership	PhD
University of San Diego	Leadership Studies	PhD
University of San Francisco	Organization and Leadership	EdD
University of the Incarnate World	Organizational Leadership	PhD
Walden University	Management- Leadership & Organizational Change	PhD
Western Kentucky University	Organizational Leadership	EdD

	Organizational Learning, Leadership, &	-	
Wilmington University	Innovation	EdD	ł

Appendix E - Interview Protocol: Doctoral Program Directors/Coordinators

- 1. How long has your program been in existence?
- 2. What components of your program do students report enjoying the most?
- 3. Which ones are most challenging?

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- 4. Do you have any internships or field work?
- 5. What advice would you give to someone developing a new program?
- 6. What are the key factors in your program admissions criteria?
- 7. Anything you wish was part of your program that isn't?
- 8. Is there a specific sequence/structure that you built into the program to increase its efficiency/effectiveness?
- 9. What metrics are built into the program to measure its success?
- 10. What is the ratio faculty to PhD candidates?
- 11. By what means and how frequently does the interaction take place among students and faculty, and among students (if any). Are there any common events that get everyone together in the same "room"?

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Appendix F – Enrollment Projections

Please click the following link to view the memos from Nancy Griffin and Andrew King: https://drive.google.com/drive/folders/12sjL9uSNq2gyZo0l9h8jR0XrLjL8jsM8?usp=sharing

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Appendix G – Faculty CVs

Please click the following link to be directed to a Google Drive folder that contains all LOS faculty CVs: https://drive.google.com/open?id=14Kc6p59ocORKiqQe18Pw2vC4-OL_5UjR University of Maine System Board Policy

GOVERNANCE AND LEGAL AFFAIRS Section 203 Chancellor – Appointment and Responsibilities

Effective: 2/82 Last Revised: 7/17/89 Responsible Office: Clerk of the Board

Policy Statement:

The Chancellor of the University of Maine System is appointed by the Board of Trustees and serves at its pleasure as the chief <u>executive</u> administrative and education officer of the University System. The Chancellor is accountable to the Board for making certain that the System <u>achieves</u> its mission and operates to serve students and the state of Maine in accordance with <u>Board-established directions</u>, Maine Statutes, and the policies and procedures of the University of Maine System.

The Chancellor is responsible for:

-the governance and administration of the <u>entire</u> University System, <u>including oversight of</u> shared services provided to the entire university system, legal affairs and identification and management of risk;

-the implementation of Board <u>priorities and objectives</u>, policy and procedures and other such duties as the Board may delegate or assign;

--providing the Board with professional, <u>strategic</u> judgments on all matters affecting the System and the universities;

- System planning, in conjunction with campus Presidents <u>and major system staff</u>, for academic affairs, student affairs, <u>research and</u> public service programs, financial operations, <u>human</u> <u>resources, labor relations</u>, capital plans, and resource utilization;

-the preparation of all operating, and capital, and auxiliary enterprise budgets, appropriation requests, bond issues, and statutory changes;

-the presentation of appropriation requests, bond issues, and statutory changes to executive or legislative branches of Maine government in accordance with the provisions of the Maine statutes;

-the nomination of persons to head the campuses and other System major staff for appointment by the Board of Trustees, and for implementation of professional development programs and performance review of the presidents and major staff;

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- seeking consultation and advice from the Presidents, both collectively and individually, on matters pertaining to the System and, as appropriate, to each campus;

- the development of an effective statewide <u>communications</u>, public relations and legislative program;

-- providing leadership in the relationships of the University of Maine System with the Maine Community College System, pre-K to 12 education, the New England Commission of Higher Education, and the employer community;

-- serving as a leading spokesperson for higher education in Maine.

1/17/2019

Priorities and Preferred Characteristics UMS Chancellor Revised 1/26/19

I. Priorities for action by the next chancellor:

- 1. <u>Building on recent good relationships with the executive and legislative branches</u> of the Maine government, enhance or establish such relationships with the current leaders in those offices, now and going forward, to continue to articulate clearly the value of public higher education for Maine.
- 2. <u>Work to achieve clarity on the short-term and longer-term goals and strategy to</u> <u>implement the One University framework, including removing barriers to effective</u> <u>academic collaboration</u>.
- Work collaboratively with all stakeholders to achieve the Board of Trustees' <u>"Declaration of</u> Strategic Priorities to Address Critical State Needs": Advancing Workforce Readiness and Economic Development; Increasing Maine Educational Attainment; Aligning Academic Programs and Innovation to Drive Student Success and Employer Responsiveness; and Maintaining Competitiveness and Sustainability to Meet Critical State Needs.
- 4. Inspire and lead UMS stakeholders to create a culture ready to change in order to better serve students, families, communities, and <u>employers businesses</u>.
- 5. Proactively engage with the Board of Trustees, presidents, UMS executive staff, faculty, staff, students, Boards of Visitors, and other stakeholders in System planning and implementation of priority directions.
- 6. Serve as the leading spokesperson for higher education in Maine. Represent UMS with the legislature, the governor and state executives, Congressional delegation, key community and private sector leaders to promote the role of public higher education and appropriate funding levels.
- 7. Provide collaborative executive leadership to best align all university resources (financial, physical, and human) to optimize effectiveness of operations.
- 8. Lead a continuous strategy to communicate the goals and priorities of UMS on behalf of students and the State of Maine to all internal and external audiences.
- 9. Implement Board priorities and objectives and provide the Board with professional, strategic judgments on all matters affecting the System and the universities and the evolving needs for public higher education in Maine.

- 10. Lead the presidents of the universities to align with, support and achieve System and Board of Trustees goals and objectives, while recognizing, appreciating and leveraging the strengths of each university and campus.
- 11. Lead an academically relevant educational system to meet the needs of workforce development, boost the economy of the State of Maine and provide students skills and learnings that contribute to their successful futures while minimizing their personal debt.
- 12. Ensure that the System meets and exceeds the expectations of its mission, including the most relevant forms of educational delivery, and prudent use of fiscal resources.

II. Desired characteristics, qualifications, and competencies (Sections re-ordered from earlier version)

Leader committed to higher education

- Commitment to public higher education and Maine students and families; broad and deep understanding of <u>the current and evolving trends in higher</u> education <u>and related fields</u>
- 2. Understanding of and commitment to academic structure and shared governance process that leads to effective and timely decision-making
- 3. Academic and intellectual credibility appropriate to a higher education leader
- 4. Student-oriented; champion of <u>current and future</u> UMS students, <u>and committed</u> to their development as fully informed and engaged participants in their <u>communities and the modern global society</u>

Strong communicator and advocate

- 1. Strong record of effective communication --listening, speaking, writing, --both internal and external to the organization; ability to articulate the mission and value of the university to the public and to serve as an ambassador for UMS
- 2. Demonstrated experience in developing external support
- 3. Ability to craft and sustain communications and relationships with all stakeholders <u>on multiple levels and issues</u>, including on key change issues

4. Demonstrated skill at working with political figures, policy and opinion leaders and local, state and national government officials to advance an organization like the university system

Strategic and Collaborative Leader

- 1. Demonstrated experience in leading through collaborative models, engaging all stakeholders, including the University workforce
- 2. Ability to see past current and mid-term goals to long-term vision and opportunities, and to lead positive progress in the rapidly changing higher education environment
- 3. Experience in bringing positive change to a complex organization with diverse internal constituencies and great public interest in the change
- 4. Ability to employ skills in leadership, coaching, management, and collaboration to lead change and to manage and resolve conflicts
- 5. Willingness to take risks and ability to stay the course with focus, tenacity and courage
- 6. Ability to inspire others to work for the larger good of the students and the State

Successful Executive Leader

- Track record of successful senior leadership (chancellor or parallel executive position) experience in a complex organization be it a higher education institution or system or a business, non-profit, government or other major enterprise, with experience relevant to UMS situation, preferably within a multi-organization system
- 2. Ability to build and lead a high performing management team to effectively manage and grow a large, complex organization over a sustained time period
- Demonstrated ability to address and bring closure to difficult or controversial issues/problems, to lead the team to implement the outcome and to take responsibility for the results
- Ability or experience providing executive level support to an organization's collective bargaining efforts involving multiple unions representing the majority of employees / faculty.

- 5. Business, political and financial acumen; ability to build relationships with employers and political leaders
- 6. Strategic thinking
- 7. A dedicated focus on collaborative leadership
- 8. An emphasis on timely, action-oriented approaches to getting things done and meeting measurable KPIs key performance indicators
- 9. A discipline for self-accountability and holding others accountable

1/26/19

UNIVERSITY OF MAINE SYSTEM SOLE SOURCE JUSTIFICATION

Pursuant to the policies of the University of Maine System and Maine Law, the University must procure all material, equipment, supplies and services via competitive means, however, the University may waive the competitive process and approve sole source procurement provided the requestor can adequately justify its use. In cases where an alternate supplier for a similar product or service cannot be identified, the requestor must document that a good faith effort has been made in seeking other sources. **Sole source justification cannot be based on quality, price, mere preference or urgency created by inadequate planning or untimely action by the requestor, such as the imminent expiration of a contract that could have been foreseen.**

All sole source justifications are subject to public review; other suppliers may have the opportunity to review the justification and protest the purchase if they feel the justification is not adequate or based on valid grounds. Therefore, the justification must contain clear, in depth and accurate information in order to avoid the possibility of delaying the procurement.

University employees may not have a financial interest in any contract entered into by the University except in circumstances approved in advance, in writing, by the appropriate University official as further described in APL VII-B, *Procurement Standards of Conduct.*

INSTRUCTIONS

- 1) Please type or print legibly.
- 2) Complete all categories and sections that apply.
- 3) Provide full explanation, complete descriptions, and/or list all relevant reasons where space has been provided. Sole Source Justification forms lacking sufficient detail cannot be approved.
- 4) Sign and date the form at the end and forward to your Campus Purchasing Authority for approval.

Authority for approval:

STATEMENT

Ι, _	Henry J Felch	Phone	207-621-3371
	Name of Principal Investigator, Requestor or End-User (please print)		

am aware that the University of Maine System policy mandates that the University procure all material, equipment, services, and supplies via competitive means whenever practicable. However, I am requesting sole source procurement based on the following criteria (attach additional sheets as necessary):

Requested product/service/estimated price:

<u>One-Year Subscription Agreement</u>: (Includes Hardware, Software, Training and Support) – \$330,000

Three-Year Special Pricing Subscription Agreement: (Includes Hardware, Software, Training and Support)

- Year 1: \$295,000
- Year 2: \$280,000
- Year 3: \$280,000
- Total \$855,000 for a three-year agreement

Ordering PN	Description
CB-RNG-SW-CLS-A02 License Price for Range Environment (one class)	Range environment for one class (20 trainees + 1 observer + 1 trainer): Traffic generator, Attack generator, Training Management System, Out of the box network simulation
CB-RNG-SW-SCN-A01 License Price for SOC Scenarios Package	SOC\IT Scenario Package
CB-RNG-PS-TRN-PO2 Train the Trainer	Onetime payment for a total of 5 days for 5 trainees, full syllabus is detailed in the SOW

Source:

Cyberbit 3571 Far West Blvd #168 Austin, TX 78731 Tel: 512.676.8731

- The requested product has unique design/performance specifications which are essential to my research, protocol or other needs and are not available in comparable products. BOTH SECTIONS A & B OF THIS CATEGORY MUST BE ANSWERED.
 - A. These capabilities are:

The Cyberbit Range provides several unique capabilities which are essential both for our research and to ensure we provide the required elements of our planned cybersecurity degree programs

- Realistic simulation of a cyber-attack environment as it will be experienced by the graduate in real-life. This requires a simulation of a real-world corporate network infrastructure, network traffic, simulated cyber-attacks, and use of real-world security products
- The ability to provide both on-premise (in-house) training, as well as remote training of multiple students
- The ability to provide both a basic platform for a cyber lab, enabling hands-on practice, as well as advanced research of cyber malware and doctrine approaches
- A rich, and substantial amount of cybersecurity training scenarios that align with our program, ranging from introductory networking lessons to advanced forensics, analysis, and incident response scenarios. These scenarios, provided in Cyberbit's platform, are optimal for serving as the core of our cyber security degree program
- Comprehensive documentation to accompany the training scenarios and enable us to run the scenarios effectively
- The Cyberbit platform provide additional, unique educational tools and capabilities which are essential for best-practice training and tutoring including the ability to record and debrief the session, student scoring and evaluation, and multiple levels of difficulty
- Security Operation Center (SOC) simulation that will enable the university to provide, in addition
 to academic programs, various non-academic courses for the benefit of the community, including
 career transformation, workforce development, and industry training that will increase the cyber
 resilience of organizations around us
- B. In addition to the product requested, I have contacted other suppliers identified below and considered their products or similar capabilities. These products are not acceptable because they

are lacking one or more of the technical specifications described in A above:

1. Vendor: Ixia

Product Description: Ixia Cyber Range

Vendor Contact/Phone Number: 877.367.4942

Technical Deficiency: Does not provide simulated attack scenarios. Does not provide a corporate network simulation, does not provide real-world security tools, all these are essential for our cybersecurity program and for research. Does not provide session recording and debrief, or student evaluation. Does not provide instructor tools

2. Vendor: Cisco

Product Description: Cisco Cyber Range

Vendor Contact/Phone Number: 978-936-0000

Technical Deficiency: Does not include industry leading security tools for the benefit of our students aside Clsco products. Does not provide a rich selection of cyber attack scenarios that align with a cybersecurity curriculum, does not provide the required training capabilities including session recording and debrief, and student evaluation.

2. The requested product is an integral repair part or accessory compatible with existing equipment.

Α.	Describe existing equipment:	
	Manufacturer/Model Number:	Age/Current
	Value: Estimated remaining life span:	
В.	Requested Equipment/Accessory/Part	
C.	: Manufacturer/Model Number:	

Explain relationship between current equipment and requested equipment:

- 3. The requested product or service is essential in maintaining experimental or administrative continuity. <u>Provide a thorough explanation in "Explain in detail" section</u>.
 - <u>N</u> Requested product or service is being used in continuing experiments;
 - <u>N</u>Other investigators have used this product or service in similar research and for comparability of results, I require it;

N _____ The use of another would require considerable time and money to evaluate.

Explain in detail:

4. The requested product is one with which I (or my staff) have specialized training and/or extensive experience. Retraining would incur substantial cost in money and/or time.

Manufacturer/model of existing equipment:
Age/Current Value:
Estimated hours/per person required to re-train:
Number of persons requiring retraining:
Other factors

5. Other factors not addressed above which may assist in the sole source justification review process are:

The Cyberbit Range is the industry-standard platform for cybersecurity simulation and training or higher education. In addition to the considerations we have provided, the product has been recommended by Miami Dade College, who opened their cyber range center and program in August 2018, and by Regent University, who opened their cyber range in early 2018, and has recently been accredited by the NSA and DHS as a Cybersecurity Center of Excellence, as a result. Being the most mature product in its category, the Cyberbit Range supports a wide selection of curricula, supported by comprehensive documentation, and provides a set of unique capabilities designed for higher education. By using this product the University will significantly improve the level of cybersecurity graduates, increase their employability, and allow for new types of cybersecurity research. Moreover, it will save significant efforts, time and costs in maintaining and running our program.

Cyberbit unique characteristics:

1. Commercially licensed security tools

The Cyberbit range provides exposure to commercial endpoint security (McAfee), commercial firewalls (Checkpoint or Palo Alto), and commercial SIEM (platforms ArcSight or QRadar).

Other vendors use a limited set of technologies, such as open source technologies as an alternative. These are not acceptable for training and certifying cybersecurity professionals for several reasons:

- **SIEM** a SIEM (Security Information and Event Management) tool is the cornerstone of the security operation center (SOC). Mastering a SIEM is the core proficiency of a cyber incident responder. However, there is no open source SIEM currently available, which means that most Cyber Range solution are missing a core element of the incident response workflow.
- Endpoint security using endpoint security tools is a critical and basic proficiency of a security analyst, but no open source system offers endpoint security functionality. This does not allow, for example, developing abilities to comply with skill designed by the NICE cybersecurity framework section A0128

 "ability to apply techniques for detecting host and network-based intrusions using intrusion detection technologies".
- **Firewall** Firewalls, routers load balancers and WAFs have open source alternatives, but their functionality is significantly limited compared to commercially licensed tools. For example: application awareness does not exist in open source tools. This severely limits cybersecurity training and education programs as these skills are essential to master when operating a firewall.

Overall, the, use of open sources cybersecurity is discouraged as it is accessible to malicious actors, may be reverse engineered and even used as an attack vector for injecting malware into a network. Open source tools cover a redundant portion of the market and some tools do not even have an open source version.

In the broader level, using open source is not an acceptable approach for the following reasons:

- Maximizing cybersecurity proficiency requires an **immersive**, **near real-life experience**. This can only be accomplished by using tools and technologies deployed in a real-life security operations center. There are practically no industry or government organizations that use open source cybersecurity tools today, such as Anti-Virus or a Firewall.
- As the University intends on becoming a **regional cybersecurity hub**, it plans to offer services to the surrounding industry and government organizations. These cannot be provided based on limited technologies or open source security tools as they will not be applicable for their day to day work. Organizations will not see this approach as viable for replacing current, low-level training approaches.
- The university plans to use the Cyber Range for workforce development programs, typically leveraging state-level funding. These must be performed using tools which are applicable for the trainees and their future employment scenario. Hence, gaining experience in using market leading vendors is critical for increasing their chances of being hired.

Cyberbit Range is the only platform providing commercial security tools and based on thism provides the richest and deepest training and simulation technology in the market.

2. Simulation of corporate networks

Cyberbit Range provides unique tools and engines enabling a customer, such as a university, to build **custom networks** that mirror the networks of industry and government organizations, who will be training in the range. This dramatically increases the impact of such training. In addition, Cyberbit offers tools enabling a customer to build **custom attack simulation scenarios** that are aligned with the specific needs of its trainees. These abilities also allow conducting advanced cybersecurity research and to build advanced cyber labs.

To the best of our knowledge there is no vendor that provides similar tools that enable the simulated training scenarios and can be used by the university, to **independently** reconfigure and customize the range without the involvement of the range vendor.

We would like to emphasize that simulating a corporate network requires simulating the actual security tools deployed in that network, such as IBM QRadar or a Palo Alto Networks Firewall. As mentioned in item #1, Cyberbit is the only vendor offering commercial cybersecurity tools, hence no real life simulation can be performed by other vendors as long as they use open source tools.

3. Rich selection of attack scenarios that align with cyber security curriculum

Virginia and Michigan Cyber Ranges do not provide an automated attack machine which executes cyber-attack scenarios. Rather, they offer a virtual playground for red and blue teams to practice attack and defense, as well as simple- entry level scenarios, mostly focused on analyzing a single network component. Cyberbit provides a wide range of pre-programmed attack scenarios that are automatically executed by an attack generator. These include both individual and team training scenarios for multiple roles in the security organization from beginners to experts. This results in deeper, more comprehensive and more effective training, which is repeatable and measurable.

A sample of the Virginia Range scenarios can be found at this link, these are primarily entry-level, simplistic scenarios:

https://virginiacyberrange.org/courseware?keywords=&category%5B8%5D=8&page=2

The following link demonstrates Michigan Cyber Range scenarios, focusing on red vs. blue competitions, but not on advanced, repeatable and measurable simulated attacks:

https://www.merit.edu/wp-content/uploads/2018/03/Merit CyberRangeExcercises.pdf

4. Client-side session recording, debrief and student evaluation

Indeed, other vendors do not provide detailed recording of student's behaviors for later debrief, nor do they automatically evaluate a student's performance/progress on their assigned exercises.

We would like to emphasize that our experience shows that this is a critical point for higher education. Managing an effective cybersecurity program relies on the ability to debrief students by revisiting their actions and showing them where did right and where they can improve. A cybersecurity instructor will not be able to run a class of 10-15 students without this capability. This concept becomes even more critical when performing remote training.

5. Instructor tools.

Rather than the scoring, the unique aspect of Cyberbit's instructor application is the ability to control a complete session end to end, hands-on, and dynamically control its workflow, for example – triggering attacks, or controlling the complexity of the session, all this using a convenient UI.

6. Service vs. Platform

The Michigan and Virginia Cyber Ranges are regional cyber ranges that offer customers to connect to their centers remotely, as a service. Or to train on premise at their sites.

The University of Maine intends on creating a similar format and is required to license a best of breed cyber range technology platform over which it can provide training services that would compete with, and exceed the performance of the Virginia and Michigan centers. Therefore, the approach of purchasing services from these providers is not applicable. It will not allow the University of Maine to conduct research, offer services to local industry and the government, and will not allow the institution to perform simulations as the University of Maine will not be controlling the platform – the hardware and network.

Additional Documentation:

Attached are three documents supporting this request, refer to Exhibit A for detail.

The first, is a letter from Deputy Vice Chancellor Kay Kimball on behalf of the System designating the Maine Cybersecurity Center (MCC) as the designated UMS Center for Cyber Education and Dr. Henry Felch, DCS, Associate Professor of Computer Information Systems at the University of Maine at Augusta, as the Director of the MCC and the UMS Cyber Program Chair. This is currently a three university collaboration between UMA, UMFK and USM, but other institutions within the UMS may join if they adopt the core academic program.

The second document is a letter of support from Chancellor Page and Vice Chancellor Neely for the UMS application for continued designation by the National Security Agency (NSA) as a *Center of Academic Excellence*. UMS currently has a "system-level" NSA designation as a Center of Academic Excellence and we are in the process of applying for continuation of this designation. The NSA designation lends credibility to the core academic curriculum shared by the three institutions and also enhances the marketability of our cybersecurity certificate and degree programs.

6

The third document serves as System authorization for the development of a shared professional Masters of Cybersecurity, between UMA and USM, that is currently planned for launch in Fall 2019. The Masters in Cybersecurity will provide a pathway for the continuing education of our students in the undergraduate degree, which is one of UMA's fastest growing programs.

Sole Source Justification:

Each of these initiatives, the Maine Cybersecurity Center, continuing NSA designation as a Center of Academic Excellence, and the shared Masters in Cybersecurity are supported and advanced by the System as a means of serving a critical state need for Cybersecurity education. Additionally, each of these initiatives would be greatly supported by a tool designed to provide a dynamic and robust environment in which faculty and students may conduct research and educational delivery. Some universities with advanced Cybersecurity programs have developed their own cyber ranges for research and instruction, but this route is both expensive and time-consuming. The Cyberbit Range is a user-ready tool that is unique in its features supporting the needs of higher education, in particular this tool is distinct from other user-ready products available in the market for business and industry, as it provides instructor tools, session recording and debrief functionality, and student evaluation, making it uniquely applicable for academic curricular support. In addition, this product is already NSA and Department of Homeland Security accredited aligning with our NSA designation as a Center of Academic Excellence.

Department Head	Date
Strategic Procurement Review	Date
Campus Chief Financial Officer (<i>if over \$50,000</i>)	Date
UMS Chief Procurement Officer (<i>if over \$50,000</i>)	Date
7	

AUTHORIZATION

EXHIBIT A

8



Vice Chancellor for Academic Affairs 15 Estabrooke Drive Orono, ME 04469

> Tel: 207-581-5842 Fax: 207-581-9212 www.maine.edu

September 22, 2018

To Whom It May Concern:

The University of Maine

University of Maine at Augusta

University of Maine at Farmington

University of Maine at Fort Kent

University of Maine at Machias

University of Maine at Presque Isle

> University of Southern Maine

The University of Maine System (UMS) and its member institutions of higher education have established the Maine Cybersecurity Center (MCC) as the designated Center for Cyber Education. Dr. Henry Felch, DCS, Associate Professor of Computer Information Systems at the University of Maine at Augusta, is the Director of the MCC and the Cyber Program Chair.

The MCC provides support and oversight for the core academic program in Cybersecurity recognized by the NSA currently offered at the University of Maine at Augusta, the University of Maine at Fort Kent, and the University of Southern Maine, and any institution within the UMS that adopts the core academic program. The MCC maintains a distributed and redundant network of servers accessible to all participating faculty and students within the University of Maine System over a virtual private network. The core servers for MCC are housed at the System's secure data center on the University of Maine campus in Orono, Maine and mirrored sites for reliability are housed at the University of Maine at Augusta in Augusta, Maine and the University of Southern Maine in Portland, Maine.

Kinball

Deputy Vice Chancellor for Academic Affairs University of Maine System



5 December 2018 Office of the Chancellor 15 Estabrooke Drive Orono, ME 04469 National Security Agency Tel: 207-973-3205 CAE Program Director 9800 Savage Road www.maine.edu Ft. Meade, MD 20755-6804 Dear NSA CAE-CDE Evaluation Committee members, The University of Maine Please find enclosed a renewal application and corresponding support materials University of Maine required for maintaining National Security Agency (NSA) designation as a NSA at Augusta Center of Academic Excellence in Cyber Defense Education (CAE-CDE) for the University of Maine System (UMS) Cybersecurity Center and its academic University of Maine programs. This UMS application for ongoing CAE -CDE recognition has the strong at Farmington support of the University of Maine System, the Chancellor's Office, the Vice Chancellor for Academic Affairs Office, and the Presidents and Provosts from the University of Maine at Fort Kent participating UMS campuses. Enrollment in our cybersecurity program has been growing, with new faculty being hired to complement existing expertise; thus, NSA CAE -CDE recognition is critical to the ongoing success of this work by faculty University of Maine at Machias and students, the collaboration among our institutions in cybersecurity, and the State of Maine. University of Maine at Presque Isle Henry Felch, Associate Professor of Cybersecurity and Computer Information Systems at the University of Maine at Augusta, will serve as the primary point of University of contact for the UMS. Please direct all correspondence to Professor Felch: Southern Maine

> Henry J. Felch, DCS Associate Professor of Cybersecurity and CIS Director Maine Cybersecurity Center Program Coordinator for UMA Cybersecurity 207-621-3371 henry.felch@maine.edu

Please do hesitate to let us know how we can be of assistance with maintaining the NSA CAE IA/CD designation in Maine. Thank you for your consideration of this application and do not hesitate to contact us should you have questions.

Sincerely,

Chancellor

R. Jule

Robert K. Neely Vice Chancellor for Academic Affairs



Rebecca Wyke <wyke@maine.edu>

Summary: 10/5/18 UMA, USM, UMS Cybersecurity meeting

1 message

Robert Neely <robert.neely@maine.edu>

Fri, Oct 5, 2018 at 1:38 PM To: Joe Berthiaume <jberthiaume02@gmail.com>, Jeannine Diddle Uzzi <jeannine.uzzi@maine.edu>, Glenn Cummings <glennc@maine.edu>, Rebecca Wyke <wyke@maine.edu>, Jim Page <jpage@maine.edu>, Karen Kimball

Colleagues,

<kkimball@maine.edu>

Please accept my most sincere gratitude for the productive meeting yesterday afternoon. I was encouraged by the cooperation and outcome. My understanding is that we agreed to the following items:

1. Two immediate priorities were identified:

 a. maintain current trajectory of work to ensure continuation of the NSA certification for UMS institutions;

b. immediately begin development of a shared professional master's program with the following elements: (i) USM and UMA faculty boh contributing to the development and eventual delivery of the program, and (ii) these faculty having equal standing in support of that program. The goal is to launch this program Fall, 2019.

2. Initially, USM will be the degree-granting institution; however, the possibility of a joint program with shared degree-granting authority will be investigated. The VCAA office will take the lead in exploring this possibility with NECHE and evaluating other university models, but will work hand-in-hand with the two provosts.

UMA will begin the substantive change process to offer UMA graduate courses in support of the cybersecurity program.

3. Provosts Szakas and Uzzi will bring the cyber faculty together from the two universities as quickly as possible. VCAA Neely and DVCAA Kimball will participate in that meeting as facilitators/resources. The intent of this meeting is to set the stage for the following:

- a. development of shared curriculum for the master's in cybersecurity;
- b. discussion and planning for the Memorandum of Understanding between the two universities; ideally, a tentative outline for this MOU could be agreed upon at this first meetina:
- c. discussion of the academic governance of the shared cybersecurity program in terms of framework, roles and

responsibilities.

*Note: the curriculum and academic governance structure ultimately should be included in the MOU, either as key sections or encapsulated in appendices.

4. After development of the shared professional master's program, the two schools will discuss and plan as appropriate the possibility of a cybersecurity concentration within the USM computer science program. It is anticipated that some of the courses developed for the professional program would be appropriate for this concentration.

5. The two provosts will re-examine the possibility of a joint faculty appointment in cybersecurity between the two institutions. Given AFUM interest in such appointments, the VCAA will facilitate interaction with UMS HR.

In closing, I am going to ask that the joint faculty meeting occur this month, and that we strive to complete the MOU by the end of January. In my opinion, neither curricular planning leading to program approval, nor action on UMA's substantive change submission, need to be impeded as the MOU is developed.

Thank you again. If I have misstated above any aspect of the agreements, please let me know immediately.

Bob

Robert Neely, Vice Chancellor for Academic Affairs University of Maine System 261 Estabrooke Hall University of Maine - Orono

Phone: 207.581.5843 Email: robert.neely@maine.edu



AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: Full Design, Engineering Education and Design Center, UM
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:**

BOARD ACTION:

4. OUTCOME: Improve Student Success & Completion **BOARD POLICY:** 701 – Budgets-Operating & Capital

Х

5. BACKGROUND:

The University of Maine System acting through the University of Maine requests authorization to expend up to an additional \$8 million to perform full design, initial relocation and related services for the Engineering Education and Design Center (EEDC) on the Orono campus of the University of Maine.

This request is pursuant to Board Policy 701, requiring Trustee approval for increases to Board approved projects. In this case, the request is to approve and to forward this matter to the Consent Agenda of the Board of Trustees. Trustees approved a preliminary \$1 million for early design of the project in September of 2017. The Agenda Item Summary (AIS) is attached for reference.

Estimates continue to indicate the project may cost up to \$80 million. The project cost is expected to be funded largely by University revenue bonds supported with State debtservice funding approved by the Legislature in late 2017, by privately raised funds and other potential resources as may be identified by the University of Maine Chief Business Officer and University System Treasurer. Through fundraising, over \$10 million has been raised toward this project and efforts continue in earnest. This current request is for approval to expend the amount necessary to complete formal design, bid preparation and related work.

Since the prior approval in September 2017, the building committee was formed, the project design team was selected and commenced conceptual design along with a site selection process. These phases of the design came to a conclusion in April, 2018 with a final site location at the site of the current Machine Tool Laboratory, and with a conceptual design of an approximately 110,000 square foot building, within the \$80 million budget.

The funding for this phase of the work will come from resources to be identified by the University Treasurer and University of Maine Chief Business Officer.

Board of Trustees Meeting - Full Design Engineering Education and Design Center, UM

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the May 20-21, 2018 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee for the University of Maine to authorize the expenditure of up to an additional \$8 million, bringing the current approved budget to \$9 million to complete full design of the Engineering Education and Design Center at the University of Maine with funding to be identified by the University Treasurer.

Attachment:

Full Design Engineering Education

Link: USM MASTER PLAN

LEASE AGREEMENT

This Lease Agreement, is made, and entered into this <u>1st</u> day of <u>April</u>, 20<u>19</u>, by and between the <u>Pine Tree State 4-H Club Foundation</u> (hereinafter the "Lessor"), having an address of <u>York</u> <u>Complex #1, Orono, ME 04469</u>, and University of Maine System, having an address of 5703 Alumni Hall, Orono ME 04469, acting by and through the University of <u>Maine</u> (hereinafter the "Lessee").

For good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree and follows:

1. <u>Premises</u>: Lessor hereby leases to Lessee, and Lessee rents and takes from Lessor the following described premises (the "Premises") <u>Greenland Point Center</u>, which are further described in Attachment A (which shall include a floor plan, if applicable, of the Premises), which is appended to and, by this reference, incorporated into this Lease.

2. <u>Term</u>: The term of this Lease shall be from <u>April 1</u>, 20<u>19</u> until from <u>March 31</u>, 20<u>29</u>. At the expiration of the base term of this Lease, the term may be extended at the option of the Lessee in a writing signed by both parties, for <u>2</u> additional term(s) of <u>10</u> year(s) each, on the same terms and conditions of this Lease, except as to rent, which shall be negotiated by the parties.

<u>Rent</u>: The Lessee agrees to pay to the Lessor \$<u>8000</u> as annual rent for the Premises, which rent shall be paid in 1 installments of \$<u>8000</u> each, and which shall be paid to the Lessor as follows: <u>On April 1 annually</u>. Rent for any partial months shall be prorated at a daily rate. Thirty (30) days before the anniversary date of the effective date of the Lease, the parties will negotiate in writing the amount of rent for the following year, which rent shall not exceed a 4% increase over the rent for the previous year.

3. <u>Use of Premises</u>: Lessee shall use and occupy the Premises for the following purpose(s) only: <u>Operation of a 4-H Camp and Learning Center, Educational Activities sponsored by the University of</u> <u>Maine System, and select revenue generating activities</u>. Lessee shall not use the Premises for any other purpose without the prior written consent of the Lessor.

4. <u>Insurance</u>: With respect to and during the term of this lease, Lessee shall maintain in force a policy of commercial general liability insurance with a limit of not less than \$400,000 per occurrence, covering bodily injury, personal injury, and property damage. The Lessor shall maintain in force a policy of commercial general liability insurance with a limit of not less than \$1,000,000 per occurrence, covering bodily injury, personal injury, and property damage. A certificate of insurance evidencing insurance coverage(s) shall be provided to the other party prior to the commencement of this lease.

The Lessor agrees to insure the leased premises with an appropriate insurance limit and on a replacement cost basis. Lessee is responsible for insuring or self-insuring Lessee's own contents.

5. <u>Liability</u>: Nothing in this Lease shall be construed as an indemnification by one party of the other for liabilities or claims of a party or third persons for property loss or damage or death or personal injury arising out of the performance of this Lease. Any liabilities or claims for property loss or damage or death or personal injury by a party or third persons, arising out of the performance of this Lease shall be determined according to applicable law. Neither party is obligated to indemnify the other party or to hold harmless from costs or expenses incurred as a result of such liabilities or claims; and each shall continue to enjoy all rights, claims, immunities and defenses available to it under law, including but not limited to the Maine Torts Claims Act, 14M.R.S.A. §8101, et seq.

6. <u>Applicable Law</u>: This Lease shall be interpreted and governed according to the laws of the State of

Maine, without regard to its choice of law provisions. Maine shall be the forum for any lawsuits or claims arising under this Lease.

7. <u>Termination</u>. The Lessee shall have the right to terminate this Lease by giving at least <u>30</u> days written notice to the Lessor and setting forth in such notice the effective date of termination. In the event that Lessee is not appropriated funds for the next fiscal year to continue this Lease, then Lessee shall have the right to immediately terminate this lease and shall not, in that event, be obligated to make any payment to Lessor beyond the end of the then fiscal year. Equally, the Lessor will have the right to terminate this lease by giving at least 180 days written notice to the lessee and setting forth in such notice the effective date of termination.

8. <u>Assignment</u>: This Lease may be assigned, transferred or conveyed by the Lessee with the written consent of the Lessor. The use of the Premises by any such sub-lessee or assignee shall be similar to the use described in section 4 hereof.

9. <u>Non-discrimination</u>: Lessor shall not discriminate and shall comply with applicable laws prohibiting discrimination on the basis of race, color, religion, sex, sexual orientation, including transgender status or gender expression, genetic information, national origin or citizenship status, age, disability, or veteran status. Lessor warrants that the Premises are physically accessible to individuals with disabilities. The Lessee encourages the Lessor in the employment of individuals with disabilities.

10. <u>Non-waiver</u>: The failure of either party to exercise any of its rights under this Lease for a breach thereof shall not be deemed to be a waiver of such rights, and no waiver by either party, whether written or oral, express or implied, of any rights under or arising from this Lease shall be binding on any subsequent occasion; and no concession by either party shall be treated as an implied modification of the Lease unless specifically agreed to in writing.

11. <u>Severability</u>: In the event one or more clauses of this Lease are declared invalid, void, unenforceable or illegal, that shall not affect the validity of the remaining portion of this Lease.

12. <u>Entire Agreement</u>: This Lease sets forth the entire agreement of the parties on the subject, and replaces and supersedes any previous agreement between the parties on the subject, whether oral or written, express or implied. This Lease contains all of the agreements and conditions made between the parties concerning the Premises. There are no collateral agreements, stipulations, promises, understandings or undertakings whatsoever of the respective parties concerning the subject matter of this Lease. This Lease may be amended or modified only by a writing signed by both parties.

13. <u>Destruction</u>: If at any time during the term of this Lease, or any extension thereof, the Premises shall be totally or partially destroyed by fire, earthquake, or other calamity, Lessee shall have the option within 30 days after assessing the amount of damage and amount of usable space, to either continue with the Lease, or choose to terminate the Lease without further obligation. In case, however, Lessee chooses to remain in the Premises but Lessor elects not to rebuild or repair said Premises, Lessor shall so notify Lessee by written notice within the period of 30 days after the damaging event, and thereupon this Lease shall terminate without further obligation by Lessee or Lessor. In any event, Lessee's rent shall be abated to the extent its use is prevented or reduced by such destruction or failure.

14. <u>Condemnation</u>: In the event the Premises, or any part thereof, are taken, damaged consequentially or otherwise, or condemned by public authority, this Lease shall terminate as to the part so taken, and Lessee shall have the option within 30 days after assessing the amount of damage and amount of usable space, to either continue with the Lease, or choose to terminate the Lease without further obligation. In any event, Lessee's rent shall be abated to the extent its use is prevented or reduced by such destruction or failure.

15. <u>Holdover:</u> If Lessee remains in possession of the Premises after expiration or termination of this Lease, such possession will be on a month to month basis. During this holdover period, all of the other provisions of this Lease shall be applicable.

16. <u>Binding Effect</u>. This Lease shall both benefit and bind the parties hereto and their

respective successors, personal representatives and permitted assigns.

17. <u>Taxes.</u> The Lessor shall be solely responsible for any and all taxes assessed against the Premises, including, but not limited to, real estate taxes.

18. <u>Breach by Lessor</u>. Lessee shall have the right to terminate this Lease without further obligation in the event Lessor breaches any term of covenant of this Lease and Lessor fails to correct such breach within thirty (30) days after written notice to Lessor.

19. <u>Surrender</u>. At the expiration or earlier termination of this Lease, Lessee will yield up the Premises to the Lessor in as good order and condition as when the same were entered upon by the Lessee, loss by fire or inevitable accident, damage by the elements, and reasonable use and wear excepted.

20. <u>Notice</u>. Any notice to either party under this Lease must be in writing signed by the party giving it, and shall be served either personally or by registered or certified mail addressed as follows:

To Lessor:

Pine Tree State 4-H Club Foundation York Complex #1 Orono, Maine 04469

To Lessee: University of Maine System 5703 Alumni Hall Orono, ME 04469

And

University of Maine System 5703 Alumni Hall Orono, ME 04469

or to such other address as may be hereafter designated by written notice provided in accordance with this section. All such notices shall be effective only when received by the addressee.

21. <u>Lessor's Authority:</u> Lessor covenants and warrants that it has the full authority and right to lease the Premises to the Lessee in accordance with the terms of this lease.

22. <u>Quiet Enjoyment</u>: On payment of rent and performance of the covenants and agreements on the part of the Lessee to be paid and performed hereunder, the Lessee shall peaceably have and enjoy the Premises and all of the rights, privileges and appurtenances granted by this Lease free from any interference by Lessor or any other person.

23. <u>Force Majeure:</u> Neither party to this Lease shall be liable for non-performance of any obligations under this Lease if such non-performance is caused by a Force Majeure. "Force Majeure" means an unforeseeable cause beyond the control of and without the negligence of the party claiming Force Majeure, including, but not limited to, fire, flood, other severe weather, acts of God, labor strikes, interruption of utility services, war, acts of terrorism, and other unforeseeable accidents.

24. <u>Utilities:</u> Where a checkmark is placed in the box of the column under a party below, it is that party's responsibility to pay for those services to the Premises.

Lessor Lessee

2000			
		Х	Water
		Х	Sewer

х	Refuse Removal
х	Fuel
х	Electricity
х	Heating and Cooling Systems
х	Maintenance and Upkeep
х	Carpeting
х	Lighting Fixtures
х	Telephone Installation, Service, Billing and Long Distance Charges
х	Cable Television
х	Snow Removal

Lessee shall furnish and pay for any other services or supplies it desires for which responsibility is not designated above.

25. <u>Default</u>: Lessor shall, on default with respect to any of the provisions of this Lease by Lessee, provide Lessee with a written notice of any breach of the Lease terms or conditions and Lessee shall then have 30 days to either correct the condition, or commence corrective action if the condition cannot be corrected within 30 days. If the condition cannot be corrected in 30 days, Lessee shall have reasonable time to complete the correction.

26. <u>Lessor's Covenants</u>: Lessor agrees to maintain the Premises in a condition fit for their intended use, make all necessary repairs of which Lessor is or becomes aware, including adequate heat and water and a sound physical structure, and to maintain the grounds and remove the rubbish.

27. <u>Access:</u> Lessee has the right of reasonable ingress and egress to the leased Premises.

28. <u>Documentation</u>: Lessor shall provide to Lessee at the time of signature of this Lease a completed and signed IRS Form W-9, if applicable, and any other documentation required by the Lessee to process payments to the Lessor under this Lease.

IN WITNESS WHEREOF, the authoriz Agreement on thisday of,	red representative of the parties have executed this Lease 20
LESSOR:	LESSEE:
Signature:	Signature:
Printed Name:	Printed Name:
Title:	Title:

STATE OF MAINE

SS	, 20
Then personally appeared before me the above-named capacity asof theof the foregoing instrument to be his/her free act and deed.	in his/her
capacity as of the	and acknowledged the
foregoing instrument to be his/her free act and deed.	
	Before me,
	Notary Public/Attorney at Law
	Printed Name
	My Commission Expires:
STATE OF MAINE	
STATE OF MAINE	
SS	, 20
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Then personally appeared before me the above-named	in his/her
capacity as	niversity of Maine System and acknowledged th
capacity as of the Un foregoing instrument to be his/her free act and deed.	inversity of Manie System and acknowledged in
	Before me,
	,
	Notary Public/Attorney at Law
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Printed Name

My Commission Expires:

ATTACHMENT A

PROPERTY DESCRIPTION

Location: 82 University of Maine Forestry Road, Princeton, ME 04668 Lot Size:± 64 Acres, with ± 3000 feet of water frontage on Long Lake <u>Topography:</u> at grade, slopping to the water <u>Utilities:</u> private water and sewer, public electricity and telephone

Access: Excellent, University of Maine Forestry Road

Zoning: Shoreland

Tax Map Reference Princeton Tax Map 1, Lots 13 and 12-3.

<u>Registry of Deeds Reference:</u> Washington County, Volume 3090, Page 10 and Volume 3019, Page 209.

<u>Easements:</u> The deed reflects an easement to Eastern Pulpwood Company, this easement is recorded in a deed at the Washington County Registry of Deeds, Book 569, Page 585.

Additional easements are noted in the deed from Typhoon LLC to Greenland Point Center, recorded in the Washington County Registry of Deeds, Volume 3090, Page 10. Both deeds are included in this report.

Site Improvements:

The buildings consist of the following structures:

- The Main Lodge The lodge serves as the center of activities for the entire facility. The approximate size of the building is 2196 sq. ft. on the first floor and approximate 2000 sq. ft. finished in a daylight basement.
- Cabins There are twelve log and wooden cabins that serve as sleeping accommodations. Each cabin has 6 to 8 bunk beds. Each cabin typically has approximate $360 \pm$ sq. ft. of living space.
- Registration Building This is a single log cabin that is used to check people into and out of the camp.
- Infirmary This is a 200 sq. ft. log cabin.
- Bath House This is a modern up to date facility that is divided into ladies and men rooms with showers and flushes.
- Storage Building There are two storage buildings on the site. Average size is 18 x 20 feet.
- Generator Shed This structure holds a generator for a back up in case of a power failure.
- There is also an extensive dock system and boat launch area on the lake.



Property Appraisal Service



Facility proposed for aquisition.



UNIVERSITY OF MAINE SYSTEM Board of Trustees AGENDA CALENDAR

A working calendar for developing agendas and submitting various reports to the Board has been designed in order to allow maximum planning in organizing presentations and reference materials. The calendar identifies the timetable for submission of items and reports which recur every six to 24 months as well as special reports with specific time lines. It does not include general items which are ordinarily on each Board meeting agenda; e.g., reports and consent agenda. The following agenda is subject to change consistent with scheduling, reporting, and other factors that the Chancellor deems necessary to consider such matters.

The Calendar will be updated and included in the Board Meeting materials on a regular basis.

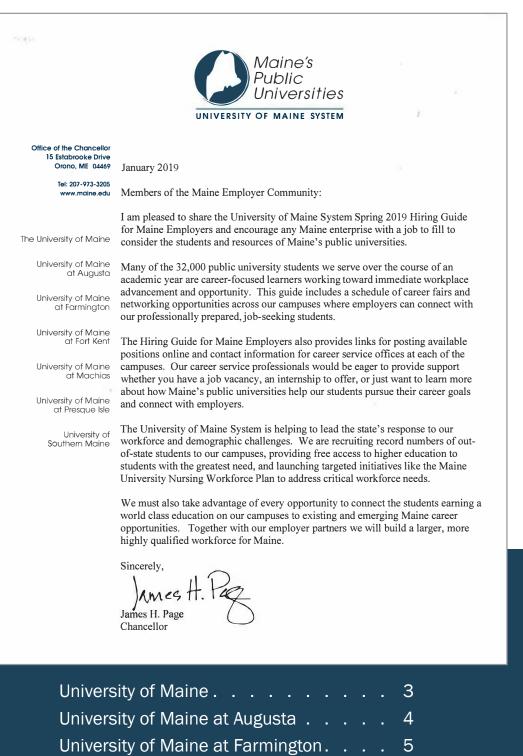
JANUARY:	Academic Affairs
	Academic Year Calendar
	Honorary Degree Nominations
	Fiscal Matters
	State Research Report
MARCH:	Academic Affairs
	Tenure Nominations
	Tenure Report
	Governance/Administration
	Board Calendar
	Establishment of Nominating Committee
	Student Affairs Spring Enrollment Update
	Spring Enforment Optiate
MAY:	Fiscal Matters
	Budgets and Student Charges
	Multi-Year Financial Analysis
	Governance/Administration
	Election of Board Officers
	Confirmation of Board of Visitors
JULY:	Governance/Administration
	Appointment of Standing Committees
	Human Resources
	Annual Report on Named Chairs and Professorships
SEPTEMBER:	Fiscal Matters
SET TEMDER.	Appropriation Request
	·
OCTOBER:	Fiscal Matters
-	Review of Annual Financial Report
NOVEMBER:	Academic Affairs
TTO TENIDER.	Awarding of Academic Degrees
	<u>Student Affairs</u> Official Fall Enrollment Update

Hiring Guide for Maine Employers

Partnering with Maine Employers to increase the size and skills of the Maine Workforce



Spring 2019



Jniversity of Maine at Fort Kent .		
Jniversity of Maine at Machias		
Iniversity of Maine at Presque Isle		
Jniversity of Southern Maine		
Jniversity of Maine School of Law.		. 1

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1865 THE UNIVERSITY OF MAINE

Contact: UM Career Center 207-581-1359

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To schedule recruiting and information sessions on campus and/or virtual visit: CareerLink: https://umaine.edu/career/employers/

Careers in Insurance All of February	Students learn about the many exciting careers offered in the insurance industry. The Career Center will be providing on going promotion and spotlights of the opportunities available to students within this field.
Career Fair Wednesday, February 6	An opportunity for students to interact with employers, organizations, and educational institutions from a variety of industries coming to hire for full-time, part-time, summer, and/or internship positions.
Graduate School Information Night Tuesday, February 12	An opportunity for students to learn about the process of selecting and applying to graduate programs.
Careers in Law & Justice Wednesday, March 13	Students have the chance to meet with leading professionals in law and justice careers to ask questions, network and explore the wide variety of options available within the field.
Careers in Sustainable Agriculture Wednesday, March 27	Students will have the chance to hear from professionals in the agricultural industry about their journey, learn about the wide variety of options available within the field, and gain valuable advice on exploring the field. Students will have the opportunity to ask questions and network.
Health Professions Career Day Thursday, April 4, 2019	This is an opportunity where undergraduate students have a chance to explore health career options through meeting with providers and graduate school options.
Careers in Outdoor Recreation & Tourism Thursday, April 25	Bring your spirit of adventure to this interactive event. Learn how your passion for the outdoors can lead to an exciting and fulfilling career. Open to all majors.

We offer the opportunity for employers to do on-campus recruiting and on-campus or virtual information sessions. Information sessions are also available for graduate and professional schools. Employers can access these opportunities through CareerLink: https://umaine.edu/career/employers/

Web: https://umaine.edu/career/ | Email: umainecareercenter@maine.edu Facebook: https://www.facebook.com/UMaineCareerCenter/ | Twitter: @UMaineCareerCtr



UMA Locations

UMA provides services to students through a statewide network of local centers. Employers looking to connect with students and/or graduates in a specific region, may contact a UMA Center at https://www.uma.edu/ locations/studentservices-coordinators/





New Ventures Maine

New Ventures Maine offers tuition-free workshops and individual coaching to help students complete their education, learn about growing career fields, connect with local employers, and find good jobs.

https://newventuresmaine.org/programs/build-your-career/

UMA CareerLink

Post job and internship listings with us at https://uma-csm.symplicity.com/employers To schedule on-campus or virtual recruiting and information sessions, please contact us at umacareer@maine.edu

Immigrant Entrepreneurs: Starting a Business in Maine Tuesday, February 19	Portland Adult Education New Ventures Maine will be hosting a free workshop for new Mainers that will discuss the pros and cons of starting a small business here in Maine, the first steps in getting started, how to map out a strategy through a basic business plan, and will be sharing resources available to new businesses, including free business counseling. Co-sponsored by the City of Portland, Portland Adult Education, with corporate support from Bangor Savings Bank.
Business Etiquette Workshop Series and Dinner Thursdays, March 28 - May 2	UMA faculty, staff, alumni, and community members come together for a weekly workshop series on business etiquette, public speaking, elevator speeches, visual presentations, and dressing for success. The series culminates to a dinner event where students get to demonstrate everything they have learned.
Career Summit Friday, April 12	UMA alumni, area employers, and hiring managers come together on this day-long event to discuss business dress, social media presence, interview and resume skills, asking for references, and considering graduate school. The format consists of plenary presentations, small workshops, and table presentations on topics that get UMA graduates into the workforce.

www.uma.edu/academics/advising/career-connections/



The University of Maine at Farmington hosts multiple opportunities through the academic year for students to connect with employers for undergraduate employment, internships and post graduate career employment. In addition to career fairs and panel discussions, the UMF Office of Career Services is available to work individually with students or directly with employers to assist in their recruiting efforts.

Summer Camp Fair Monday, February 4 (snow date February 11)	In coordination with the Maine Summe 30 of Maine's best summer camps to p students and meet a critical need in to	
UMaine Career Fair Wednesday, February 6	Career Services invites students to join weather permitting.	n them on a trip to UMaine's Career Fair,
UMF Career Fair Wednesday, March 6 (snow date March 8)	UMF Career Services welcomes employers to campus to meet with students who are looking for their first post-college career or summer employment.	
UMF Education Career Fair Friday, March 15	Career Services welcomes school districts and educational organizations to campus to meet with our senior student teachers as they search for teaching positions.	
College to Career Symposium Thursday, April 11	Panel and networking event. UMF Career Services invites alumni and employers from myriad industries for a panel in which they discuss the transition from undergraduate to employment. The panelists answer questions, offer insight, and share tips with students. The panel is followed by an informal networking mixer between professional and student.	
		Important Links
Drop-in Hours & Specialized	Workshops	Website: http://www2.umf.maine.edu/careers/

Career Services has drop in hours and specialized workshops throughout the semester. These opportunities are designed to support our students as they prepare for meaningful work. Call or email for more information.

For Employers Recruiting Students

We offer employers individual opportunities to schedule a visit to campus anytime they are interested in recruiting students or would like to participate in a campus event. Please call (207)778-7035 or email cynthia.mcshane@maine.edu to schedule a day and time.

Post to UMF's Job Board: http://www2.umf. maine.edu/careers/job-board/

Career Services Events: http://www2.umf. maine.edu/careers/job-fairs-and-career-events/

Facebook: https://www.facebook.com/ umfcareers/

Twitter: https://twitter.com/UMFCareers

email: cynthia.mcshane@maine.edu



Linked-In group is designed and being utilized to reach alumni and current students. Career Services is posting open jobs and articles to this platform. https://www.linkedin.com/groups/8663029/

Career Week March 4 - 8	A week full of career focused events to help students be better prepared and to connect students with professionals and employers:		
	March 4 - Linkedin Workshop Networking and Interviewing tips		
	March 5 - Mock Interviews Local professionals donate their time to conduct mock interviews with students. Students receive valuable feedback from the professionals on career readiness and interview tips.		
	March 6 - Making Connections Networking event for students to practice networking skills with employers.		
	March 7 - Mock Interviews Local professionals donate their time to conduct mock interviews with students. Students receive valuable feedback from the professionals on career readiness and interview tips.		
	March 7 - Eliquette Dinner Students learn the do's and don'ts of table etiquette while being seated with faculty, staff and professionals. Keynote speaker TBD		
Employer Tables	Various employers are able to set up a table in UMFK's Cyr Hall to meet and greet students. Some Employers joining us this spring are: Maine Air National Guard DAFAS Bangor Savings Bank Contact the Career Services office for more information about Employer Tables.		
Job Fairs and or Trainings	Students may contact the Career Services office if they are interested in attending Job Fairs at other locations or attending trainings that would benefit their career development.		

https://career.umfk.edu/



Career Link

Employers can access recruiting opportunities by joining the CareerLink program at https://machias.edu/career-services/career-center/

Check us out on Facebook: https://www.facebook.com/UMMachiasCareerServices/

Career Cafe January - April	A chance for students to explore, prepare, and build confidence and professionalism as they seek experiential learning and employment opportunities in the Maine workforce. One hour sessions start at 11 AM or Noon throughout the Spring 2019 Semester and include: January 30 - What's in your Portfolio? February 13 - Crushing the Interview February 20 - Mock Interviews March 6 - Where are your Manners? March 27 - Salary Negotiations April 3 - Business Etiquette and Career Dress Show, Kilburn Commons Cafeteria April 10 - Blah-to-Brilliant Resumes
UMaine Career Fair Wednesday, February 6	An opportunity for students to interact with employers,organizations, and educational institutions from a variety of industries coming to hire for full-time, part-time, summer, and/or internship positions. Transportation will be provided. Contact the UMM's Career Center for more information. If the weather is inclement then we always offer it to students through a virtual event.
UMM Career Fair & Festival Thursday, February 28 (storm date, March 8)	The UMM Career Fair and Festival will feature various employers throughout Washington County and the northern/eastern Maine areas of the state.
Careers in Law & Justice (UMaine) Wednesday, March 13	Students have the chance to meet with leading professionals in law and justice careers to ask questions, network and explore the wide variety of options available within the field. Transportation will be provided. Contact the UMM's Career Center for more information.
Business of the Year Wednesday, April 17	Partnering with Machias Savings Bank, UMM students will have the opportunity to tour and visit the main office of Machias Savings Bank here in Machias.
Careers in Outdoor Recreation & Tourism (UMaine) Thursday, April 25	Bring your spirit of adventure to this interactive event. Learn how your passion for the outdoors can lead to an exciting and fulfilling career. Open to all majors. Transportation will be provided. Contact the UMM's Career Center for more information.
Greek Alumni Social & Networking Event April 26 - 27	Greek Alumni will have an opportunity to meet undergraduate students in a networking opportunity where they can share information on current job opportunities within their area of expertise.



Employers, to post positions, visit:

https://www.umpi.edu/offices/career-readiness/for-employers/

www.umpi.edu/offices/career-readiness/

UMaine Career Fair Wednesday, February 6	The Office of Career Readiness and the Student Activities Office are collaborating to offer rides to UMPI students to participate in the UMaine Career Fair (weather permitting).
Alumni Coffee Hour February (date TBD)	An opportunity for students to interact with alumni from a variety of industries to gain insights into future careers and talk with professionals. Enjoy a cup of coffee and networking with us. Alumni wishing to participate should contact Craig Cormier, Director of Alumni Relations and Annual Giving at craig.cormier@maine.edu or 768-9425
Networking and Etiquette Dinner TBD	Professional skills development is crucial for students' future career success. Opportunities to learn and practice professionalism and etiquette are requirements in today's competitive job market. The Networking and Etiquette dinner will provide students that opportunity to network with local employers and alumni while learning the principles of social and professional behavior. Employers or alums interested in participating should contact the Office of Career Readiness at nicole.l.fournier@maine.edu or 768-9589.
Vitual Open House for Employers Wednesday, March 20	Office of Career Readiness Virtual Open House for Employers Employers will have the opportunity to "visit" the Career Readiness Office to ask questions, learn how we can collaborate, hear more about the services we offer, and see how easy it is to post job or internship opportunities with us.
Career Distinguished Graduate Mock Interview Panels April 1 - 30	Employers are invited to participate on panels to assess student career readiness skills. Employers wanting to participate should contact Nicole Fournier, Director of Career Readiness, at nicole.l.fournier@maine.edu or 768-9589.
National Student Employment Week April 8 - 14	Celebration and events on Campus and at our off Campus sites all week long celebrating our student employees and their supervisors.
National Small Business Week April 29 - May 5	In celebration of National Small Business Week, we will offer our second annual Job Fair at the Houlton Higher Education Center.
Career Readiness Day Friday, May 10	Students will have the opportunity to have professional photos taken, cover letter/resume reviewed, and participate in mock interviews prior to graduation practice. Employers are invited to offer career advice, network, review resumes/cover letters, and provide short mock interviews to graduating students. Employers are invited to participate and provide feedback to our graduating students. Employers wanting to participate should contact Nicole Fournier, Director of Career Readiness, at nicole.l.fournier@maine.edu or 768-9589.
	Email: nicole.l.fournier@maine.edu



Contact: Andy Osheroff 207-780-4695



	Have a job, internship or other opportunity for a USM student? ttps://usm-maine-csm.symplicity.com/employers/?signin_tab=0&signin_tab=0
Intere	sted in learning more about the Career and Employment Hub at USM? Visit https://usm.maine.edu/career-and-employment-hub
Salary Negotiation Thursday, February 7	The Career & Employment Hub will kick off the new year by facilitating a workshop to help attendees gain confidence in their negotiation style. Students along with USM alumni will learn how to articulate personal value, research market benchmarks, and develop persuasive responses to hiring managers.
Career Takeoff: Land a Great Summer Internship Friday, February 15	During the first session of our Career Takeoff workshop series for Spring 2019, students who are seeking summer internship opportunities will network with employers seeking summer interns. Tips on how to execute a great project-based internship, both from the perspective of the student and from the employer, will be shared by Career & Employment Hub staff.
Spring Job Fair March 7, 2019	Over 100 employers will gather on the USM Portland campus to recruit for full-time, part-time, volunteer, internship and work study positions. Not only is this a fantastic opportunity for USM students and alumni, but this event is also open to the public. Last spring, nearly 1000 job seekers attended. Free professional head shots are offered to all participants.
Career Takeoff: Mock Interview Day Friday, March 29	During this session of our Career Takeoff workshop series, Career & Employment Hub staff members will collaborate with our business and community partners to create a safe space for students and alumni to practice interview skills and get real- time feedback on their performance. This is both a useful learning opportunity as well as a networking event for attendees.
Graduate Studies Hiring Event TBD	Employers, alumni and graduate students will gather to network and discuss workforce related needs, with a focus on jobs applicable to graduate level students.
Career Takeoff: LinkedIn and Personal Branding Thursday, April 18	The Career & Employment Hub, along with business and community partners, will present to students on how to brand themselves online and through their LinkedIn accounts. Attendees will have the chance to network with local professionals while learning to create a stellar online presence for employers to view.
Career Takeoff: Resume Review Thursday, May 16	Just in time for graduation, students and alumni will learn best practices in resume writing from Career & Employment Hub staff as well as our business and community partners. In the final iteration of Career Takeoff for Spring 2019, attendees will fine-tune their resumes while networking with local professionals.

https://usm.maine.edu/careerhub



Contact: Maine Law Career Services Office 207-780-4796



Throughout Maine and beyond, employers of all sorts (not just law firms!) are recognizing the exceptional value of hiring the Law School's students and graduates.

If you are interested in learning more, we would love to hear from you. Please contact us by email at lawcareer@maine.edu, or by telephone at (207) 780-4796.

On Campus Interviewing	If you are an employer, you may use the Law School's Career Services Office to publicize open positions, collect résumés and other application materials, schedule initial interviews, and facilitate second interviews. On-campus recruiting generally takes place during the fall and spring semesters, and the Career Services Office distributes invitations to participate in on-campus interviewing twice yearly via email. However, we would be pleased to hear from you at any time, and you will find us very accommodating of your particular needs.
Free Advertising of Internship and Employent Opportunities	The Career Services Office will post your full-time, part-time, permanent, or temporary openings on our online student and alumni job boards and in our monthly alumni jobs bulletin at no cost to you.
Opportunities to market your organization	Send your representatives to participate in our various panel presentations, career-related workshops, and other events to raise your profile within the Maine Law community and get to know our students better.

https://mainelaw.maine.edu/career-services/careers

MAINE ECONOMIC IMPROVEMENT FUND DRAFT Pending UMS Board of Trustees Approval



A successful partnership among Maine's government, private sector and public universities to build Maine's economy and future workforce through research and development.



UNIVERSITY OF MAINE SYSTEM

Annual Report FY18 • Presented to Maine State Legislature



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MAINE ECONOMIC IMPROVEMENT FUND 2018 ANNUAL REPORT

Memo from the Chancellor

The Maine Economic Improvement Fund (MEIF) represents Maine's ongoing commitment between the state and our public universities, working together to advance research and economic development for the benefit of all Maine people. In July 2014, the University of Maine System Board of Trustees (UMS BOT) established Strategic Outcomes and metrics to measure the performance of the University of Maine System and its campuses. Included in these Strategic Outcomes are specific goals for research, economic development, and workforce development. The UMS BOT has applied these overall Strategic Outcomes to research and development, and has established specific goals and metrics for the Maine Economic Improvement Fund to help achieve these Strategic Outcomes. These metrics were approved at the end of FY14 and are applied to all FY18 MEIF activity and included in this annual report. By statute, MEIF-funded activity is restricted to Maine's seven statutorily established R&D sectors.

In FY18, the state's \$17.35 million MEIF investment was leveraged at a rate of 3.6:1 by our UMS campuses for an additional \$62.35 million in federal and private-sector grants and contracts in the seven sectors.

- MEIF funds and the external grants and contracts it leverages funded the work of 481 researchers and technicians, and 878 graduate and undergraduate students.
- These grants and contracts provided more than \$2.5 million to purchase major equipment to upgrade and outfit university laboratories.
- Maine's public universities secured new patents, worked on development projects with large and small businesses and start-ups, and provided R&D support to over 500 companies and individuals.

As required in the statute that created MEIF, included with this FY18 MEIF report are financial and informational details.

If you have any questions about MEIF projects, this report or other University of Maine System research and economic development programs, please contact me.

Sincerely,

1 hmes H1

James H. Page Chancellor University of Maine System

The Maine Economic Improvement Fund Fiscal Year 2018

MEIF Background

The Maine Economic Improvement Fund (MEIF) represents the ongoing commitment between the state, the private sector and our public universities, working together to advance research and economic development for the benefit of all Maine people.

Since the Maine Legislature established MEIF in 1997, MEIF has positioned the University of Maine System (UMS) at the



center of statewide efforts to leverage economic development through targeted investment in university-based R&D. MEIF continues to be funded through an annual state appropriation to UMS.

These funds provided through state appropriation to the University of Maine System are

dollars specifically directed to support university-based research, development, and commercialization in the state's legislatively designated seven strategic technology areas:

- Advanced Technologies for Forestry and Agriculture
- Aquaculture and Marine Sciences
- Biotechnology
- Composites and Advanced Materials Technologies
- Environmental Technologies
- Information Technologies
- Precision Manufacturing

The University of Maine and the University of Southern Maine have well-established research, development, and commercialization activities accounting for 97 percent of the MEIF activity. In 2009, the University of Maine System established the Small Campus Initiative Fund to promote seven-sector research and development activity at the other five UMS campuses and, as of 2013, Maine Maritime Academy (MMA).

Role of MEIF

The role of MEIF is to solve fundamental problems and discover new solutions, and to provide researchers at Maine's public universities with the investment necessary to:

- Attain external grants and contracts to support R&D activities in Maine's seven sectors;
- Attract and retain world-class researchers;
- Provide support for modern laboratories and state-of-the-art equipment;
- Create new products, patents, technologies, companies and exciting job opportunities in Maine;
- Create and sustain economic development and innovation.

MEIF funds often provide the required match to acquire federal or private sector grants, and this investment in Maine's public university R&D helps faculty, staff, and students successfully leverage tens of millions of dollars in grants and contracts annually.

MEIF money also supports equipment purchases or facilities renovations to make the universities more competitive for federal grants, expanding opportunities to support Maine companies, and involve students in real applications of their education.

MEIF increasingly fosters university partnerships with business and industry through economic development collaborations, entrepreneur training programs, business incubators, technology accelerators, business research, and other programs. These efforts lead to new Maine-based products, technologies, patents, and spin-off businesses.

The University of Maine and the University of Southern Maine are the two universities with established research and graduate programs in the seven targeted research sectors, and have received MEIF funds, with 76.4 percent to the University of Maine, 19.1 percent to the University of Southern Maine, 1.4 percent to the University of Maine Machias and 3 percent to the other campuses and Maine Maritime Academy.

Indicators of success show that Maine's MEIF investment is paying dividends by:

- Creating businesses and jobs, including the jobs of more than 481 faculty and staff, and over 878 students working on MEIFfunded projects;
- Boosting Maine's economy by leveraging MEIF funds to bring federal and private-sector grants and contracts to Maine;
- Building capacity and expertise to help Maine companies solve problems and commercialize innovation;
- Generating new intellectual property and working to commercialize patents and innovations;
- Capitalizing on natural resources and core strengths by focusing R&D efforts on economic sectors where Maine can make real gains. University research personnel use MEIF resources to support the staff, equipment and facilities they need to successfully pursue and develop research projects.

2 Maine Economic Improvement Fund

Strategic Outcomes, Goals and Metrics

In July 2014, UMS BOT developed and approved Strategic Outcomes to measure the performance of the University of Maine System and its campuses. In October 2014, UMS BOT approved the use these newly developed Strategic Outcomes to create MEIF specific goals and metrics. Several of the UMS Strategic Outcomes are performance targets for all R&D and economic development activity. The MEIF goals recognize that MEIF activity is restricted to Maine's legislatively selected seven R&D sectors and are, therefore, MEIF goals and metrics, and a subset of the overall UMS goals. The UMS Strategic Outcomes that apply to R&D activity are:

UMS Strategic Outcomes Target 1 – Increase Research Capacity and Activity UMS Strategic Outcomes Target 2 – Support New Technologies, Licensing, and Commercialization UMS Strategic Outcomes Target 4 – Increase Economic Development Partnerships UMS Strategic Outcomes Overall Goal –

Support R&D Workforce Development

This report addresses those goals. In addition, the University of Maine System reports R&D outcomes annually through the statutorily required survey of Maine R&D activity administered by the Maine Department of Economic and Community Development Office of Innovation (5 MSRA 13107).

The R&D Strategic Outcomes and related MEIF goals are:

MEIF Target 1 -

Derived from UMS BOT Research and Economic Development Target 1

UMS maintains a sponsored programs grant and contracts effort growing greater than 3 percent annually on a three-year rolling average from a 2013 baseline of \$45 million and NSF-defined total research expenditures of \$45 million in the MEIF sectors. Activity from the seven MEIF sectors will account for 50 percent of the total R&D grants and contracts, with a 3 percent annual growth on a three-year rolling average. The FY13 baseline was a calculated percentage of total activity. Table 1 below shows the actual FY13 baseline at slightly less at \$43.5 million.

Table 1

FY18 Total Grants and Contract	Total Award Value							
Total Proposals Submitted		1,205			\$210,434,244			
Total Proposals Awarded		1,0	18	\$93,979,641				
Grants and Contracts								
Awarded in MEIF Sectors ONLY	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018		
Aquaculture and Marine	7,045,322	9,153,389	15,187,566	12,631,690	21,229,069	16,032,068		
Biotechnology	1,985,295	6,353,450	1,524,204	2,399,487	3,821,390	6,552,964		
Composites	9,230,715	5,135,033	5,247,712	6,974,264	13,504,642	9,952,947		
Cross Sector	2,990,129	4,681,209	1,018,132	507,842	4,274,394	3,034,812		
Environmental Technologies	5,781,658	7,959,264	4,349,651	5,045,536	5,543,121	7,407,213		
Forestry and Agriculture	8,642,424	7,654,060	14,194,009	10,317,799	4,660,014	10,685,631		
Information Tech	7,422,675	2,520,521	4,473,781	11,497,199	5,292,726	5,582,266		
Precision Manufacturing	1,130,746	1,414,700	780,694	1,009,921	1,602,646	3,099,123		
Total	\$44,228,964	\$44,871,626	\$46,775,749	\$50,383,738	\$59,928,002	\$62,347,024		

FY17–18 Increase 4%

2018 ANNUAL REPORT 3

Strategic Outcomes, Goals and Metrics

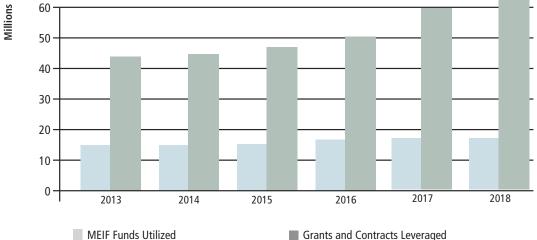


Figure 1 MEIF Return on Investment (UMS) Tens of Millions Leveraged in Grants and Contracts (Five-Year Snapshot)

In summary, the MEIF Target 1 for increasing external grants and contracts leveraged through MEIF investments saw an increase of 5 percent over the previous fiscal year exceeding the goal of 3 percent per year. This favorable trend continues in a positive direction after decreases from FY10 through FY12. This is largely related to changes in the economy and the federal and private sectors partners that are beginning to increase post-

Grants and Contracts Leveraged

recession funding for R&D. Recognizing the lead-time for proposal preparation, sponsor review and selection, and contract activity to begin, there can be a one- to two- year lag in output. Proposal preparation and submissions remain steady. For the purpose of this report, a private-sector contract is counted as a single proposal submission.



4 Maine Economic Improvement Fund

MEIF Target 2 –

Derived from UMS BOT Research and Economic Development Target 2

UMS annual revenue from commercialization, including intellectual property licensing increases, at least 20 percent annually on a three-year rolling average from a baseline of \$150,000 from the MEIF sectors.

Table 2

MEIF Target 2 — Commercialization Activity	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Revenue from Commercialization	\$121,250	\$96,726	\$150,094	\$127,949	\$186,148	\$561,423
Number of Patents Filed	15	32	22	35	12	14
Number of Patents Issued	16	12	9	8	6	5
Number of License Agreements and License Options	6	6	16	8	7	9

In summary, revenue from the licensing of intellectual property has shown an overall increase since FY2013 in an upward trend in FY2018. Commercialization in Maine relies on private companies licensing UMS intellectual property to secure private investment to advance technology, products, and services into markets. General trends in venture capital and private equity investments are slowly rebounding in Maine and companies are starting to see new equity investments. Patents take four to five years from application to issuance. Newly issued UMS patents

FY17–18 Revenue Increase 202%

reported above and detailed in Appendix 1 were filed four to five years ago. In addition, UMS technologies generally fall into categories such as transportation infrastructure, pulp and paper, and sensors and biotechnology. These sectors have been slower to rebound post-recession and timelines from lab to market can take five to ten years. UMS is focusing additional effort to accelerate the commercialization with private-sector partners and other investment programs, such as the Maine Technology Institute and Maine Venture Fund.

MEIF Target 3 –

Derived from UMS Research and Economic Development Target 4

The UMS annual revenue from activities with business and industrial partners in the MEIF sectors increased from an FY13 baseline of \$3.15 million to \$6.75 million by FY17, and the number of business and industry contracts in the MEIF sectors increased from a baseline of 407 in FY13 to 450 in FY17. The number of business and industry contracts is included in the total grant and contract count in Table 1.

Table 3Figure 2 UMS Industry Partnerships FY10 through FY18							
MEIF TARGET 3 — Business and Industry Contracts	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	
Revenue from Business and Industrial Contracts	\$4,156,184	\$4,371,999	\$5,759,572	\$4,836,138	\$5,035,394	\$5,009,399	
Number of Business and Industrial Contracts	407	500	624	519	565	520	

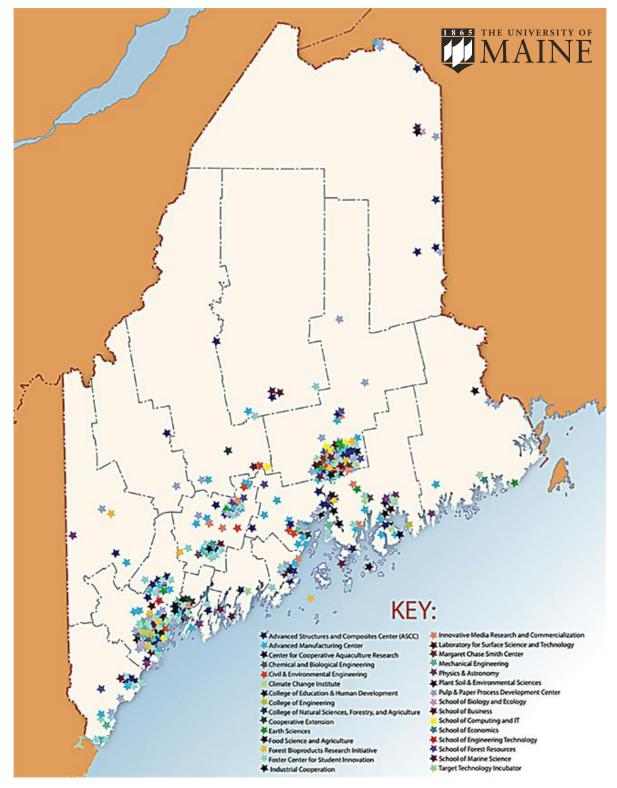
FY17-18 Revenue Change -.99%

In summary, many MEIF investments not only leverage external grants and contracts, but through a combination of MEIF funds, and grant and contract funds, help UMS campuses build capacity to work directly with industry partners. Figure 2 illustrates the variety of campus-based programs that work directly with companies. Some industry partners will be companies licensing and commercializing UMS intellectual property, while many companies are working with UMS

campuses to get assistance with solving their problems or perfecting their inventions and innovations. UMS projects with business and industry are steady and activity is meeting the goals and metrics of this Target. Figure 2 demonstrates the statewide nature of these partnerships for those contracts that are currently tracked. Many additional companies, inventors, and entrepreneurs receive advice and guidance but do not result in formal contracts.

Strategic Outcomes, Goals and Metrics

Figure 2 UMS Industry Partnerships FY10–18



6 Maine Economic Improvement Fund

MEIF Target 4

Support R&D Workforce Development

UMS shall maintain a concerted effort to involve faculty, staff, and students participating in research, development, and commercialization, and shall report annually the number of employees directly supported by MEIF funds and by grants and contracts in the MEIF sectors. As external funding is hard to predict, there is no specific numerical goal for employee count, but UMS shall report the annual number of faculty, staff, and students to indicate trends and identify opportunities for growth.

In summary, state economic analysis predicts economic growth in Maine based on an available trained and educated workforce. Growth in the seven MEIF sectors is especially dependent on the available workforce. MEIF seven-sector projects at UMS rely on regular faculty and staff, as well as many "soft money" employees - those hired to work on specific grants and contracts and paid by those grant and contract funds. UMS employees and students gain valuable on-the-job training and experience, and may then contribute to the employment base within these sectors after completion of the grants or graduation. Grant and contract revenue is a strong contribution to support this workforce development. UMS counts employees involved in this activity and will continue to pursue the growth in employment numbers related to growth in grant and contract activity. Nonstudent employees are tracked as full-time equivalents (FTEs) based on a 40-hour/52-week work year. Student employees, tracked by head count, generally work less than 20 hours per week during the academic year.

Grant and contract revenue also is an important source of funding for students' salary, tuition and other types of support,

allowing many research-active students to offset their cost of education while getting valuable skills and on-the-job experience, positioning them well to be leading contributors to Maine's key growth sectors.

Success and Strategic Impact

By investing MEIF funds in researchers, facilities, and matching for grants, UMS has attracted more than \$307 million since 2013 in federal and private-sector grants and contracts related to the seven strategic research areas. This funding directly results in Maine products and technologies, such as biofuels, pulp and paper products, new potato varieties, aquaculture technologies, and software, which lead to improvements in Maine's industries.

Return on Investment

Each year, the state's MEIF appropriation is expanded by tens of millions of dollars in federal and private funds for important research, development, and commercialization. The University of Maine, as the state's land grant/sea grant institution, utilizes its long-established research capacity and infrastructure to attract the majority of these external funds. Other UMS schools continue to build and partner with federal and private-sector grants and contracts.

Developing Workforce and Creating Jobs

Annually, 481 full-time equivalent jobs are funded in Maine through the grants and contracts leveraged and expended related to MEIF. These positions include faculty, technicians and research staff. Currently, 878 graduate and undergraduate students are funded for their involvement in research, development, and commercialization. This student involvement in research, development and commercialization projects is comparable to an internship and gives students great real-world experience as well as life-long networks and connections.

Table 4-A

MEIF Target 4 — Workforce Development	FY18 Wages Paid fr	om MEIF F	Y18 Wages Paid fron	tracts Totals	
Number of Faculty and Staff Supported (FTE = Full-Time Equivalent)	176.21		3	481.64	
Number of Graduate Students Supported (Headcount)	20			248	268
Number of Undergraduate Students Supported (Heado	count) 119			491	610
Table 4-B Graduate and Undergraduate Student Costs Paid from Grants and Contracts	FY2014	FY201	5 FY2016	FY2017	FY2018
Student Salaries and Wages from Grants and Contract	s \$4,877,650	\$4,603,69	6 \$5,255,861	\$5,498,777	\$4,853,956
Student Tuition Paid by Grants and Contracts	857,781	835,96	1 956,963	935,494	373,118
Student Fellowships Paid by Grants and Contracts	199,400	552,94	4 197,744	233,111	214,000
Student Health Insurance Paid by Grants and Contract	s 282,848	62,96	7 247,960	214,951	795,339
Total Soft Money Student Support	\$6,217,679	\$6,055,56	8 \$6,658,528	\$6,882,333	\$6,236,413

FY17-18 Change -0.91%

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MEIF Success Stories

MIRTA: Out of the lab and into the public

t the University of Maine System, faculty and students collaborate to make significant discoveries that solve meaningful problems to improve lives and create jobs. And now the Maine Innovation, Research and Technology Accelerator (MIRTA), a new university technology accelerator program, provides the resources and expertise to allow researchers to move their inventions out of the lab and into commercial use with public benefit.

Earlier this year, five inventions created by UMaine faculty-led teams were the first to benefit from the program. All projects are tied to Maine businesses or industries critical to the future of the state. At the end of their program, all five teams had clear commercialization plans to move forward, from starting a company to licensing and collaborating with business partners.

Healthy Hives (MIRTA)

In a single year, the successful pollination of crops by honeybees is reflected in the foods found in nearly every average American meal. In particular, the \$28 million wild Maine blueberry crop (2016) was dependent on pollination by commercial honeybees. But in 2014–15, bee losses in Maine reached 60 percent due to colony collapse, a global problem not yet fully understood. To learn more about bee colony health and prevent collapses through early intervention, a noninvasive beehive activity monitor was invented to record the insects' movements. Armed with the customer and market knowledge gained through MIRTA activities, Healthy Hives inventor Nuri Emanetoglu plans to launch a startup company in late 2018, with companies in Ellsworth and Portland expected to collaborate on manufacturing.



8 Maine Economic Improvement Fund

Geospatial Innovations Supporting Landscape Management in Maine (MIRTA)

The Maine forest industry contributes \$8.5 billion annually to the gross domestic product and supports 33,000 jobs. This industry has a long, rich history in Maine, and continues to have significant economic impact in the state. To keep this industry strong and the resources sustainable, forest managers require ongoing, accurate data collection. Currently in Maine, a lack of broad-scale geospatial information about forest and landscape conditions is a barrier to planning and prioritization for large private landowners. The Intelligent Geosolutions mapping approach is gathering this critical information using machine learning algorithms. University of Maine inventors Erin Simons-Legaard, Kasey Legaard and Aaron Weiskittel have created a cost-effective high-resolution, near-real time mapping system about timber and nontimber resources. Those forest attributes can include tree species biomass and relative abundance, forest types, wildlife habitat suitability, disturbance history and canopy change.

Beverage Contamination Detector (MIRTA)

Across the country, demand for beer and wine is on the rise. There are more than 6,000 wineries in the United States — a number that's growing by more than 6 percent a year. In Maine, the number of breweries has jumped 30 percent in the past year to more than 120. To meet the ever-increasing market demand, wineries and breweries need a faster, more cost-effective means of identifying spoilage than the current costly yeast tests that take days to return results and require specialized equipment. A portable device for point-of-use beverage spoilage yeast testing has been developed by University of Maine inventors Laurie Connell and Corey Hirn. The technology delivers on-site microbe detection using RNA-related probes to return results in 15 minutes, compared to the industry standard method that takes five days. They will be partnering with Beacon Analytical in Saco to develop kits that could be used by commercial beer and wine producers throughout the US. Current beta versions of the instrument and test kits are undergoing testing at commercial facilities in 2019, with commercial products expected to be available to the industry as early 2020.

Point-of-Care Diagnostics, Simplified (MIRTA)

The need is ever-increasing for handheld point-of-care biomedical diagnostic testing devices, such as those used in blood and urine testing, in the health care and pharmaceuticals arenas. These types of tests enable providers to detect diseases earlier and provide diagnostic testing to underserved populations. Despite the numerous benefits these devices bring to the health care community, they are costly to produce. Can the devices be made more cost-effective and environmentally friendly, eliminating the use of plastics and glass? In collaboration with Sappi North America in Westbrook, Maine, a UMaine research team is developing new methods of using patterned release paper in biotechnical applications. The team is led by University of Maine inventors Caitlin Howell, Amber Boutiette and Matthew Talbot in collaboration with Amy Blakeley of Sappi. The goal is to develop low-cost, paper-based devices that leverage the existing patented patterning technology and microfluidics engineering in disposable, biodegradable devices that could ultimately increase accessibility to health-related diagnostic testing worldwide.

Making Peripheral Neuropathy Right (MIRTA)

Neuropathy, the death of peripheral nerves, is a health condition that can result in pain and loss of mobility and, in some cases, can lead to amputation. Causes range from diabetes and aging to certain viruses and exposure to some chemicals. It is estimated that, in the U.S. alone, approximately 30 million people are affected and one out of every four Americans will be affected by it. How can peripheral neuropathy be detected and diagnosed as early as possible to avoid extreme measures like amputation? A University of Maine research team led by Kristy Townsend and Rosemary Smith has developed a microneedle medical device for early detection and diagnosis of small-fiber neuropathy. The device also has the ability to deliver noninvasive, pain-free treatment on and below the skin. The flexible microneedle array is capable of nerve conduction measurements and drug delivery, and has the potential to stimulate nerve regrowth.

MEIF Success Stories

UMaine wins \$14.2M DOT award to form Transportation Infrastructure Durability Center

The U.S. Department of Transportation (U.S. DOT) has selected the University of Maine to lead the creation of a highly competitive University Transportation Center (UTC) called the Transportation Infrastructure Durability Center (TIDC). TIDC aims to save federal and state taxpayer dollars by extending the life of transportation assets, including bridges, roads, and rail.

The U.S. DOT will provide as much as \$14.2 million over five years for the UMaine-led coalition that includes the University of Rhode Island, University of Connecticut, University of Massachusetts Lowell, University of Vermont, and Western New England University. For many years this center has resided with the Massachusetts Institute of Technology, but because of the University of Maine's nationally recognized expertise in the use of composite materials in infrastructure, leveraged with the strengths of several partners, it now has the opportunity to house this important resource.

Working with state DOTs, the new TIDC seeks to identify new materials and technologies that maximize the impact of transportation infrastructure investments. TIDC will harness the experience of 28 faculty researchers and train 280 student researchers from all New England states. It will focus on real infrastructure needs identified by DOT partners and prioritize extending the life of existing transportation assets to ensure cost-effectiveness.

\$400,000 Award to Develop Computer Model that Simulates Irregular Voice Conditions

University of Maine assistant professor of mechanical engineering, Qian Xue, is leading the development of a computer model that can provide an accurate, real-time simulation of irregular voice conditions.

Xue recently was awarded \$406,984 from the National Institute on Deafness and Other Communication Disorders (NIDCD), part of the National Institutes of Health, for the project. The overall objective of the project is to develop a high-fidelity computer model for simulating mucosal wave on vocal fold and voice outcomes in various irregular vocal conditions.

Xue says the proposed model could further the understanding of the relationship between vocal fold biomechanics, mucosal wave patterns and the resulting voice. This will help improve the diagnosis and treatment of a variety of medical conditions.

UMaine develops new potato variety for gourmet, specialty markets

The University of Maine, in partnership with the Maine Potato Board, has released a new gourmet potato variety, Pinto Gold. The potato is a high-yielding, yellow-fleshed specialty variety with excellent roasting and eating quality, according to Gregory Porter, who leads UMaine's potato



breeding program at Aroostook Farm in Presque Isle.

Pinto Gold is the fourth potato variety released by UMaine and the Maine Potato Board since 2014. They previously released Easton, Sebec, and Caribou Russet. The partners license new varieties to seed growers and commercial farmers, and revenue from licensing is reinvested into the potato breeding program.

Although Pinto Gold will likely never be produced on thousands of acres in the state, Porter says, he believes it will be beneficial for small-scale growers, restaurants, home cooks and gardeners.

"They're pretty, unique, and the tastiest roasting potatoes you could ever have," he says.

10 Maine Economic Improvement Fund Soil professors awarded \$498,000 to study phosphate interactions in agroecosystems

Research led by two University of Maine professors aims to provide a greater understanding of how soils collect and hold phosphate, an important fertilizer component, to increase the sustainability of agriculture in the United States.

At the University of Maine, Tsutomu Ohno, a professor of soil chemistry, and M. Susan Erich, a professor of plant and soil chemistry, were awarded a \$498,000 grant from the United States Department of Agriculture's National Institute of Food and Agriculture to complete a three-year study to provide the foundational knowledge to design management practices that significantly increase phosphorus use efficiency in agroecosystems and to understand soil carbon stabilization.

"Fertilizer use and other technologies have increased food production in the U.S. which has increased food security for many, but has come at the cost of adverse environmental impacts and decreasing sustainability of U.S. agriculture," Ohno says.

Tajvidi awarded \$250,000 to develop next-generation CNF floor, wall products

Mehdi Tajvidi knows that big things can come in small packages.

He works with cellulose nanofibrils (CNF) — the natural structural building units of wood that are 1/100,000th the width of a human hair. CNF can be produced from any wood species and from the lower value residual byproducts from Maine's sawmills and pulp and paper mills.

The University of Maine assistant professor of renewable nanomaterials describes CNF as magical. The renewable biodegradable material has superior properties, he says, including exceptional strength and ability to bond.

Tajvidi has been awarded \$250,000 from P3Nano — a public-private partnership founded by the U.S. Endowment for Forestry and Communities and the U.S. Forest Service — to develop next-generation CNF building materials.

Tajvidi is developing and testing an alternative to traditional drywall made of plaster, other materials, and additives. His version, which is made with CNF and wood particles, is lighter and a better insulator. Tajvidi plans to make the core fire resistant, as well. In addition he's partnering with G-O Logic to create a lightweight interior wall covering system that's easy to mold into various shapes. G-O Logic is a Belfast, Maine firm that makes advanced building products for the high-performance construction market.

FiberLean Technologies, a global producer of products that combine CNF and minerals, has contributed \$10,000 cash and \$10,000 in-kind support toward implementation of the wall-covering product.

Maine mills could be modified to handle production, says Tajvidi, who adds that he has numerous other ideas of how to utilize the magic of CNF in a variety of other products.

University of Maine's Laboratory for Surface Science and Technology (LASST) receives \$2.5 million from U.S. Department of Energy to improve technology in power plants

A University of Maine research project focused on improving sensor technologies used in coal-based power plants has received a \$2.5 million grant from the National Energy Technology Laboratory (NETL) through the Department of Energy's Office of Fossil Energy.

The goal of the project is to develop new advanced sensor instrumentation that can provide improved condition-based maintenance in existing coal power plants, thus serving to reliably reduce the costs of operation and maintenance, increase efficiency and safety, and significantly reduce the pollutant emissions, according to the DOE.

The technology aims to monitor temperature and equipment degradation at both the fire-side and steam-side of boilers and other critical components. The work carried out under this DOE funding will focus on technology transfer and development of new materials and packaging for wireless harshenvironment sensors applications in coal-fired power plants. The award builds on the ongoing work on UMaine's patented wireless high temperature sensors for extreme environments.

MEIF Success Stories

Suds to Shrimp

The Suds to Shrimp Project began during the summer of 2018. The project, directed by the University of Southern Maine's (USM) Environmental Science and Policy (ESP) Department, seeks to create a retail and wholesale network focused on polyculture aquaponic systems in Maine. Aquaponics is a system that combines aquaculture (raising fish and other aquatic animals in tanks) with hydroponics (cultivating plants in water) into an indoor ecosystem.

This project will develop a grave-to-cradle approach for sustainable food production by using waste beer grains to grow prawns, tilapia, and vegetables in a multi-species aquaponics system. The project is being incorporated into the ESP Research and Analytical Methods class as a first step in broadening the knowledge base in Maine as well as offering an excellent opportunity for students and faculty to conduct experiments with their community partners that move toward creating the first source of larval prawns in Maine.

Over the next year, the project will demonstrate methods to overcoming economic barriers to the development of Maine's aquaponic industry and workforce by:

- 1. Raising prawns in production with tilapia in aquaculture systems
- 2. Developing a business model that sells an aquaponic service to restaurants
- 3. Training future growers to establish and maintain sustainable polyculture aquaponics operations



Alliance for Maine's Marine Economy invests over \$14 million in infrastructure projects to increase jobs

The Alliance for Maine's Marine Economy, a consortium of Maine-based marine businesses, research institutions, and educational organizations, is investing in infrastructure and technologies with \$7 million in voter-approved bond funds, matched by more than \$7 million from Alliance members.

Coordinated by the University of Maine, the Alliance is dedicated to ensuring that Maine seafood, fishing, and aquaculture industries, and the natural ecosystems on which they depend, are healthy and benefit Maine people. These strategic investments support and diversify traditional fisheries, aquaculture, and other marine-dependent industries.

The bond money and public/private matching funds total over \$14 million supported capital investments in public institutions and private businesses that will benefit the entire marine sector by facilitating business development, accelerating product innovation, assessing and preventing risks to resource health, forecasting changes in product supply, and improving the value of Maine's seafood resources. These investments include new processing capabilities at seafood businesses in York, Cumberland, Lincoln, Knox, Hancock, and Washington counties, and new R&D and commercialization facilities in Lincoln, Penobscot, and Washington counties.

Maine's marine businesses will benefit from resources, technical assistance, information, educational opportunities, business training, and capital that will allow them to grow and thrive in the face of an ever-changing ocean ecosystem and globalized economy.

The Alliance is a developing initiative focused on emerging opportunities and challenges related to a productive and profitable marine economy. In the long term, the Alliance is committed to stimulating Maine's marine economy at all levels. Alliance partners have identified projects and contracts aimed at attracting at least another \$50 million in additional private sector and federal grant dollars over the next 10 years.

UMaine designated one of eight US Department of Energy combined heat and power centers

The U.S. Department of Energy (DOE) has selected the University of Maine to lead one of eight regional partnerships dedicated to the promotion, technical support ,and deployment of cost-effective and highly efficient combined heat and power (CHP) technologies throughout the nation. UMaine, in partnership with the University of New Hampshire and Watson Strategy Group, will oversee the CHP Technical Assistance Partnership (TAP) center in the northeast region, including Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, and Connecticut.

The UMaine-led Northeast Combined Heat and Power Center (NECHPC), as well as the seven other CHP TAP program centers nationwide, are supported by \$25 million of DOE funding. The NECHPC will receive more than \$2 million of that total.

Combined heat and power (CHP) — also known as cogeneration — is an efficient and clean approach to generating both electric power and heat from a single fuel source, like biomass or natural gas. Furthermore, heat and power can be produced onsite, reducing the need to purchase electricity from the distribution grid, greatly increasing energy security and resiliency.

Traditional electric and thermal energy generation systems can be very inefficient. In many situations, electricity is purchased from the distribution grid, and additional fuel is used to heat a boiler or furnace to provide heat to a facility or a manufacturing process.

However, over half of the fuel energy consumed to generate electricity at a large power plant is exhausted as heat energy and often underutilized, even wasted.

CHP systems capture the "extra" thermal energy created in power generation and use it to provide heat in any required application — from staving off cold temperatures in apartment buildings and hospitals, to heating large amounts of water for industrial or food processing purposes. The team is meeting with companies and facilities throughout Maine to help applicants measure their baseline loads and evaluate modern solutions to improve their bottom lines.

Projects aim to bolster seaweed, blue mussel production

Aquaculture companies in Maine are at the forefront of efforts to culture high-quality seafood products. While the industry has grown in the last five years, those seeking to further expand face serious challenges.

Two awards from National Oceanic and Atmospheric Administration (NOAA) will support research projects designed to overcome the challenges and increase aquaculture production.

A NOAA grant of \$908,015 to the University of Maine will support research into sustainable post-harvest processing of aquacultured seaweed and development of value-added products. Balunkeswar Nayak, assistant professor of food processing in the University of Maine School of Food and Agriculture, will lead the research. Interest in seaweed aquaculture is increasing in the U.S. for many reasons, including the demand for natural and local food. Maine is home to the first commercial kelp farm in the nation and has emerged as an industry leader.

A second award of \$249,238 to University of Maine Machias professor Brian Beal and the Downeast Institute for Applied Marine Research and Education will support study of large-scale culture of blue mussel seed or spat (larval or juvenile shellfish provided to commercial aquaculturists for grow-out). Demand for mussels in the Northeast exceeds the current domestic supply. In 2015, 9 million pounds of live mussels were imported from farms in Canada, especially Prince Edward Island. This represents about half of the U.S. market, and demand is projected to increase by nearly a third in the next decade.

These new efforts build on previous NOAA Sea Grant investments to support domestic aquaculture efforts. Between February 2016 and January 2017, Sea Grant reported \$90 million in national economic impacts, including support of 900 businesses and 1,800 jobs from aquaculture investment.

The Maine Sea Grant College Program at the University of Maine is a program of the National Oceanic and Atmospheric Administration and the state of Maine.

Creation of Maine Mass Timber Commercialization Center

The University of Maine System will be examining how to build structures using engineered wood composites and Maine timber. This is made possible by a \$454,532 US EDA grant that created the Maine Mass Timber Commercialization Center.

The center's mission is to work with key stakeholders across the state to revitalize and diversify the forest economy through the development and advancement of new technologies and manufacturing opportunities such as Composite Laminate Timber (CLT).

"Maine's forest products industry helps drive local economies throughout our state. By establishing the Maine Mass Timber Commercialization Center, UMaine and its forest industry partners are furthering important work to discover innovative ways to develop new forest products from our natural resources," Collins and King said in a joint statement. "This grant will help strengthen Maine's forest economy, support jobs in our rural communities and further diversify the industry. The possibilities are endless with the introduction of new technology and ingenuity."

Forest Sector Focus: Maine Forest Economy Growth Initiative



ORMaine is one of the most comprehensive economic development efforts in the history of Maine. With the closure of six pulp and paper mills in Maine in just a two-year period, Maine has seen the economic disaster from the businesses and jobs lost in those communities. This situation led the Maine Forest Products Council, the Maine Professional Loggers Association, the Maine Woodland Owners, the Maine Development Foundation, and the University of Maine to form a unique collaboration between the private companies, trade associations, and the public sector to develop a Vision and Roadmap for Maine's Forest Economy. Several US Economic Development Administration (EDA), US Department of Agriculuture (USDA), and U.S. Department of Energy (DOE) grants have been awarded in Maine and to UMaine to specifically focus on industry support, forest species supply and modeling, emerging technology commercialization, workforce assessment, community and stakeholder engagement, and business attraction and recruitment. FORMaine is run by an industry-led executive committee and seven subcommittees that include private sector companies, trade associations, land owners, state agencies, the University of Maine, and communities.

Partners in the formation of this statewide project include UMaine and USM. UMS faculty and staff participate in all of the committees and expertise is sought in all facets of the programs. UMS faculty and staff serve as PIs/Co-PIs on multiple grants funding different elements of the vision and roadmap for Maine's forest economy. In addition, EDA also funded a roadmap for Maine's Bioproducts Sector to advance biobased manufacturing, marketing Maine's biobased assets to investors in new technologies and processes, and providing technical assistance to Maine forest products manufacturers and users in the implementation of new biobased technologies. Biobased materials include bio-plastics, bio-chemicals and bio-fuels that are traditionally derived from petroleum. Markets for bio-based alternatives are growing throughout Europe and North America placing Maine in an important geographic market at a time where Maine has abundant, under-utilized wood-based feed stocks.

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New Lab Provides Hands-On Experience Students through Cutting-Edge Research

The University of Maine Alfond Advanced Manufacturing Laboratory for Structural Thermoplastics was created to advance research and development of a new class of structural composite materials — the latest generation of tough, lightweight structural thermoplastics. The automotive, transportation, and building industries are the most common areas where these materials are used today. The goal is to develop new automated, advanced manufacturing techniques that reduce cycle time and cost, and can then be transferred into industry.

The materials that students and faculty are working with also have applications in the marine and aerospace industries. They can be adapted to exterior or interior uses, and can be engineered for a variety of specifications, such as withstanding weather and ultraviolet radiation in outdoor applications, or limiting smoke and toxicity in the event of fires in indoor applications. They also can be adapted to different manufacturing processes. The ultimate goal is to find new ways to use this new class of thermoplastic composites in industrial applications.

One student working on this project is Justin Baron from Madawaska, ME. Justin has gained considerable hands-on experience through his position within the lab as he focuses on tape layup — placing layers of fiber composites at various angles to gain strength.

Sleep monitoring invention that could help detect early symptoms of Alzheimer's receives \$1 million NIH award

A home-based sleep monitoring invention developed by University of Maine researchers that has the potential to help detect early symptoms of mild cognitive impairment and Alzheimer's disease in elders has received a \$1 million Small Business Innovation Research Award (SBIR) from the National Institute of Health's Institute on Aging.

The two-year NIH Phase II award to start-up company Activas Diagnostics, LLC, founded by UMaine professors Marie Hayes and Ali Abedi, focuses on bringing the company's SleepMove product — a fitted

mattress undersheet instrumented with 16 hybrid wireless sensors — to market as a new approach to diagnostics and monitoring in early stage neurological diseases, including Alzheimer's disease.

Activas Diagnostics' SleepMove technology allows for home-based, nonintrusive recording that integrates wireless sensing technology, signal processing, and statistical inference software to identify two novel biomarkers of sleep disorder that complement standard actigraphy, and new level of accuracy for out-patient sleep recording.

Adults living independently will perform a seven-day sleep study and overnight memory testing to evaluate sleep-wake and respiratory status during sleep. The funding will focus on proof of concept — through clinical testing and device development to validate the SleepMove device's predictive power — and execute early stage commercialization plan.

The goal is to move the technology into clinical trials and establish approval from the U.S. Food and Drug Administration.

Research and Workforce Development of Maine's Microalgal Industry

The purpose of this research project was to engage biology students in carrying out growth optimization and ecophysiological measurements on various strains of the microalgae, Nannochloropsis, to determine the growth conditions under which any of the strains would produce the most lipids that could be used for biofuels.

Five students from the University of Southern Maine were trained in basic lab techniques, as well as microalgal culturing. Engaging students in research leads to developing a trained and educated workforce. One student has gone on to work in a biotechnology company in Maine; two students are attending graduate studies in pharmacy and dentistry; and another student, while still an undergraduate biology major, was awarded the Tom Knight Memorial Scholarship for his exceptional dedication to research and academics.



New England and Iceland Cluster/MBA Program

Five teams of USM MBA students worked with entrepreneurs at the New England Ocean Cluster (NEOC) and Soli DG to examine market feasibility, conduct market opportunity analyses, and develop market plans for new building materials products and a cold storage facility on the Portland Waterfront. Students presented the following five ideas to local entrepreneurs to be judged on the most impactful business plan and best overall business presentation:

- 1. Lobster chitosan processing
- 2. Reusing seashell and glass waste products
- 3. New USA consumer herring products
- 4. Direct waterfront-to-restaurant seafood distribution channels
- 5. Portland Waterfront cold storage needs (winning team)

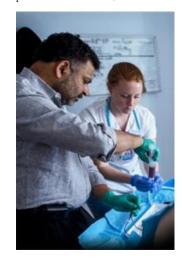
The winning team (Cold Storage) of four MBA students travelled with Professors Bob Heiser, Patricia Griffin, and Jimmy Xu to Iceland in October 2017 to meet Icelandic entrepreneurs and academics. The MBA team presented their project ideas to individual businesses in Reykjavik, as well as to a group of academics at Reykjavik University. The MBA team also visited local Icelandic seafood entrepreneurs, particularly members of the Icelandic Ocean Cluster House.

In Portland, Maine, the Cold Storage team's economic analysis was reviewed by NEOC's waterfront client Americold, which was extremely well received by NEOC and its clients. The analysis was used to justify economic development and zoning approvals on Portland's waterfront.

USM's School of Business and Professor Bilodeau also conducted a competition with USM undergraduate entrepreneurial students. The undergraduates examined a range of ideas regarding seafood processing, waste recovery, and shipping logistics. The winning undergraduate student and Professor Bilodeau traveled to Iceland to conduct company visits and present entrepreneurial ideas at RU, as well as several Icelandic small farming and aquaculture startup companies.

Samstarf – USM and Iceland Academic Public Health Collaboration

The Samstarf Initiative built public health and healthcare capacity in the areas of workforce training, international health, health services research, and academic course development. Public health graduate students from Maine engaged in public health and health care research and fieldwork with Icelandic preceptors and Icelandic public health PhD candidates involved in health services research work in Maine. Faculty from the University of Southern Maine (USM) developed and piloted e-Learning opportunities for Icelandic public health students, faculty public health officials, and healthcare professionals. These activities are intended to support the



growing business, cultural, and academic relationships between Icelandic universities, government agencies, industry, and the State of Maine.

Project staff traveled to Reykjavik and Akureyri, Iceland to meet with university, government, and embassy officials to advance the work of the Samstarf Initiative and attended the Arctic Circle Assembly. Multiple student exchanges took place with USM students visiting Iceland for internships and field experiences and UNAK students and faculty taking USM courses. The efforts of the project led USM and UNAK to sign a Memorandum of Understanding (MOU) for a partnership to develop collaboration in both academic and research activities.

The Samstarf Initiative was successful in increasing international public health and health care experiences that are important to Maine's economic development with Northern Atlantic countries.

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Maine Regulatory Training and Ethics Center

The Maine Regulatory Training and Ethics Center (MeRTEC) was founded to develop regulatory compliance professional development training and certification that will allow graduates to provide consultation to businesses about maintaining compliance to regulations in a cost-effective manner, regardless of the field or sector.

The partnership with the University of Maine School of Law resulted in co-designing and delivering a professional certificate program to help non-lawyer professionals across Maine in businesses, nonprofits, and government agencies navigate the regulatory minefield in areas such as finance, health care, environment, and energy. There is also an undergraduate certificate and minor in Regulatory Ethics housed at Lewiston Auburn College.

MeRTEC hosts the annual conference called the Three I's, Biosecurity & Research Integrity Conference each spring. This year they have partnered with the Massachusetts Society for Medical Research (MSMR). The national conference aims to deliver an exceptional educational and training opportunity that will facilitate meaningful dialogue as well as interactive, interdisciplinary learning and networking.

Downeast Institute Creates Regional Business Incubator and Research Hub

The Downeast Institute (DEI) serves as the Marine Science Field Station for the University of Maine at Machias, providing diverse opportunities for students, researchers, and industry members. DEI has enabled UMM to complete MEIF-funded applied research on soft-shell clams and a number of new candidates for shellfish aquaculture. Local entrepreneurs in downeast Maine can use this research space to develop and test new ideas about marine-based products or processes. So far this project has facilitated five new research projects, and has resulted in seven collaborations with businesses. Three new species have been introduced to the aquaculture sector, and one production site has been added to the region.

The Downeast region has great potential for growth in the marine economy, including commercial fisheries and aquaculture. The \$5.2 million expansion of the Downeast Institute's shellfish hatchery and lab facility, creating a business incubation and research "hub" for the region, was made possible by its unique partnership with the University of Maine at Machias. The 2018 project included \$100,000 MEIF money used for equipment.

Funds were used to purchase equipment that will build the research capacity of the only marine research facility and business incubation space of its kind northeast of Bar Harbor. Additional building improvements include 8,250 square-foot wet and dry labs, a 2,500 square-foot expansion of the current shellfish production and research center, and business incubation space. Conference and office space were also included to accommodate additional researchers and support collaboration.



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Students' biomedical engineering spinoff company receives VentureWell funding

A group of University of Maine biomedical engineering graduate students have been selected by nonprofit VentureWell to receive funding and training to develop their medical simulation startup. As part of their senior capstone project advised by assistant professors Caitlin Howell and Karissa Tilbury, the students developed a cost-efficient, realistic simulator to train medical professionals in diagnosing and responding to critical respiratory situations.

The students are receiving a \$5,000 grant to help build their spinoff company, Zephyrus Simulation, LLC. The funding comes from VentureWell's E-Team Student Grant Program. VentureWell announced Dec. 4 it has awarded 18 student teams more than \$200,000 in its winter 2018 cohort.

The students — Patrick Breeding of East Granby, Connecticut; Banton Heithoff of Oldwick, New Jersey; Amber Boutiette of Skowhegan, Maine; and Madeline Mazjanis of Portland, Maine. Like Breeding, Boutiette and Mazjanis are now pursuing master's degrees in biomedical engineering at UMaine. Heithoff is now a researcher at IDEXX in Westbrook, Maine.

The capstone project won the undergraduate Innovation Award at UMaine's 2017 Student Symposium. In October 2017, Zephyrus Simulation, based in UMaine's Foster Center for Student Innovation, won \$500 in the Big Gig pitch event for innovators and entrepreneurs. The company went on to win the \$5,000 grand prize offered by Big Gig, a partnership of municipalities, universities, and organizations in the greater Bangor region that works with local entrepreneurs to spur economic growth.

Zephyrus Simulation is pursuing a patent for the prototype, and also has received grants from the Libra Future Fund and Maine Technology Institute.

UMaine lake monitoring project bolstered with NSF funding

Maine lakes are home to a diversity of fish and wildlife and contribute approximately \$4 billion to the state's economy. They provide economic, social, recreational, and aesthetic benefits to the people of Maine and millions of visitors annually.

The National Science Foundation has awarded a one-year, \$100,000 grant for continuing a University of Maine citizen-science project aimed at protecting lake water quality in the state. The grant will help extend the project, which began in 2015 with funding from UMaine's Senator George J. Mitchell Center for Sustainability Solutions, into 2018 and beyond.

The initial project focused on 24 Maine lakes in an effort to develop a lake vulnerability index through a blend of biophysical measurements and social science techniques. The index is meant to help predict which lakes are most susceptible to deterioration in water quality via chemical, physical and biological measurements, and identifying — through surveys and interviews — the underlying factors that encourage successful citizen science collaborations.



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Appendix 1 — University of Maine System Intellectual Property

Table A1-1

University of Maine System New Patent Applications Filed FY2018

Title	Application Type	Filing Date	Inventor	Campus
MULTILINE RING ANCHOR	US – PROVISIONAL	3/28/2018	MELISSA LANDON	ORONO
POLYMERIC COMPOSITE MATERIALS AND METHODS OF MAKING THEM	US – CONTINUATION	3/5/2018	MICHAEL BILODEAU JONATHAN SPENDER	ORONO
IV INFUSION SYSTEM FOR STANDARDIZED PATIENT	US – PROVISIONAL	1/29/2018	SUSAN WHEATON	USM
METHODS FOR THE PRODUCTION OF HIGH SOLIDS NANOCELLULOSE	РСТ	11/22/2017	MICHAEL BILODEAU JOHN SPENDER ADRIAAN VAN HEININGEN	ORONO
IMPROVED FILAMENTS FOR 3D PRINTING	US – PROVISIONAL	11/16/2017	DOUGLAS GARDNER JORDAN (ELLIOTT) SANDERS LU WANG	ORONO
METHODS OF CONTROLLING THE HYDROPHILICITY OF CELLULOSE	US	11/13/2017	MICHAEL BILODEAU JONATHAN SPENDER	ORONO
ELECTRICALLY CONTROLLABLE SURGICAL TOOLS	US	10/19/2017	ROBERT ECKER MOSHEN SHAHINPOOR	ORONO
ELECTRICALLY CONTROLLABLE SURGICAL TOOLS	PCT	10/19/2017	ROBERT ECKER MOSHEN SHAHINPOOR	ORONO
METHODS FOR THE PRODUCTION OF HIGH SOLIDS NANOCELLULOSE	US	10/18/2017	MICHAEL BILODEAU JOHN SPENDER ADRIAAN VAN HEININGEN	ORONO
PARASITE TREATMENT COMPOUND	US – PROVISIONAL	9/19/2017	DEBORAH BOUCHARD IAN BRICKNESS	ORONO
METHODS FOR BIOBASED DERIVATIZATION OF CELLULOSIC SURFACES	PCT	8/31/2017	MICHAEL BILODEAU JONATHAN SPENDER	ORONO
METHODS FOR BIOBASED DERIVATIZATION OF CELLULOSIC SURFACES	US	8/31/2017	MICHAEL BILODEAU JONATHAN SPENDER	ORONO
SOFT TISSUE INGROWTH OF POROUS, THREEDIMENSIONALLY PRINTE TRANSCUTANEOUS IMPLANTS OF VARYING MATERIAL AND PORE GEOME		8/1/2017	IAN DICKEY ANNE LICHTENWALNER DAVID NEIVANDT KYLE SPIVAK	ORONO

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Table A1-2 University of Maine System — Patents Issued FY2018

Title	Application Type	Filing Date	Inventor	Campus
POLYMERIC COMPOSITE MATERIALS AND METHODS OF MAKING THEM	9,944,789	4/17/2018	MICHAEL BILODEAU JONATHAN SPENDER	ORONO
ENERGY DENSIFICATION OF BIOMASSDERIVED ORGANIC ACIDS (LEVULINIC ACID UPGRADING)	2,778,453	4/3/2018	ADRIAAN VAN HEININGEN M. CLAYTON WHEELER PETER VAN WALSUM THOMAS SCHWARTZ	ORONO
ATTACHMENT OF A DEVICE TO A SUBSTRATE FOR OPERATION IN UNDER VARIABLE CONDITIONS	9,850,932	12/26/2017	ALBERTO CANABAL GEORGE HARRIS MAURICIO PEREIRA DA CUNHA SCOTT MOULZOLF THOMAS MOONLIGHT	ORONO
RADIOFREQUENCY IONIZATION OF CHEMICALS	9,818,593	11/14/2017	TOURADJ SOLOUKI	ORONO
BREACH DETECTION SYSTEM FOR CONTAINERS	9,809,007	11/7/2017	ANTHONY VISELLI BRUCE SEGEE HABIB DAGHER RYAN FISHER	ORONO

Appendix 2 — Maine Economic Improvement Fund Financial History and Tables

Table A2-1

A History of Legislative Actions on Appropriating State Research Funds

The following is a summary of the actions of the 118th–127th (first regular session) Maine Legislature with regard to appropriating research and development funds to the University of Maine System.

118th LEGISLATURE

March 26, 1997: Governor signed into law the Economic Improvement Strategy (Chapter 24) that appropriated \$500,000 to UMS for research.

April 1, 1998: Governor signed into law the Economic Improvement Strategy (Chapter 643, Part LL, Sec. S-3) that appropriated \$4 million to UMS for research. These funds were allocated from the FY98 year-end state surplus for use in FY99.

119th LEGISLATURE

March 15, 1999: Governor signed into law the Part I Current Services budget (Chapter 16) that appropriated \$4 million in 1999–2000 and 2000–01 to UMS on a "base budget" basis for research. This extends the one-time FY99 \$4 million research appropriation that was funded from the FY98 year-end state surplus.

June 4, 1999: Governor signed into law the Part II Supplemental Appropriation budget (Chapter 401) that appropriated an additional \$5.55 million in 1999–2000 and an additional \$50,000 in 2000–01 to UMS on a "base budget" basis for research.

April 25, 2000: Governor signed into law the Part II Supplemental Appropriation budget (Chapter 731) that appropriated \$300,000 in 2000–01 to UMS on a "base budget" basis for the Maine Patent Program.

A History of Legislative Actions on Appropriating State Research Funds continued

120th LEGISLATURE

June 21, 2001: Governor signed into law the Part II Supplemental Appropriation budget (Chapter 439) that appropriated an additional \$2 million in 2002–03 to UMS on a "base budget" basis for research.

March 25, 2002: Governor signed into law a deappropriation (Chapter 559) that reduced the FY03 \$2 million Supplemental Appropriation by \$1 million.

July 1, 2002: Governor signed a Financial Order that curtailed the FY03 \$2 million Supplemental Appropriation by an additional \$1 million. This eliminated the FY03 increase of \$2 million for research, bringing the FY03 research and development appropriation back to the FY02 level of \$10.1 million.

November 18, 2002: Governor signed into law a Supplemental Appropriation budget (Chapter 714) that deappropriated the \$1 million curtailment that was signed July 1, 2002.

121st LEGISLATURE

March 27, 2003: Governor signed into law the Part I Current Services budget (Chapter 20, Part RR) that appropriated \$100,000 in 2003–04 and 2004–05 on a "base budget" basis for research.

January 30, 2004: Governor signed into law a Supplemental Appropriation budget (Chapter 513, Part P, Sec. P-2) that includes a provision to transfer to MEIF up to \$2 million of any unbudgeted State revenue remaining at the close of FY04. The full amount was subsequently transferred to UMS. This same Chapter 513, Part P, Sec. P-3 made the \$2 million part of the MEIF FY05 base appropriation.

122nd LEGISLATURE

March 29, 2006: Governor signed into law a Supplemental Appropriations budget (Chapter 519, Part A, Sec. A-1) that includes providing one-time funding of \$600,000 in FY07 for the commercialization of research and development activity, and for the Gulf of Maine Ocean Observing System.

123rd LEGISLATURE

June 7, 2007: Governor signed into law a budget (Chapter 240, Part A, Sec. A-68) that provides an increase of \$1.5 million in FY08 and an additional \$1 million in FY09 on a "base budget" basis for research.

124th LEGISLATURE

May 28, 2009: Governor signed into law a budget (Chapter 213, Part A, Sec. A-67) that maintains the annual funding at the FY09 level of \$14.7 million.

125th LEGISLATURE

June 15, 2011: Governor signed into law a budget (Chapter 380) that maintains the annual funding at \$14.7 million. May 29, 2012: PUBLIC Law (Chapter 698) creates the formula funding for the Small Campus Initiative, reserving a percentage of MEIF exclusively for the five smaller campuses of the University of Maine System.

126th LEGISLATURE

June 10, 2013: Governor signed into law (Chapter 225) an amendment to the MEIF statute to include Maine Maritime Academy as a MEIF-eligible small campus.

June 26, 2013: Legislature approved into law a budget (Chapter 368) that maintains the annual funding at \$14.7 million.

127th LEGISLATURE

June 30, 2015: Legislature approved into law a budget (Chapter 267) that increases the annual funding by \$2.65 million in each year of the biennium.

128th LEGISLATURE

July 4, 2017: Governor signs into law the state budget that maintains the annual funding at \$17.35 million (FY17/FY18).

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Table A2-2

Legislative History of MEIF New Appropriations

118th LEGISLATURE			
	<u>FY1998</u>	<u>FY1999</u>	Total 2-Year
UMaine	\$400,000	\$3,200,000	\$3,600,000
USM	100,000	800,000	900,000
Total	\$500,000	\$4,000,000	\$4,500,000
119th LEGISLATURE			
	FY2000	FY2001	Total 2-Year
UMaine	\$4,440,000	\$40,000	\$4,480,000
USM	1,110,000	10,000	1,120,000
Total	\$5,550,000	\$50,000	\$5,600,000
120th LEGISLATURE			
	FY2002	FY2003	Total 2-Year
UMaine	\$0	\$0	\$0
USM	0	0	0
Total	\$0	\$0	\$0
121st LEGISLATURE			
	FY2004	FY2005	Total 2-Year
UMaine	\$80,000	\$1,600,000	\$1,680,000
USM	20,000	400,000	420,000
Total	\$100,000	\$2,000,000	\$2,100,000
122nd LEGISLATURE			
	FY2006	<u>FY2007</u>	Total 2-Year
UMaine	\$0	\$540,000	\$540,000
USM	0	60,000	60,000
Total	\$0	\$600,000	\$600,000
123rd LEGISLATURE			
	<u>FY2008</u>	<u>FY2009</u>	Total 2-Year
UMaine	\$1,200,000	\$720,000	\$1,920,000
USM	300,000	180,000	480,000
S.C. Initiatives	0	100,000	100,000
Total	\$1,500,000	\$1,000,000	\$2,500,000
124th LEGISLATURE20			
	FY2010	FY2011	Total 2-Year
UMaine	\$0	\$0	\$0
USM	0	0	0
S.C. Initiatives	0	0	0
Total	\$0	\$0	\$0

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125th LEGISLATURE

125th LEGISLATORE			
	<u>FY2012</u>	<u>FY2013</u>	Total 2-Year
UMaine	\$0	\$0	\$0
USM	0	0	0
S.C. Initiatives	0	0	0
Total	\$0	\$0	\$0
126th LEGISLATURE			
12001 LEGISLATORE	FY2014	<u>FY2015</u>	Total 2-Year
UMaine	<u>\$0</u>	<u>\$0</u>	<u>10tal 2-tear</u> \$0
USM	0 \$0	0د 0	
S.C. Initiatives	-	-	0
	0	0	0
Total	\$0	\$0	\$0
127th LEGISLATURE			
	<u>FY2016</u>	<u>FY2017</u>	Total 2-Year
UMaine	\$2,056,400	\$0	\$2,056,400
USM	514,100	0	514,100
S.C. Initiatives	79,500	0	79,500
Total	\$2,650,000	\$0	\$2,650,000
128th LEGISLATURE			
12001 LEGISLATORE	EV2017	EV2019	Total 2 Voar
UMaine	FY2017	<u>FY2018</u>	Total 2-Year
	\$0	\$0	\$0
USM S.C. Initiatium	0	0	0
S.C. Initiatives	0	0	0
Total	\$0	\$0	\$0

Total Yearly Researc	h Appropriations for FY2018
FY2	017 Appropriation
UMaine	\$13,289,194
USM	3,290,306
UMM	250,000
UMFK	0
UMF	0
UMA	0
UMPI	0
MMA	520,500
Total	\$17,350,000

S.C. Initiatives Small	Campus Initiatives
University of Maine	UMaine
University of Southern Maine	e USM
University of Maine at Augus	taUMA
University of Maine at Farmin	ngton UMF
University of Maine at Fort K	ent UMFK
University of Maine at Machi	as UMM
University of Maine at Presqu	ue Isle UMPI
Maine Maritime Academy	MMA

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Utilization of FY18 Research Appropriation by Targeted Sector	8 Researc	ch Approp	oriation b	y Targete	d Sector	r					
UMAINE	So	Source of R&D Funds	spu			5	Utilization of R&D Funds	D Funds			Balance
	FY2018	Unused R&D	Adjustment	Adjusted	FY2018	FY2018		Transferred	Transferred	Total	Funds
	R&D	Funds from	To Prior	Unused R&D	R&D	Total	FY2018	To Match	Between	R&D	Carried
	Initial	Prior Years	Years Unused	Funds From	Funding	R&D Funds	R&D Actual	Grants &	R&D	Funds	Forward
Targeted Research Area	Base Budget	As Reported	R&D Funds	Prior Years	Transfers	Available	Expenditures	Contracts	Accounts	Utilized	To FY20191
Adv. Technology Forestry & Agriculture	\$1,595,386	\$(517,144)	\$(7)	\$(517,151)	- \$	\$1,078,235	\$2,868,058	\$194,498	\$(934,654)	\$2,127,902	\$(1,049,667)
Aquaculture & Marine Science	3,046,875	(2,000,333)	1	(2,000,333)		1,046,542	3,195,616	1,409,917	(1,158,893)	3,446,640	(2,400,098)
Biotechnology	995,565	(724,475)	'	(724,475)	•	271,090	1,798,943	100,310	(492,620)	1,406,633	(1,135,543)
Composites	2,064,300	1,334,271		1,334,271	'	3,398,571	2,253,318	61,248	(944,196)	1,370,370	2,028,201
Environmental	1,178,699	(209,929)		(209,929)		968,770	2,038,363	236,118	(735,681)	1,538,800	(570,030)
Information Technology	1,963,483	(147,741)	(1,533)	(149,274)	•	1,814,209	3,224,381	101,247	(921,163)	2,404,465	(590,256)
Precision Manufacturing	1,465,789	210,324		210,324		1,676,113	2,124,979	46,819	(736,246)	1,435,552	240,561
Cross Sector	979,097	(703,635)	'	(703,635)		275,462	802,387	76,979	(181,454)	697,912	(422,450)
Total State Funding	\$ 13,289,194	\$(2,758,662)\$	(1,540)	\$ (2,760,202)	- Ş	\$ 10,528,992	\$ 18,306,045	\$ 2,227,136	\$ (6,104,907)	\$ 14,428,274	\$ (3,899,282)
UM Cost Sharing Funding ²	6,104,907					6,104,907			6,104,907	6,104,907	
		(000 010 0)+	101 1 2 4	4(0 100 000)	•	- 10 COD 000	1.0000000000000000000000000000000000000		•		10000001
Iotal Funding	\$ 19,394,101	\$(2,758,662)	\$(1,540)	\$(2,760,202)	5-	\$ 16,633,899	\$ 18,306,045	\$ 2,227,136	\$	\$ 20,533,181	(3,899,282)
1 Includes veaseand acruinment carru-over funds (acruinment	ar funds <i>l</i> aduinmant	t ordered not received and not naid)	od and not naid)								
² Salary and benefits from university.	in initial children		ed and not para.								
³ Actual expenditures for FY2017 included a reversal of a \$1	ed a reversal of a \$i	1,533 FY2016 payro	ll accrual that was a	,533 FY2016 payroll accrual that was accrued under the instruction functional expense and not included in the FY2016 report.	struction function	al expense and no	ot included in the FN	'2016 report.			
NSM	So	Source of R&D Funds	inds			'n	Utilization of R&D Funds	D Funds			Balance Unused
	FY2018	Unused R&D	Adjustment	Adjusted	FY2018	FY2018		Transferred	Transferred	Total	Funds
	R&D	Funds from	To Prior	Unused R&D	R&D	Total	FY2018	To Match	Between	R&D	Carried
	Initial	Prior Years	Years Unused	Funds From	Funding	R&D Funds	R&D Actual	Grants &	R&D	Funds	Forward
Targeted Research Area	Base Budget	As Reported	R&D Funds	Prior Years	Transfers ³	Available	Expenditures	Contracts	Accounts	Utilized	To FY2019 ^{1,2}
Forestry & Agriculture	\$ -	\$ 402,807	- S -	\$ 402,807	\$ 1,107,845	\$ 1,510,652	\$ 1,008,644	\$49,909	\$ -	\$ 1,058,553	\$ 452,099
Aquaculture & Marine		343,940		343,940	973,072	1,317,012	816,365		•	816,365	500,647
Biotechnology		13,737	57	13,794	274,450	288,244	273,972	•	•	273,972	14,272
Composites					4,400	4,400	3,311	•	•	3,311	1,089
Environmental		36,509		36,509	136,628	173,137	107,437			107,437	65,700
Information Technology		683,506		683,506	1,185,841	1,869,347	1,058,462	134,512		1,192,974	676,373
Precision Manufacturing					84,172	84,172	83,616			3,616	556
Croce Cortor		77	(E 7)	(10)	065 661	0.01 0.0	2 V 1 V C 0			713 020	201 20

Table A2-3 Maine Economic Development Fund

¹ Includes year-end equipment carry-over funds (equipment ordered, not received, and not paid).

\$ 3,290,306 3,290,306

Total State Funding

Jnassigned — reallocated by System

Cross Sector

² At USM, projects are funded on a year to year basis with renewals contingent on performance. A majority of the unused funds carried forward into FY19 are committed but not yet allocated to multi year projects. ³ Transfers for current year funding of USM R&D programs and awards from "Unassigned". UM base budgets the MEIF appropriation by sector and thus does not use funding transfers.

26,107 287,551

839,547

,869,347 84,172 865,654

683,506 (10)

865,664 (4,632,072)

1,629,317

(57)

47 1,629,317 \$ 3,109,863

839,547

287,551

\$2,024,394

\$ 4,375,775

ŝ

\$184,421

\$4,191,354

\$6,400,169

ŝ

\$3,109,863

\$

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	So	Source of R&D Funds	nds			Þ	Utilization of R&D Funds	D Funds			Balance Unused
	FY2017	Unused R&D	Adjustment	Adjusted	FY2017	FY2017		Transferred	Transferred	Total	Funds
	R&D	Funds from	To Prior	Unused R&D	R&D	Total	FY2017	To Match	Between	R&D	Carried
	Initial	Prior Years	Years Unused	Funds From	Funding	R&D Funds	R&D Actual	Grants &	R&D	Funds	Forward
	Base Budget	As Reported	R&D Funds ⁴	Prior Years	Transfers ³	Available	Expenditures	Contracts	Accounts	Utilized	To FY2018 ¹
UMAINE	\$13,289,194	\$(2,758,662)	\$(1,540)	\$(2,760,202)	\$ -	\$10,528,992	\$18,306,045	\$2,227,136	\$(6,104,907)	\$14,428,274	\$(3,899,282)
USM	3,290,306	3,109,863		3,109,863	'	6,400,169	4,191,354	184,421		4,375,775	2,024,394
NMM	250,000	222,656		222,656	300,000	772,656	529,556			529,556	243,100
UMFK		24,394		24,394	182,500	206,894	29,862			29,862	177,032
UMPI		119,989		119,989	182,500	302,489	43,918			43,918	258,571
UMA		19,867		9,867	'	19,867	12,579			12,579	7,288
UMF		57,568		57,568	ı	57,568	33,932			33,932	23,636
NMS	520,500	158,353		158,353	(665,000)	13,853	,		'	'	13,853
MMA		121,440		121,440	'	121,440	16,022			16,022	105,418
Total State Funding	\$17,350,000	\$1,075,468	\$(1,540)	\$1,073,928	- \$	\$18,423,928	\$23,163,268	\$2,411,557	\$(6,104,907)	\$19,469,918	\$(1,045,990)

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FY2018 Utilization of FY18 Research Appropriation by Campus Table A2-4 Maine Economic Development Fund

1 Includes year-end equipment carry-over funds (equipment ordered, not received, and not paid).

2 UM Cost Sharing. 3 Inter-unit R&D funding transfers related to FY2018 MMA and Small Campus Initiative (SCI) awards.

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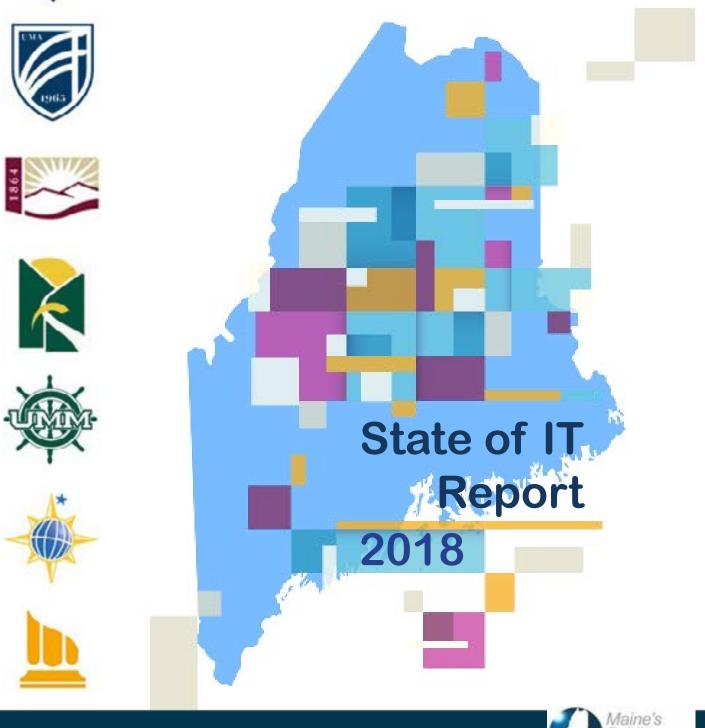
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University Services: Information Technology





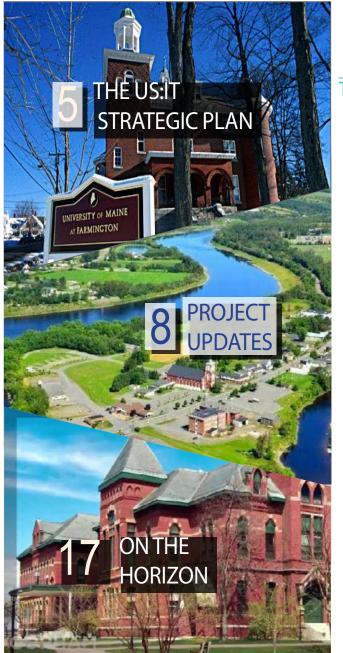


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On The Horizon	17

WELCOME

For the University Services: Information Technology (US:IT) group, our work is not solely focused on technology; rather, it is focused on helping people realize their goals by leveraging the power of technology. 2018 proved to be a very busy year for the entire team and this report highlights the achievements of the US:IT division over the past year, including the many successes realized in empowering members of the University community with tools necessary for facilitating success. This report also provides an overview of the organization, the work we have been engaged in over the past 12 months and our future directions.

A key area of emphasis for 2018 was the development of the US:IT Strategic Plan. This process kicked off with the work of a dedicated Task Force charged with defining the mission, vision and value statements for US:IT. Armed with these statements, we embarked on a journey to crowdsource the 3-year strategic goals and objectives for the unit. We are now working to ensure alignment of these goals with the recently adopted Board of Trustees Declaration of Strategic Plan.

As noted in the 2017 Annual Report, US:IT continues to find ways to support the One University initiative. Many of the project updates highlighted in this report reveal the power and value of leveraging a shared, unified services approach to achieve greater efficiency, efficacy and impact. This includes initiative such as the launch of the Kaltura video management, Zoom video conferencing, JIRA Service Desk and Blackboard Connect emergency notification platforms.

We look forward to working closely with our colleagues across the system to address the challenges that lie ahead in 2019. Initiatives designed to improve the experience for the majority of users are currently underway and are due to go-live in the Fall. We also look forward to building on the momentum that has been generated with major investments in teaching facilities system-wide (Classrooms For The Future) and upgrades to the wireless infrastructure.

Tremendous opportunities lie ahead through the transformational potential afforded through information technology innovation. US:IT will continue to view it's role as that of a catalyst as we seek to partner with colleagues to select, implement and provide the best possible solutions to position the entire University of Maine System for long-term success.

I am honored to present the 2018 US:IT Annual report. I am particularly proud of the engagement, creativity and effort of the entire US:IT team to support the needs of the University; without their dedication and hard work, we would have achieved a mere fraction of the progress highlighted in this report. As you review this document, you will note the many ways in which US:IT serves the entire University community. I welcome and encourage you to share your questions, comments and concerns with me as we venture forth into the new year.

David M. Demers, Ph.D. Chief Information Officer david.demers@maine.edu



WHO WE ARE

The University Services Information Technology (US:IT) group is a centralized support organization for the University of Maine System. We are a dedicated team of professionals responsible for strategic planning, oversight, direction and operation of IT infrastructure, resources and support services. We are proud to deliver critical technology support and services for each of the University of Maine System campuses, centers and operations across the state.

	MAINE KOON MM					
Campus	СІТО	IT Operations Mgr				
UM Fort Kent	Sara Farnham	Joshua Bellinger				
UM Presque Isle	Sara Farnham	Marteen Hester				
UMaine	Robin Sherman	Thomas Drake				
UM Machias	UM Machias Robin Sherman Thomas Drake					
UM Farmington	Fred Brittain	Nicole Haggan				
UM Augusta	Lauren Dubois	Tanner Kelleter				
USM	Kim Tran	Chadeverett Brown				

Supporting each campus, the Campus Information Technology Officer (CITO) works closely with the dedicated IT Operations Manager to provide strategic and operational alignment of local IT resources.

Working collaboratively, the newly established CITO Council is charged with ensuring campus IT Support Services teams are well-informed and leveraging bestpractices to provide exemplary customer service to the entire University community.

The broader US:IT team is organized into several functional units including:

- Custom Enterprise Solutions
- Campus Academic and Business Solutions
- Network & Telecommunications Services
- System Administration
- Database Administration
- Data Center Operations
- Advanced Computing Group
- Project Management
- Web Technologies
- Classroom Technology
- End User Technology
- Information Security
- Support Services
- Data Analytics and Reporting Technology Services

We strive to partner with stakeholders across the University of Maine System to empower users with reliable and innovative solutions to support the University's mission of teaching, learning, research and service.

US:IT Summit 2018

On June 1, 2018 in Brewer, ME, the entire IT staff for UMS gathered for a day of fun, learning, and sharing with an event theme of Putting IT

Together. Approximately 180 were in attendance. Michael Cato, CIO for Bowdoin College, was the



session to their colleagues a summary of their projects from the past year. This also gave individuals a chance to learn what other Teams are doing.



There were four training sessions covering Jira Service Desk, Active Directory to University Active Directory Transition, Common Cloud Tools at UMS, and a rousing Jeopardy-style game of Who Does That (common and uncommon support issues), presented by IT colleagues. These sessions were extremely well received and highly rated.

OUR MISSION, VISION AND VALUES

Over the past year, an inclusive process was undertaken to establish an identify for the US:IT division to establish a foundation for a new Strategic Plan. Through a series of workshops, forums and working sessions, staff participated in defining who US:IT is and the values we aspire to provide the University. We are proud to share the following US:IT Mission, Vision and Values statements:



US:IT Mission Statement

US:IT designs and supports technology solutions through a team of knowledgeable, dedicated professionals. Working within a structure of shared governance and data-driven decisions, we support the mission of the University of Maine System and its campuses.

US:IT Vision Statement

US:IT strives to be a **trusted** partner by **empowering** our university communities with **reliable** and **innovative** solutions

US:IT Service Values

- We value delivering a comprehensive suite of high quality SERVICES designed to meet and exceed customer expectations regardless of skill set or location
- We value clear and effective COMMUNICATION with our customers to foster an informed community
- We value COLLABORATION with stakeholders to ensure availability of reliable, high quality solutions designed to meet the diverse needs of our customers
- We value EMPOWERING individuals with appropriate solutions determined through engagement and developing an understanding of each users' expectations and experience level with technology
- We value promoting a **PROFESSIONAL** technology service organization that aspires to provide reliable, valuable solutions that allow customers to achieve success

The US:IT Strategic Plan

With new Mission, Vision and Values statements providing a solid foundation, US:IT staff were asked to participate in a series of sessions designed to create a new, comprehensive strategic plan. This plan will establish a 3-year roadmap toward enhancing the technology and information services provided to the University community and serve to inform budget and resource planning activities through concrete annual plans of action.



5

The US:IT Strategic Plan is organized into the (6) broad categories which are aligned with our identified Service Values:



US:IT Strategic Plan

Within each category, a series of strategic goals have been identified. Annual objectives and activities are currently being finalized for 2019 and will be available on the US:IT website.

1. <u>Service</u>

1.1. US:IT will be a trusted and preferred service provider for the University of Maine System

1.2. US:IT will be a customer-focused IT solution provider that ensures unparalleled customer service with high standards for responsiveness

1.3. US:IT will achieve consistency in the scope and delivery of system-wide services

1.4. US:IT will foster a culture that promotes reliable technology solutions and robust information security

2. <u>Communication</u>

2.1. US:IT will establish an environment that promotes transparency and collaboration through a commitment to effective robust internal and external communication

2.2. US:IT will embrace

a customer-centric

communication focus



3. Collaboration

3.1. US:IT will promote active collaboration with stakeholders to optimize alignment of IT activities and prioritize services to support System and Campus strategic initiatives

3.2. US:IT will partner with stakeholders to establish a supportable and sustainable technology baseline designed to meet the needs of campus communities

3.3. US:IT will pursue opportunities to actively contribute to the mission of the University

3.4. US:IT will provide solutions designed to empower stakeholders

4. <u>Innovation</u> 4.1. US:IT will

4.1. US:IT will be a leader of innovation within the University of Maine System

4.2. US:IT will provide innovative accessible solutions designed to meet the needs of the UMS community

5. Professional Development

5.1. US:IT will attract and retain a highly talented and efficient workforce

5.2. US:IT will be a recognized leader in Higher Education IT support and service

5.3. US:IT will be an organization that develops and empowers employees

5.4. US:IT will establish an information hub for IT training and documentation

6. <u>Data</u>

6.1. US:IT will engage with the University community to establish a culture of data-informed and responsive decision making

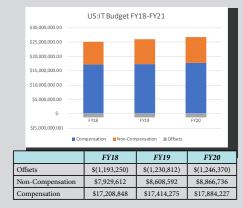


Throughout the Strategic Plan development process, effort has been made to ensure widespread, inclusive participation among US:IT staff. Following several planning sessions, staff were asked to provide one word that describes how they felt about the process. The word-cloud presented below is a summary of one such session.

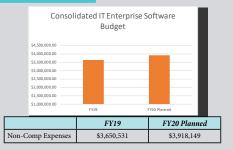


BUDGET

Under the 'One University' model, US:IT is a shared service organization with a budget that is rechargebased with the rational cost for support and services charged back to each UMS campus for both campusspecific and shared IT services. The consolidated US:IT budget is composed of staff compensation and benefits, non-compensation annual expenses and annual revenue offsets. The FY18 budget was comprised of 68% compensation & benefits and 32% non-compensation expenses. This ratio was adjusted slightly for FY19 (67% compensation & benefits; 33% non-compensation expenses) and maintained for FY20.



Non-compensation expenditures consist of enterprise systems, major applications, network infrastructure and data center operation and maintenance. Expenses include both internally hosted systems and those provided through a cloud based or managed services providers. Campus Services represents embedded resources located on each campus to respond to local



needs, including classroom and multimedia support. Approximately 22% of the total US:IT budget is for Campus Services support.

To help demonstrate and clarify the nature of noncompensation expenditures and associated annual increases for campuses, US:IT coordinated with the UMS Budget Office to consolidate enterprise software contracts and expenses into a single, unified account for FY19. This account now covers licensing for core enterprise applications including Oracle/Peoplesoft, Blackboard, SciQuest (Marketplace), Kaltura, Box Cloud Storage, Zoom, Microsoft, etc. By establishing this account, US:IT can better track and help campuses plan for contractually negotiated annual software licensing increases. For FY19, the consolidated IT Enterprise Software budget represented 42%% (\$3.65M) of total non-compensation expenses. With contractual increases for FY20, the Enterprise Software Budget increases to \$3.92M representing 44% of total non-compensation expenses.

In an effort to help contain increasing software licensing costs, adjustments to the FY20 budget have been made, reducing expenses in several categories, including travel (reduced by \$21,000) and training (reduced by \$21,900). In addition, \$52,000 in reductions for equipment, supplies and travel were made across campus service accounts to help offset other increases.

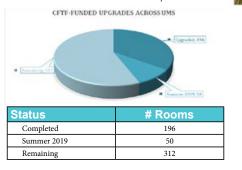


PROJECT UPDATES

CLASSROOMS FOR THE FUTURE

The Classrooms for the Future (CFTF) Project represents a \$4.9M investment designed to establish and improve classroom technology baseline standards across the University of Maine System to empower and support teaching and learning. In order to achieve this goal, the CFTF team, comprised of Classroom Technology, Capital Planning, Instructional Design and Project Management staff, worked collaboratively to collect faculty and student feedback to guide the development of classroom technology standards and to establish a comprehensive project implementation plan. The initial phase of the CFTF project, first started in 2016, is scheduled for completion in Summer 2019. To date, the feedback received from faculty and students on the upgrades that have been completed has been highly positive.

Over the past year, the CFTF team has successfully managed the installation of over 90 classroom technology systems across the University of Maine System supported by funding through the CFTF project. In addition, the CFTF team has also managed the installation of another 15 systems through funding made available by individual campuses bringing the total number of rooms renovated to 196 over the duration of the project. This represents 35.1% of the teaching locations throughout the University. A final 50 rooms are scheduled to be renovated during Summer 2019 bringing the total number of rooms to 246, or 44% of available rooms across the University.





The rooms that have been updated with Classrooms for the Future funding have been rated using a comprehensive rubric to quantify improvements. The assessment is based on 43 discrete characteristics across 6 categories:

- Functionality
- Finishing
- Environment
- Displays & Cameras
- Audio
- Accessibility

UMS Upgraded Rooms Category Score Comparison

3.14



3.03

Based on comparative ratings of each facility prior to and

following the upgrades, measurable improvements were

achieved across the board for all sites with an overall increase

in average room rating across the University system from

2.17 to 3.15 on a 4-point scale. A detailed breakdown of

the average improvements within each category are shown

3.48

3.28

2.67

Student Testimonial

After

above.

3.08

"It is easy to hear from the back of the room and the projectors and whiteboards being available to see simultaneously is really helpful."

Faculty Testimonial

"The active learning classroom is very versatile for group work for my classes. The setup and technology allows for more team work, student interaction and collaboration"

WIRELESS INFRASTRUCTURE

The Wireless Infrastructure Project represents a \$12.8M investment intended to upgrade wireless service and associated cabling and equipment at all campuses to bring wireless capacity to gigabit speeds to support learning and living spaces. Since June of 2017, the wireless infrastructure project funding has enabled the completion of upgrades in 17 residence halls and 68 instructional buildings with an additional 7 residence network instability (failing equipment) and security halls upgraded with other funding sources. While the vulnerabilities (security patches are no longer being goal of this project is to deliver a high-quality wireless network experience, this is an effort which requires upgrades to underlying infrastructure including building cabling, network switching, and in many cases fiber optic connectivity to the building to meet the needs of the project. Collectively, these efforts represent a significant modernization effort for 49% of UMS buildings.

A key performance indicator is that the percentage of wireless access points and network switches that are in use, but beyond the supported lifespan. While new network equipment has been deployed through the project, the number of devices that have surpassed

equipment models have aged out. As of Fall 2018, only 53% of network switches and 56% of Access Points presently installed are considered "current generation". The sheer amount of outdated network equipment still in use increases the risk of



9

released).

In addition to the physical network upgrades, the Networkmaine team has deployed a secure, encrypted wireless service known as eduroam. This service provides enhanced security and allows users to automatically connect at any of the 611 institutions across the United States and at institutions in 101 countries worldwide supporting eduroam, eliminating the need to search for Wi-Fi access when a user is at one of these locations. US:IT initiated a soft launch of the eduroam service at the being of the fall semester enabling visiting faculty, staff and students from other institutions to connect to eduroam at UMS locations across the state. While the their supported lifespan has increased overall as several vast majority of "visitors" came from local institutions

such as SMCC, UNH, and UMass-Lowell we also enabled visitors from institutions located in 22 different countries some as far away as Australia, the UK and Japan. General availability of the eduroam wireless service for UMS faculty, staff, and students is planned for February 4th and will be accompanied by a significant community outreach effort to encourage and support wide-scale adoption.

Over the next year, wireless infrastructure upgrades will continue with the University of Maine and University of Southern Maine campuses being the main focus.

HR UPGRADE/ ENHANCEMENTS

A major systems initiative completed this past year was the HR Upgrade project which advanced the UMS PeopleSoft (MaineStreet) Human Capital Management (HCM) system to the most current version (9.2) while also tranisitioning the software environment from a legacy Sun-Solaris architecture to a modern Intel-Linux

platform. The project's scope included improvements in interfaces and systems that support the Benefits and requests, as well as termination actions, in a secure, Payroll Center of Excellence.

In June 2018, all components of the HR 9.2 Upgrade project were successfully completed and the upgraded environment was open to all employees as scheduled. As is the case with all projects of this scope and complexity, a few post go-live issues were encountered but the majority were minor and quickly resolved. The project team's committed efforts and regular communications about the upgrade helped to reduce the number issues and calls for post upgrade support.

Once the MaineStreet HR system was upgraded, HR and IT resources have collaborated to launch key strategic initiatives focused on enhancing employee engagement, including:

- Enhanced Employee On-boarding
- Improved Self-Service Functionality
- Expanded Benefit Options

Development of a comprehensive onboarding program, which leverages the available PeopleSoft Activity Guide functionality, was given highest priority. This initiative is on target for a pilot launch at USM and UMPI in January 2019.



Additionally, delivered functionality to include automatic notifications and guided Self-Service transactions have been tested. Utilization of online forms provides an opportunity to leverage workflow automation and native form functionality within the system. These forms will provide campus HR Liaisons

with the tools needed to process non-financial change reliable manner.

HR Enhancements

Completed:

- Roth IRA Option
- Payroll Workcenter
- Automated Time Reporter Setup
- Benefits auto-enrollment •
- eStudent rehire and new hire process expansion
- · Automatic notifications for direct deposit

Currently In Progress:

Application	Status
HireTouch Integration	Testing
Employee onboarding Activity Guides	Finalizing content/videos
Automated Life Event Processing	Configuration & Testing to commence in January 2019
Oracle Forms with Workflow (Terminations; Employee Data Changes; Tuition Waivers)	Finalizing Requirements
Auto-Notifications (Benefit events; Retirement; New Hire)	Finalizing Requirements
Automated I-9 Form Processing	Finalizing Security Roles for January Launch

KALTURA

Acquisition and implementation of Kaltura was born ways to use the best of breed video platform.

-

from the necessity to explore options to consolidate and improve the varied video content tools in use across the system. Faculty at the different campuses were using a combination of officially supported tools (Panopto) and free

or homegrown solutions (YouTube, Burstpoint). This created difficulties for faculty and students, who needed to know how to operate several technologies, and had varied levels of support for the different solutions. These multiple solutions also had inherent issues, including lack of control over UMS owned content, the costs to maintain and backup on-site solutions, and the presence of advertising (including for competitor higher ed institutions). When adding in the tools used for more than just teaching and learning, the need for a video content platform was clear. With Kaltura, we have been able to roll out a standardized, powerful toolset that the UMS can control, brand, and support as our community needs.

As a platform, Kaltura has numerous tools for use in meeting the on-demand video content needs of the entire UMS organization, backed by an underlying cloud-based architecture that ties everything together. Kaltura is currently used for teaching and learning, for course work, marketing & public relations, departmental content sharing content and collaboration, training and more. Content can be created from a variety of sources, including webcams, mobile devices, classroom cameras, screen captures, slideshows, whiteboard tools, and more. Kaltura adoption and use has continued to grow rapidly since its initial rollout in the Summer of



Kaltura is the video-asset management platform 2017 and we anticipate that this growth will continue as employed by the University of Maine System. more and more faculty and staff find new and impactful

> **Key Features** Learning Management System (LMS) Integration altura

The first part of the Kaltura platform to be implemented, Kaltura tools is directly accessed from within

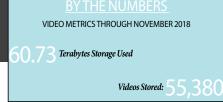
the Blackboard LMS. Faculty and students access available Kaltura media galleries independently, or as part of a specific course. Instructors use this to record presentations for online or hybrid courses, add supplementary materials for online or in-person classes, communicate with their students, and more. As an integrated tool within the course, students can record content for assignments and share with their instructor and/or fellow students. Kaltura has also added the ability to do video quizzes, allowing for assessments to happen inline with viewing a video assigned to the class.

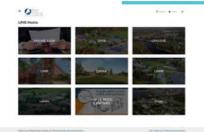
Video.maine.edu

Launched formally this year, video.maine.edu is the branded home for UMS-related video content outside the Blackboard LMS. This site is accessible to anyone within the UMS, with portions of the site available publicly. The site also allows for embedding video on other websites (similar to YouTube) for content sharing and supporting a variety of use cases, including:

- 1. Faculty with video sharing needs beyond their Blackboard courses
- 2. Campus marketing offices for hosting and sharing video content with the world.
- 3. Staff-generated training videos for colleagues in their departments, or throughout the system.

Over the past several months, UMaine Cooperative Extension has moved all of their videos onto video.





maine.edu, and a number of other departments have similar plans in the pipeline.

Kaltura Classroom

A longstanding, critical use for video content within UMS has been in recording live classes for subsequent delayed viewing by students. This can be used for online/hybrid courses, supporting the various Centers across the state, or even for reference purposes for students attending in-person courses. Kaltura provides tools that allow for use of dedicated cameras and other learning tools in many existing and newly refurbished classrooms to record scheduled or ad-hoc video sessions. The Classroom product has been upgraded by Kaltura over the past year and we have worked to get it in place as our primary classroom video capture tool.

Live-Captioning

It is the policy of the University of Maine System that "All University programs and services must be accessible to and usable by qualified individuals with disabilities." Additionally, there are legal requirements around accessibility for students or staff with documented needs, as well as any content presented and available to the to their capture software and administrative tools.

Team Spotlight: Web Technologies

Web Technologies is a team of 6 staff dedicated to providing direct technical, functional, and design support to more than 100 mission-critical web, portal and campus sites across UMS. A key area of focus has been the migration of various websites from aging and costly legacy platforms into a unified, robust, and

common framework hosted in the US:IT datacenter.

In 2018, a multifaceted redesign of UMF's recruitment website, as well as the



public. Kaltura provides automated machine captioning for all content that is created and uploaded, regardless of method of capture. Additionally, professional human captioning can be ordered, as needed, for situations requiring near 100% accuracy. There are also tools within Kaltura allowing content creators to edit their caption files, for improved accuracy.

Zoom/Kaltura Integration

With the implementation of Zoom this past year, as the official web conferencing platform, we have enabled the connection between Zoom and Kaltura for any cloud based recordings completed in Zoom. This allows centralization of recorded video content within the same tool, and to leverage the unlimited storage available through the Kaltura license.

KMS GO

While all Kaltura video content can be viewed via a standard web browser, Kaltura does also provide us with a free mobile application, KMS GO, for use on Android and iOS devices. With the advent of smartphones, virtually everyone has a video camera with them at all times, and this app provides an easy and quick way to leverage the tools and devices our students have.

The Future

As the Kaltura implementation project comes to a close, the team is working on establishing lasting governance for our video content platform. This governance will help guide UMS to ensure proper and robust utilization of the Kaltura service. Immediate needs are to work through establishing robust processes for captioning and content moderation. Kaltura continues to deliver new technologies as well, rolling out frequent updates

newly developed Early College website, leveraged Early College the common framework and 'One University' Wordpress theme to promote greater outreach, enhance branding, and increase adherence to



The myCampus portal, which functions as a unified gateway to access enterprise information and applications, continues to achieve steady growth and adoption throughout UMS, seeing its busiest day ever: 41,042 sessions on Tuesday, September 4, 2018.

ZOOM

During the 2018 academic year, IT and partners within instructional support units, worked through a gathering of needs and a subsequent RFP process to acquire a web conferencing system to replace the aging Adobe Connect product. The platform decided upon was Zoom, already in use by numerous faculty and staff through individual licensing across the state. Over the course of the summer, a team worked to implement the new systemwide license for Zoom culminating in a mid-August launch.



Zoom has provided the ability to teach and meet from anywhere from a wide variety of desktop and mobile



devices. Students have begun to host their own Zoom meetings for study sessions, group work, and other ad-hoc purposes. Faculty have adopted new features such as polling and breakout rooms to enhance the interactive nature of their courses online via Zoom. Through the fall we have seen Zoom usage increasing

as more applications of the tool are realized.

	Zoom Meet	tings - Fall	2018		Month (2018)	# Sessions
					August	1,900
					September	4,200
	-				October	7,700
					November	10,500
14	14	08		24	December	11,200

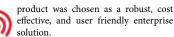
In an effort to create a more ubiquitous teaching and meeting environment, a second phase of the Zoom

project is now underway with a target of summer of 2019 for completion. This next project will move our Polycom core video conferencing infrastructure to also use the Zoom cloud. This new approach will allow current Polycom video conferencing sessions to be joined seamlessly by participants from anywhere with their own devices. This will allow much greater flexibility for classes taught via video conferencing and students will have the option of not traveling to a campus or center to participate. That same flexibility extends to administrative use and even meetings with participants from outside the UMS.

EMERGENCY NOTIFICATION

For several years, each of the University of Maine campuses has had a separate vendor contract for allhazards (fire, weather, active shooter...) emergency notifications. This decentralized model was not only costly and inefficient, it was cumbersome for faculty, staff, and students to enroll - especially those affiliated with more than one campus.

Under the decentralized system, people with multicampus affiliations were required to create a seperate account for each campus, with no connection to their @maine.edu userid. Moreover, campuses incurred a per-user cost for every individual enrolled to receive emergency notifications from that campus even if the person was also enrolled at another campus. Through a competitive RFP process, the Blackboard Connect 5



Throughout late summer and into the fall, the University of Maine System partnered with all seven campuses to plan and coordinate the deployment of Blackboard Connect 5. Full engagement

with the campuses was deemed critical to all aspects of the new system. The design of the enterprise solution, deployed in late November 2018, provides flexibility to adapt to specific needs and circumstances of each campus, while leveraging single-sign-on capabilities of @maine.edu accounts as a single point of entry for faculty, staff, and students to centrally manage their account for one or more campuses.



To ensure all campus users were correctly imported into the new system, each campus sent two test SMS messages in late November - one SMS from the old decentralized system, and another SMS message from the centrally managed system. By doing so, administrators from each campus emergency communications team were able to validate a successful test of the enterprise system in parallel with empowerment of individuals to easily opt-out of communications from specific campuses. Of note, the vast majority of users who opted-out from emergency notifications from a campus, and provided a reason for doing so, indicated they no longer had an active affiliation with that campus.

From the baseline of users in September 2018, the number of registered users has increased by 14.8%. In the first week since the new system was implemented 1,166 users registered using the UMS Blackboard Connect portal. With the successful completion of project implementation, a transition to a governance team with representation from all campuses is forthcoming. The governance team will determine how best to leverage the robust features included within the new service offering.

JIRA SERVICE DESK

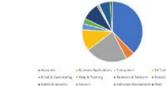
US:IT historically operated three different Help Desk ticketing systems to track issues: RT, JIRA, and Heat. In July of 2018, US:IT migrated all ticketing activity **ÿJIRA**

into a single instance of Jira Service Desk to track customer incidents and service requests. As a result, we have created a seamless tool for IT staff across US:IT, have leveraged a single workflow process to manage customer incidents, and now provide a better customer experience in a modern tool.

With the implementation of Jira Service Desk, IT has a much greater ability to analyze requests and incidents and make informed decisions. As an example, while it was known that user account management accounted for a high volume of traffic, IT is now able to quantify it. Since the July launch, 26,195 tickets were logged and 38% of those were account issues. With this information IT has now prioritized efforts to improve user account management such that less difficulties will arise resulting in less disruption to the UMS community. With a higher percentage of account issues identified during the late August and early September timeframe, we know this has been especially disruptive to new and returning students.



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# Scherty & Sancertip	#Satiers	 Software Development & Watt 	
Ticket Category	% Tickets	Ticket Category	%Tickets
Accounts	37.7%	Help&Training	2.9%
Business Apps	4.7%	Network&Telec.	9.4%
Computers	22.4%	Project Mgmt	0.1%
Ed Tools	11.3%	Safety&Security	0.7%
Email&Calendar	3.2%	Servers	0.5%
Software Dev.	5.9%	Web	1.2%

Jra Service Desk Tickets Since Launch

Much work still remains for the coming months. Jira has an embedded customer portal with which forms can be built out for specific requests. Already on deck is demand to start developing forms to simplify numerous processes for the UMS community. From an efficiency and accountability perspective, Jira allows for embedded Service Level Agreements and Operating Level Agreements. Work to leverage the latter has begun which essentially puts a timer on service requests and incidents based on type and triggers an alert if action has not been taken. These alerts not only can identify a single ticket in need of attention but also allows for visibility into overall operations and pinpoint areas within IT that are unable to meet defined standards of response.

Jira Service Desk is a critical step towards moving all of US:IT into an industry standard methodology for managing requests, internal escalations, communications, reporting and triage.

Team Spotlight: Database Administration

The Database Administration (DBA) Team is a seven member team that supports the MaineStreet systems, the databases for other enterprise applications, and

a combined

databases for

UMS.

total of 72 years experience supporting



From left to right: Gary Blake, Noel Chelberg, Xiumei Fang, McLean Poulin, Valli Vel, Anna Dukhovich, John St. Peter

Given the nature of enterprise databases, the DBA team members are key resources in a number of the items described elsewhere in this report -- the MaineStreet Human Resources upgrade and enhancements, MaineStreet Campus Solutions upgrade, and the Datamart initiative. There have also been a number of smaller maintenance and upgrade projects supported by the team, including: the AssetWorks "AiM" software used by Facilities Management; Advance Fundraising software used by several campus Alumni Associations; Infosilem and Resource 25 room scheduling software used by the campus registrars; and several other

NETWORK INFRASTRUCTURE

MaineREN

As projected in last year's report, the new optical network equipment was put into full production in the spring of 2018. The new equipment, installed between Orono, ME and Cambridge, MA, provides a 10-fold increase in capacity. The new platform supports up to eighty-eight 100 Gbps wavelengths (up from thirty-two 10 Gbps wavelengths), allowing for expanded capacity on the busiest parts of the network, increased resiliency, and new interconnections with key service providers.

In the past year we have joined the Massachusetts Internet Exchange (Mass-IX) to diversify connectivity and facilitate direct peering with commercial cloud providers. The first such direct connection was established with Microsoft this past fall, with plans to establish peering with Google and Amazon in 2019.

Feam is a seven Street systems, ications, and a number of databases for campus applications. The team has

A019102			
Storage Category	% Usage	Storage Category	%Usage
Room Scheduling	7.2%	Other	11.4%
Assetworks	9.0%	Advance	14.3%
ImageNow	10.3%	MaineStreet	47.7%

databases related to user identity and network infrastructure management.

Enterprise Production Database Storage Usage

At present, the team manages around ten terabytes of data for production applications, and several times that for test and development systems.

During peak times, the MaineStreet system handled over 186,000 sessions in a week. Between 10 a.m. and 11 a.m. on first day of classes during the Fall 2018 semester, our Campus Solutions system handled a record high number of sessions -- 8,240.

In 2019, the team looks forward to completing the MaineStreet Campus Solutions improvements, retiring the legacy Solaris hardware, and seeing the first Data Mart deployed.



In 2018, US:IT released an RFP for data transport services on behalf of UMS, K-12 schools and public libraries that participate in the Maine School and



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Library Network (MSLN) and research and highereducation institutions that connect to MaineREN. The RFP covered a total of 746 locations across the state (MSLN - 716, UMS - 22, MaineREN - 8) and resulted in awards being made to 7 different transport providers. The 7 resulting contracts have a total value of \$17M over their 36 month term which represent a \$4.7M in savings over the contracts they replace.

US:IT YEAR IN REVIEW

ORGANIZATIONAL CHANGES

Earlier this year, John Grover, Director of Enterprise Computing and Application Services (ECAS) announced his retirement following 29 years of faithful service to the University of Maine and UMS. This event, coinciding with the ongoing development of the US:IT Strategic Plan and the call for greater alignment of internal teams and resources to best position them for success, provided a unique opportunity to review the larger ECAS team and derive an organizational structure designed to address emerging strategic goals. As a result, ECAS has been restructured into the following teams:

- Enterprise Systems Architecture: The Enterprise Systems Architecture team is responsible for the design, planning, implementation and maintenance of the UMS enterprise infrastructure to support the mission and goals of the UMS. This team encompasses the services of the Systems Administration, Database Administration and Data Center Operations groups. Steven Premeau was appointed as Director of the Enterprise Systems Architecture team in October 2019.
- **Custom Enterprise Solutions:** The Custom Enterprise Solutions team is responsible for the strategic design, planning, implementation and support



of enterprise software solutions to address the educational, administrative and research goals of the University of Maine System. This team includes the Software Development and Web Technologies groups. Tiffany Maiuri was appointed as Director of the Custom Enterprise Solutions team in July 2019.

Campus Academic and Business Solutions: The CABS team, led by John Brown, focuses on providing business analysis, implementation and operational support for a majority of enterprise systems used across the UMS. The CABS team remained intact through the post-ECAS transition.

In recognition of the vital role each of these teams plays in supporting and delivering technology solutions to stakeholders across the UMS, Steven Premeau, Tiffany Maiuri and John Brown have been appointed to serve on the US:IT Leadership Team.

NEW STAFF

We are pleased to have been joined by the following staff members over the past year:

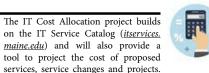
Name	Role
Paul Eaton	IT Specialist II; Campus Card & Cellular Services
Jeremiah 'Zak' Gould	USM Media Services Manager
Matthew Jacobson	Suport Services Help Desk Coordinator
Yan Liu	Analyst Programmer
Dustin Miller	Systems Administrator
Ryan Paradis	Network Engineer I
Joseph Patenaude	Network Engineer I
Buddwood Shain	Network Engineer I
Lynn Smith	Administrative Specialist – Infrastructure/Networkmaine



ON THE HORIZON

COST ALLOCATION

In support of strategic planning, improved communications and increased efficiency and portability on the IT Service Catalog (itservices. of IT services across the system, US:IT is currently maine.edu) and will also provide a engaged in an IT Service Cost allocation project that tool to project the cost of proposed will determine the cost of services US:IT provides by allocating US:IT labor and expenditures to services, and services to campuses. The project is on-target for completion by the end of Q1, 2019. The allocation is forward looking and will serve strategic planning and budget processes through increased transparency of IT spend.



The project is being led by the IT Service Costing team which includes Michael Cyr, John Forker and David Jones (Finance) with assistance from John Grover. Approximately 30 other US:IT staff are involved in allocating time and costs to their services. In the future, we expect less effort will be required to update the allocation for each new budget cycle.

DATA INITIATIVES

With the goal of providing advanced analytics capabilities to data users within the University of Maine System, three upcoming projects will dovetail to deliver a modernized architecture of analytics-ready data combined with



transparency into that data and its definitions. The three upcoming projects are outlined in more detail below, including 1) the launch of the UMS Data Cookbook to solidify, validate, and publish definitions of our enterprise data elements, 2) the implementation of Microsoft Power BI to create everything from basic aggregate reports to powerful visualizations, and 3) UMS Data Marts to bring together the most commonly needed enterprise data elements into targeted, analytics-ready, ormats.

DATA GOVERNANCE/COOKBOOK

The Data Cookbook is an increasingly relied-upon data governance tool among institutions of higher education. Combining technical and business definitions for data elements, the Data Cookbook is essential for both data users and for decision makers who need to interpret data and reports during their decision-making process.

US:IT starts work on Data Cookbook implementation in January 2019, first leveraging standard definitions (e.g., IPEDS), then building the infrastructure to create, modify, and validate UMS-specific definitions. The process for writing and approving definitions will be a collaborative one, with the Cookbook tool streamlining data governance work and tracking approvals, edits, and published definitions. The Data Cookbook tool will serve as a common repository for all information about UMS data, informing data and research projects across several enterprise data domains.

POWER BI

In 2018, data stakeholders across the UMS evaluated several business intelligence tools. As a result, Microsoft Power BI was chosen for enterprise business intelligence and interactive reporting/dashboarding. A small number of US:IT employees have begun training on the desktop tool and will coordinate training for UMS users beginning in January 2019. Furthermore, US:IT will build out the infrastructure needed to deploy Power BI as an enterprise application, featuring collaborative workspaces with centralized governance, security, and publishing of reports and data visualizations throughout the new year.

The long-term goal for Power BI is to serve as a userfriendly reporting tool and as the front end analysis engine for UMS Data Marts. Data discrepancies will be reduced, while the volume of data and the number of users who can access it will be better managed.

DATAMART INITIATIVE

Beginning in 2019, US:IT will design, build, and deliver increased integration capabilities with a series of data marts for UMS data users. The data marts will be designed through a collaborative process with stakeholders such that each mart is optimized for a discrete analytics use-case, benefiting various functional areas and meeting myriad needs for analysis and information.

than replace the former UMS Data Warehouse drew heavily upon lessons learned from that Data Warehouse project. In 2017, US:IT engaged with a data warehousing consultant to conduct a thorough assessment of the UMS Data Warehouse and to guide US:IT towards a design for a robust analytics environment for the University of Maine System. Ultimately, a cross-departmental US:IT team selected to build out the data marts using Microsoft SQL Server, an approach that affords an opportunity for US:IT staff members to acquire new expertise while learning an architecture that offers more features, lower costs, quicker set-up and easier maintenance, and

Microsoft products over the existing database architecture.



During the Fall 2018 semester, US:IT began work on a pilot data mart for

student application data, with the goal of supporting recruitment efforts at all UMS campuses. In addition to The decision to build out a series of data marts rather this data mart's value in strategic analysis of applicant information, building the first pilot data mart is an opportunity for expansion of US:IT staff skill sets in both new database infrastructure and the development of analytics-ready data sets.

> Upon completion of this first data mart, US:IT will also pilot access to the data mart through Power BI for end users who regularly leverage student applicant data. Following this first pilot project, all contributing US:IT teams will be asked for feedback on the pilot in order to inform design and creation of subsequent data marts.

MAINESTREET IMPROVEMENTS

The MaineStreet Improvements initiative is comprised of two projects; a technical upgrade of the PeopleSoft Campus Solutions (CS) student information system from version 9.0 to 9.2, the underlying PeopleTools architecture will be upgraded from version 8.55 to 8.56, and a project to enhance the PeopleSoft user experience (UX Enhancements).

Campus Solutions (CS) 9.2 Upgrade: This project will upgrade the UMS PeopleSoft (MaineStreet) Campus Solutions system from version 9.0 to version 9.2 and the Campus Solutions PeopleTools from version 8.55 to version 8.56. The upgrade will maintain Oracle compliance and continued support of the system. Wherever possible, the project will make improvements in business practice throughout the upgrade that will not significantly or materially change the timeline or the scope of the upgrade project. In addition to the CS application and PeopleTools upgrades, the project's scope includes transitioning the CS PeopleSoft environments from the legacy Solaris architecture to Linux architecture. The project kicked-off in late



October 2018 and will be completed during the first week of June 2019.

UX Enhancements: This project will acquire and deploy a 3rd party PeopleSoft UX enhancement tool to streamline and improve usability, navigability, and utility of the MaineStreet environment for students and faculty alike. Additionally, enhanced Single Sign-On capabilities will be deployed to support a secure, fully integrated user environment. An RFP process to select a vendor kicked-off mid-fall 2018 and we anticipate a contract award will be made in early January 2019.

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University of Maine System

2017-18 Degrees Conferred Report

Robert Zuercher – Senior Institutional Research & Planning Analyst November 27, 2018

INTRODUCTION

The following report provides summary information on degrees conferred at the University of Maine System for the 2017-18 academic year. The notes below apply to all of the tables and charts contained within this report, unless otherwise noted:

- 1. Data for past years may differ from previous reports due to changes in the segregation of data by degree level and discipline. The current report follows the classification standards outlined by the National Center for Education Statistics (IPEDS).
- 2. The 2017-18 academic year for degrees conferred is July 1, 2017 to June 30, 2018.
- 3. Multiple degrees awarded to a single individual within the academic year are counted separately. Multiple degrees are based on independent courses of study (e.g., one in Business and Management and one in Foreign Languages), not multiple majors within the same degree. The figures in this report include only first majors.
- 4. Percentages and may not add to 100% due to rounding.
- 5. Certificate degrees include certificates awarded below and above the baccalaureate level.

Data Source: National Center for Education Statistics (IPEDS) https://nces.ed.gov/ipeds/datacenter/ Retrieved November 27, 2018

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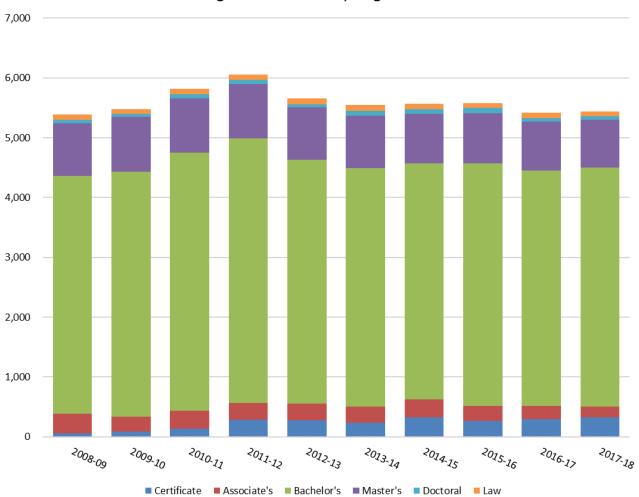
HIGHLIGHTS

- The University of Maine System (UMS) conferred 5,440 degrees and certificates in 2017-18. In the last decade, the UMS conferred 55,958 degrees and certificates.
- The UMS conferred 4,001 degrees at the baccalaureate level in 2017-18, or 73.5% of all academic awards in 2017-18, followed by 794 degrees conferred at the Master's level, or 14.6% of all degrees and certificates awarded. The 327 Certificates awarded comprised 6.0% of all academic awards. Associate's degrees (177, 3.3%), Law degrees (81, 1.5%), and Doctoral degrees (60, 1.1%) made up the remainder of degrees and certificates awarded.
- The University of Maine (UM) conferred 2,280 degrees and certificates in 2017-18, or 41.9% of all academic awards in 2017-18. The University of Southern Maine (USM) conferred 1,686 degrees and certificates in 2017-18, or 31.0% of all degrees and certificates awarded. The University of Maine at Augusta (UMA) awarded 600 degrees and certificates (11.0% of all awards). The University of Maine at Farmington (UMF) awarded 416 degrees and certificates (7.6% of all awards), while the University of Maine at Fort Kent (UMFK) (217 awards, 4.0% of all awards), the University of Maine at Presque Isle (UMPI) (150 awards, 2.8% of all awards), and the University of Maine at Machias (UMM) (91 awards, 1.7% of all awards) made up the remainder of degrees and certificates awarded.
- Women earned 62.0% of all degrees and certificates conferred. Across all academic awards (certificates, associate's degrees, bachelor's degrees, master's degrees, doctoral degrees, and law degrees), women earned more awards than men.
- The highest number of degrees and certificates conferred by discipline in 2017-18 was within Health Professions, with 936 degrees and certificates conferred, or 17.2% of all academic awards, followed by Education (765 awards or 14.1% of all academic awards) and Business (741 awards or 13.6% of all awards) disciplines.
- Overall, the UMS conferred 21 more awards in 2017-18 than in 2016-17 a 0.4% increase. Awards in Engineering-related fields increased by 28, or 23.7%, compared to last year. Likewise, Health Professions and Business disciplines also saw an increase relative to last year (31 or 3.4% and 27 or 3.8% respectively). Awards in Education decreased by 47 or 5.8% compared to last year, as did awards in Psychology (-32 or 12.6%) and Agriculture (-24 or -22.6%) disciplines.
- Certificates increased 8.6% from 301 in 2016-17 to 327 in 2017-18. In the same time period, associate's degrees conferred dropped to 177 from 217 a decrease of 18.4%. Bachelor's degrees conferred increased slightly by 1.7% from 3,935 in 2016-17 to 4,001 in 2017-18. Master's degrees conferred fell 2.9% from 818 in the previous academic year to 794 in 2017-18. Doctoral degrees conferred also declined since the previous academic year, from 63 to 60 a 4.8% decrease. Law degrees went from 85 degrees conferred last year to 81 a decline of 4.7%.
- UMFK saw an average increase of 43.7% in degrees and certificates awarded over the past five academic years. UMM and UM also saw an average increase during this time period (15.2% and 7.5% respectively). UMPI had the highest average decrease over the five years at 37.6%, followed by an average decline of 12.7% at UMF and an average 10.9% decrease at USM. UMA also saw a slight average decrease of 2.4% from 2013-14 to 2017-18.

	Degrees Conferred by Degree Level													
Academic	Certi	ficate	Asso	ciate's	Bach	elor's	Mas	ster's	Doctoral		Law		То	tal
Year	#	%	#	%	#	%	#	%	#	%	#	%	#	%
2008-09	54	1.0%	328	6.1%	3,983	73.9%	872	16.2%	61	1.1%	91	1.7%	5,389	100%
2009-10	86	1.6%	246	4.5%	4,099	74.7%	914	16.7%	56	1.0%	83	1.5%	5,484	100%
2010-11	137	2.4%	295	5.1%	4,318	74.3%	912	15.7%	63	1.1%	90	1.5%	5,815	100%
2011-12	288	4.8%	279	4.6%	4,423	73.1%	911	15.0%	67	1.1%	86	1.4%	6,054	100%
2012-13	279	4.9%	276	4.9%	4,078	72.0%	874	15.4%	56	1.0%	98	1.7%	5,661	100%
2013-14	235	4.2%	268	4.8%	3,987	71.9%	880	15.9%	83	1.5%	96	1.7%	5,549	100%
2014-15	326	5.9%	300	5.4%	3,945	70.9%	829	14.9%	81	1.5%	83	1.5%	5,564	100%
2015-16	262	4.7%	256	4.6%	4,058	72.7%	838	15.0%	83	1.5%	86	1.5%	5,583	100%
2016-17	301	5.6%	217	4.0%	3,935	72.6%	818	15.1%	63	1.2%	85	1.6%	5,419	100%
2017-18	327	6.0%	177	3.3%	4,001	73.5%	794	14.6%	60	1.1%	81	1.5%	5,440	100%

2017-18 | 327 6.0% | 177 3.3% | 4,001 73.5% | 794 14.6% | 60 1.1% | 81 1.5% | **5,440**

Notes: Percentages may not add to 100 percent due to rounding. Law contains the Master of Laws (L.L.M.) degree, as well as the Juris Doctorate (J.D.).



Degrees Conferred by Degree Level

3

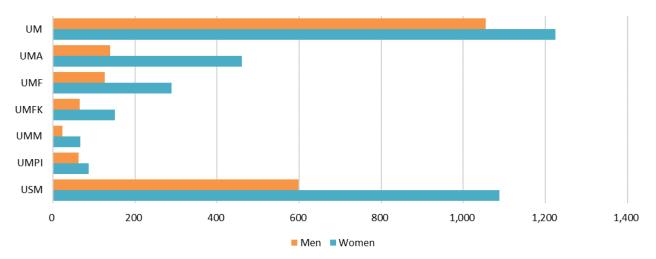
2017-18 Degrees contened by campus and Gender													
	м	en	Wo	men	Total								
	#	%	#	%	#	%							
UM	1,055	46.3%	1,225	53.7%	2,280	41.9%							
UMA	139	23.2%	461	76.8%	600	11.0%							
UMF	126	30.3%	290	69.7%	416	7.6%							
UMFK	65	30.0%	152	70.0%	217	4.0%							
UMM	24	26.4%	67	73.6%	<i>9</i> 1	1.7%							
UMPI	62	41.3%	88	58.7%	150	2.8%							
USM	598	35.5%	1,088	64.5%	1,686	31.0%							
Total	2,069	38.0%	3,371	62.0%	5,440	100.0%							

				•				
	м	en	Wo	men	Т	otal		
	#	%	#	%	#	%		
Certificate	67	20.5%	260	79.5%	327	6.0%		
Associate's	49	27.7%	128	72.3%	177	3.3%		
Bachelor's	1,618	40.4%	2,383	59.6%	4,001	73.5%		
Master's	269	33.9%	525	66.1%	794	14.6%		
Doctoral	26	43.3%	34	56.7%	60	1.1%		
Law	40	49.4%	41	50.6%	81	1.5%		
Total	2,069	38.0%	3,371	62.0%	5,440	100.0%		

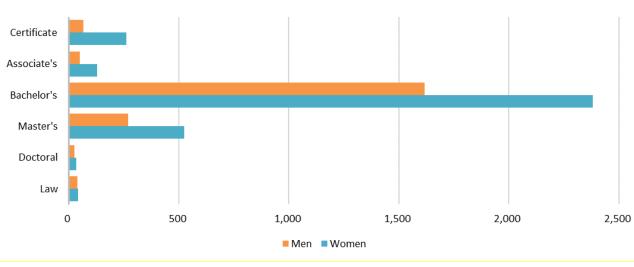
2017-18 Degrees Conferred by Degree Level and Gender

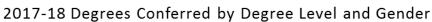
2017-18 Degrees Conferred by Campus and Gender

Note: Percentages may not add to 100 percent due to rounding.



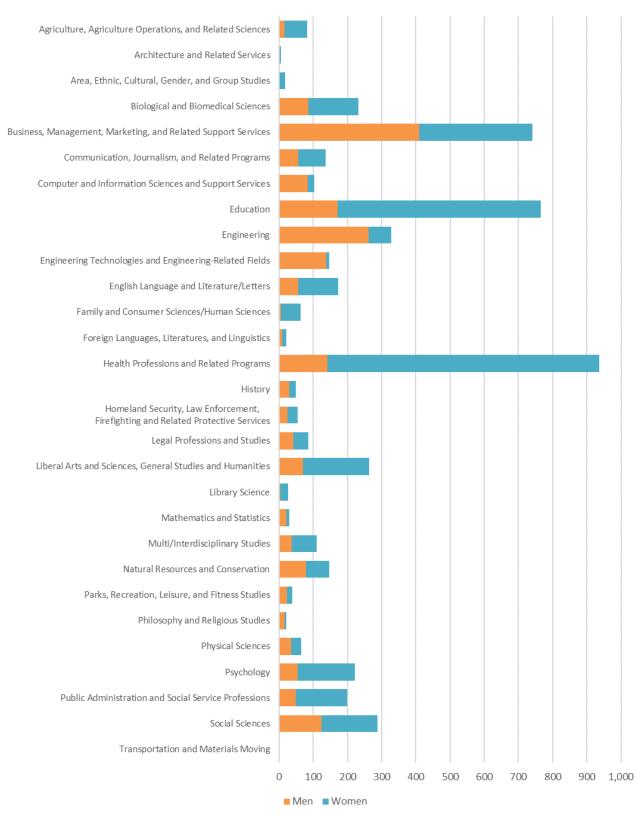
2017-18 Degrees Conferred by Campus and Gender





	N	len	Wo	men	Тс	otal
Discipline	#	%	#	%	#	%
Agriculture, Agriculture Operations, and Related Sciences	16	19.5%	66	80.5%	82	1.5%
Architecture and Related Services	1	16.7%	5	83.3%	6	0.1%
Area, Ethnic, Cultural, Gender, and Group Studies	2	11.1%	16	88.9%	18	0.3%
Biological and Biomedical Sciences	85	36.8%	146	63.2%	231	4.2%
Business, Management, Marketing, and Related Support Services	410	55.3%	331	44.7%	741	13.6%
Communication, Journalism, and Related Programs	55	40.4%	81	59.6%	136	2.5%
Computer and Information Sciences and Support Services	84	81.6%	19	18.4%	103	1.9%
Education	170	22.2%	595	77.8%	765	14.1%
Engineering	262	80.1%	65	19.9%	327	6.0%
Engineering Technologies and Engineering-Related Fields	137	93.8%	9	6.2%	146	2.7%
English Language and Literature/Letters	55	31.8%	118	68.2%	173	3.2%
Family and Consumer Sciences/Human Sciences	5	7.9%	58	92.1%	63	1.2%
Foreign Languages, Literatures, and Linguistics	8	38.1%	13	61.9%	21	0.4%
Health Professions and Related Programs	141	15.1%	795	84.9%	936	17.2%
History	30	62.5%	18	37.5%	48	0.9%
Homeland Security, Law Enforcement, Firefighting and Related Protective Services	25	46.3%	29	53.7%	54	1.0%
Legal Professions and Studies	41	48.2%	44	51.8%	85	1.6%
Liberal Arts and Sciences, General Studies and Humanities	69	26.1%	195	73.9%	264	4.9%
Library Science	3	11.5%	23	88.5%	26	0.5%
Mathematics and Statistics	21	70.0%	9	30.0%	30	0.6%
Multi/Interdisciplinary Studies	37	33.9%	72	66.1%	109	2.0%
Natural Resources and Conservation	79	53.7%	68	46.3%	147	2.7%
Parks, Recreation, Leisure, and Fitness Studies	23	60.5%	15	39.5%	38	0.7%
Philosophy and Religious Studies	15	71.4%	6	28.6%	21	0.4%
Physical Sciences	35	53.8%	30	46.2%	65	1.2%
Psychology	54	24.3%	168	75.7%	222	4.1%
Public Administration and Social Service Professions	48	24.2%	150	75.8%	198	3.6%
Social Sciences	123	42.7%	165	57.3%	288	5.3%
Transportation and Materials Moving	1	100.0%	0	0.0%	1	0.0%
Visual and Performing Arts	34	35.4%	62	64.6%	96	1.8%
Total	2,069	38.0%	3,371	62.0%	5,440	100.0%

2017-18 Degrees Conferred by Discipline and Gender



2017-18 Degrees Conferred by Discipline and Gender

2017-18 Degrees Conferred by Discipline: Two-Year Co	mparison		D:#	erence
Discipline	2016-17	2017-18	#	%
Agriculture, Agriculture Operations, and Related Sciences	106	82	(24)	-22.6%
Architecture and Related Services	8	6	(24)	-25.0%
Area, Ethnic, Cultural, Gender, and Group Studies	9	18	9	100.0%
Biological and Biomedical Sciences	218	231	13	6.0%
Business, Management, Marketing, and Related Support Services	714	741	27	3.8%
Communication, Journalism, and Related Programs	144	136		-5.6%
· · · · ·	98	103	(8) 5	-5.0% 5.1%
Computer and Information Sciences and Support Services Education	812	765	-	
	341	327	(47)	-5.8%
Engineering	-	-	(14)	-4.1%
Engineering Technologies and Engineering-Related Fields	118	146	28	23.7%
English Language and Literature/Letters	154	173	19	12.3%
Family and Consumer Sciences/Human Sciences	57	63	6	10.5%
Foreign Languages, Literatures, and Linguistics	18	21	3	16.7%
Health Professions and Related Programs	905	936	31	3.4%
History	59	48	(11)	-18.6%
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	69	54	(15)	-21.7%
Legal Professions and Studies	89	85	(4)	-4.5%
Liberal Arts and Sciences, General Studies and Humanities	264	264	0	0.0%
Library Science	24	26	2	8.3%
Mathematics and Statistics	40	30	(10)	-25.0%
Multi/Interdisciplinary Studies	91	109	18	19.8%
Natural Resources and Conservation	150	147	(3)	-2.0%
Parks, Recreation, Leisure, and Fitness Studies	48	38	(10)	- 20.8%
Philosophy and Religious Studies	16	21	5	31.3%
Physical Sciences	59	65	6	10.2%
Psychology	254	222	(32)	- 12.6%
Public Administration and Social Service Professions	186	198	12	6.5%
Social Sciences	264	288	24	9.1%
Transportation and Materials Moving	4	1	(3)	-75.0%
Visual and Performing Arts	100	96	(4)	-4.0%
Total	5,419	5,440	21	0.4%

2017-18 Degrees Conferred by Discipline: Two-Year Comparison

Certificates Conf	erred b	Certificates Conferred by Discipline													
	20	13-14	20	14-15	20	15-16	2016-17		20	17-18					
Discipline	#	%	#	%	#	%	#	%	#	%					
Agriculture, Agriculture Operations and Related Sciences	0	0.0%	3	0.9%	2	0.8%	0	0.0%	0	0.0%					
Architecture and Related Services	1	0.4%	4	1.2%	1	0.4%	1	0.3%	0	0.0%					
Area, Ethnic, Cultural, Gender, and Group Studies	1	0.4%	1	0.3%	0	0.0%	1	0.3%	7	2.1%					
Biological and Biomedical Sciences	0	0.0%	0	0.0%	0	0.0%	1	0.3%	0	0.0%					
Business, Management, Marketing, and Related Support Services	32	13.6%	35	10.7%	21	8.0%	30	10.0%	32	9.8%					
Communication, Journalism, and Related Programs	0	0.0%	2	0.6%	6	2.3%	5	1.7%	2	0.6%					
Computer and Information Sciences and Support Services	1	0.4%	1	0.3%	3	1.1%	3	1.0%	4	1.2%					
Education	89	37.9%	143	43.9%	94	35.9%	132	43.9%	147	45.0%					
Engineering	1	0.4%	1	0.3%	4	1.5%	7	2.3%	3	0.9%					
Engineering Technologies and Engineering-Related Fields	0	0.0%	1	0.3%	1	0.4%	0	0.0%	1	0.3%					
English Language and Literature/Letters	0	0.0%	0	0.0%	0	0.0%	1	0.3%	1	0.3%					
Family and Consumer Sciences/Human Sciences	8	3.4%	3	0.9%	3	1.1%	4	1.3%	6	1.8%					
Health Professions and Related Programs	56	23.8%	78	23.9%	84	32.1%	79	26.2%	80	24.5%					
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.3%					
Legal Professions and Studies	0	0.0%	0	0.0%	0	0.0%	4	1.3%	4	1.2%					
Mathematics and Statistics	0	0.0%	3	0.9%	0	0.0%	0	0.0%	1	0.3%					
Multi/Interdisciplinary Studies	5	2.1%	9	2.8%	12	4.6%	9	3.0%	12	3.7%					
Natural Resources and Conservation	3	1.3%	6	1.8%	3	1.1%	4	1.3%	2	0.6%					
Physical Sciences	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.9%					
Psychology	6	2.6%	1	0.3%	7	2.7%	7	2.3%	10	3.1%					
Public Administration and Social Service Professions	17	7.2%	18	5.5%	7	2.7%	1	0.3%	4	1.2%					
Social Sciences	15	6.4%	17	5.2%	14	5.3%	11	3.7%	7	2.1%					
Visual and Performing Arts	0	0.0%	0	0.0%	0	0.0%	1	0.3%	0	0.0%					
Total	235	100.0%	326	100.0%	262	100.0%	301	100.0%	327	100.0%					

Associate's Degrees Conferred by Discipline												
	20	13-14	20	14-15	2015-16		2016-17		20	17-18		
Discipline	#	%	#	%	#	%	#	%	#	%		
Business, Management, Marketing, and Related Support Services	41	15.3%	33	11.0%	30	11.7%	26	12.0%	22	12.4%		
Communication, Journalism, and Related Programs	0	0.0%	1	0.3%	0	0.0%	0	0.0%	0	0.0%		
Computer and Information Sciences and Support Services	9	3.4%	12	4.0%	10	3.9%	9	4.1%	3	1.7%		
Health Professions and Related Programs	141	52.6%	141	47.0%	122	47.7%	85	39.2%	75	42.4%		
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	22	8.2%	45	15.0%	27	10.5%	33	15.2%	24	13.6%		
Liberal Arts and Sciences, General Studies and Humanities	46	17.2%	53	17.7%	45	17.6%	49	22.6%	41	23.2%		
Library Science	4	1.5%	4	1.3%	6	2.3%	4	1.8%	5	2.8%		
Multi/Interdisciplinary Studies	0	0.0%	0	0.0%	1	0.4%	1	0.5%	0	0.0%		
Natural Resources and Conservation	1	0.4%	8	2.7%	13	5.1%	8	3.7%	4	2.3%		
Public Administration and Social Service Professions	2	0.7%	1	0.3%	0	0.0%	1	0.5%	2	1.1%		
Social Sciences	0	0.0%	0	0.0%	0	0.0%	1	0.5%	0	0.0%		
Visual and Performing Arts	2	0.7%	2	0.7%	2	0.8%	0	0.0%	1	0.6%		
Total	268	100.0%	300	100.0%	256	100.0%	217	100.0%	177	100.0%		

Bachelor's Degrees Conferred by Discipline													
	201	13-14	20	14-15	20:	15-16	20	16-17	202	17-18			
Discipline	#	%	#	%	#	%	#	%	#	%			
Agriculture, Agriculture Operations, and Related Sciences	65	1.6%	77	2.0%	98	2.4%	87	2.2%	67	1.7%			
Architecture and Related Services	4	0.1%	3	0.1%	5	0.1%	6	0.2%	5	0.1%			
Area, Ethnic, Cultural, Gender, and Group Studies	8	0.2%	10	0.3%	6	0.1%	3	0.1%	9	0.2%			
Biological and Biomedical Sciences	192	4.8%	209	5.3%	204	5.0%	198	5.0%	215	5.4%			
Business, Management, Marketing, and Related Support Services	515	12.9%	535	13.6%	604	14.9%	607	15.4%	620	15.5%			
Communication, Journalism, and Related Programs	158	4.0%	156	4.0%	143	3.5%	130	3.3%	132	3.3%			
Communications Technologies/Technicians and Support Services	25	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%			
Computer and Information Sciences and Support Services	54	1.4%	57	1.4%	66	1.6%	70	1.8%	90	2.2%			
Education	381	9.6%	344	8.7%	309	7.6%	349	8.9%	331	8.3%			
Engineering	205	5.1%	230	5.8%	308	7.6%	298	7.6%	265	6.6%			
Engineering Technologies and Engineering-Related Fields	135	3.4%	135	3.4%	154	3.8%	118	3.0%	145	3.6%			
English Language and Literature/Letters	143	3.6%	110	2.8%	119	2.9%	103	2.6%	121	3.0%			
Family and Consumer Sciences/Human Sciences	46	1.2%	36	0.9%	45	1.1%	47	1.2%	53	1.3%			
Foreign Languages, Literatures, and Linguistics	30	0.8%	14	0.4%	22	0.5%	16	0.4%	20	0.5%			
Health Professions and Related Programs	598	15.0%	636	16.1%	628	15.5%	629	16.0%	662	16.5%			
History	69	1.7%	77	2.0%	53	1.3%	55	1.4%	44	1.1%			
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	45	1.1%	51	1.3%	38	0.9%	36	0.9%	29	0.7%			
Liberal Arts and Sciences, General Studies and Humanities	232	5.8%	216	5.5%	239	5.9%	215	5.5%	223	5.6%			
Library Science	34	0.9%	25	0.6%	22	0.5%	20	0.5%	21	0.5%			
Mathematics and Statistics	34	0.9%	28	0.7%	28	0.7%	31	0.8%	20	0.5%			
Multi/Interdisciplinary Studies	51	1.3%	62	1.6%	58	1.4%	51	1.3%	59	1.5%			
Natural Resources and Conservation	85	2.1%	73	1.9%	101	2.5%	105	2.7%	116	2.9%			
Parks, Recreation, Leisure, and Fitness Studies	37	0.9%	48	1.2%	31	0.8%	48	1.2%	38	0.9%			
Philosophy and Religious Studies	17	0.4%	12	0.3%	12	0.3%	16	0.4%	21	0.5%			
Physical Sciences	44	1.1%	47	1.2%	50	1.2%	42	1.1%	45	1.1%			
Psychology	238	6.0%	227	5.8%	224	5.5%	217	5.5%	197	4.9%			
Public Administration and Social Service Professions	97	2.4%	97	2.5%	89	2.2%	102	2.6%	101	2.5%			
Social Sciences	324	8.1%	311	7.9%	293	7.2%	242	6.1%	267	6.7%			
Transportation and Materials Moving	0	0.0%	0	0.0%	0	0.0%	4	0.1%	1	0.0%			
Visual and Performing Arts	121	3.0%	119	3.0%	109	2.7%	90	2.3%	84	2.1%			
Total	3,987	100.0%	3,945	100.0%	4,058	100.0%	3,935	100.0%	4,001	100.0%			

Master's Degrees C	onferre	d by Discip	oline							
	20	13-14	20	14-15	20	15-16	20	16-17	20	17-18
Discipline	#	%	#	%	#	%	#	%	#	%
Agriculture, Agriculture Operations, and Related Sciences	27	3.1%	20	2.4%	14	1.7%	19	2.3%	13	1.6%
Architecture and Related Services	11	1.3%	10	1.2%	3	0.4%	1	0.1%	1	0.1%
Area, Ethnic, Cultural, Gender, and Group Studies	9	1.0%	15	1.8%	7	0.8%	5	0.6%	2	0.3%
Biological and Biomedical Sciences	29	3.3%	18	2.2%	19	2.3%	13	1.6%	8	1.0%
Business, Management, Marketing, and Related Support Services	70	8.0%	49	5.9%	56	6.7%	51	6.2%	67	8.4%
Communication, Journalism, and Related Programs	5	0.6%	4	0.5%	7	0.8%	8	1.0%	1	0.1%
Communications Technologies/Technicians and Support Services	4	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Computer and Information Sciences and Support Services	11	1.3%	11	1.3%	9	1.1%	16	2.0%	6	0.8%
Education	335	38.1%	296	35.7%	299	35.7%	324	39.6%	281	35.4%
Engineering	34	3.9%	21	2.5%	37	4.4%	25	3.1%	49	6.2%
English Language and Literature/Letters	65	7.4%	49	5.9%	63	7.5%	50	6.1%	51	6.4%
Family and Consumer Sciences/Human Sciences	4	0.5%	6	0.7%	4	0.5%	6	0.7%	4	0.5%
Foreign Languages, Literatures, and Linguistics	3	0.3%	3	0.4%	0	0.0%	2	0.2%	1	0.1%
Health Professions and Related Programs	88	10.0%	103	12.4%	98	11.7%	112	13.7%	117	14.7%
History	6	0.7%	4	0.5%	2	0.2%	1	0.1%	3	0.4%
Liberal Arts and Sciences, General Studies and Humanities	3	0.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Mathematics and Statistics	6	0.7%	16	1.9%	10	1.2%	9	1.1%	9	1.1%
Multi/Interdisciplinary Studies	20	2.3%	24	2.9%	21	2.5%	24	2.9%	29	3.7%
Natural Resources and Conservation	19	2.2%	17	2.1%	21	2.5%	22	2.7%	15	1.9%
Physical Sciences	17	1.9%	13	1.6%	12	1.4%	10	1.2%	12	1.5%
Psychology	23	2.6%	4	0.5%	23	2.7%	20	2.4%	9	1.1%
Public Administration and Social Service Professions	75	8.5%	126	15.2%	108	12.9%	81	9.9%	91	11.5%
Social Sciences	4	0.5%	5	0.6%	9	1.1%	10	1.2%	14	1.8%
Visual and Performing Arts	12	1.4%	15	1.8%	16	1.9%	9	1.1%	11	1.4%
Total	880	100.0%	829	100.0%	838	100.0%	818	100.0%	794	100.0%

Doctoral Degrees Co	Acciences1214.5%78.6%1012.0%69.5%813.3%n, and Related Programs33.6%00.0%11.2%11.6%11.7%Sciences and Support Services33.6%00.0%00.0%00.0%00.0%00.0%910.8%44.9%56.0%711.1%610.0%ated Programs00.0%00.0%33.6%00.0%33.6%00.0%23.3%ated Programs00.0%1316.0%1214.5%1117.5%1016.7%ated Programs1214.5%1316.0%56.0%69.5%915.0%ated Programs1214.5%1316.0%56.0%69.5%915.0%ated Programs1214.5%1316.0%56.0%69.5%915.0%ated Programs1214.5%1316.0%56.0%69.5%915.0%ates9.6%1214.8%910.8%1117.5%1016.7%ates9.6%1214.8%910.8%1117.5%1016.7%ates9.6%1214.8%910.8%1117.5%1016.7%ates9.6%1214.8%910									
	20	13-14	20	14-15	20	15-16	20	16-17	20	17-18
Discipline	#	%	#	%	#	%	#	%	#	%
Agriculture, Agriculture Operations, and Related Sciences	3	3.6%	3	3.7%	2	2.4%	0	0.0%	2	3.3%
Biological and Biomedical Sciences	12	14.5%	7	8.6%	10	12.0%	6	9.5%	8	13.3%
Communication, Journalism, and Related Programs	3	3.6%	0	0.0%	1	1.2%	1	1.6%	1	1.7%
Computer and Information Sciences and Support Services	3	3.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Education	9	10.8%	4	4.9%	5	6.0%	7	11.1%	6	10.0%
Engineering	6	7.2%	13	16.0%	12	14.5%	11	17.5%	10	16.7%
Health Professions and Related Programs	0	0.0%	0	0.0%	3	3.6%	0	0.0%	2	3.3%
History	3	3.6%	2	2.5%	4	4.8%	3	4.8%	1	1.7%
Multi/Interdisciplinary Studies	12	14.5%	13	16.0%	5	6.0%	6	9.5%	9	15.0%
Natural Resources and Conservation	10	12.0%	12	14.8%	9	10.8%	11	17.5%	10	16.7%
Physical Sciences	8	9.6%	12	14.8%	5	6.0%	7	11.1%	5	8.3%
Psychology	12	14.5%	9	11.1%	10	12.0%	10	15.9%	6	10.0%
Public Administration and Social Service Professions	2	2.4%	6	7.4%	16	19.3%	1	1.6%	0	0.0%
Social Sciences	0	0.0%	0	0.0%	1	1.2%	0	0.0%	0	0.0%
Total	83	100.0%	81	100.0%	83	100.0%	63	100.0%	60	100.0%

Note: Percentages may not add to 100 percent due to rounding.

Law Degrees Conferred by Discipline														
	20	12-13	20	14-15	20	15-16	20	16-17	20	17-18				
Discipline	#	%	#	%	#	%	#	%	#	%				
Legal Professions and Studies (L.L.M.)	5	5.2%	5	6.0%	0	0.0%	5	5.9%	1	1.2%				
Legal Professions and Studies (J.D.)	91	94.8%	78	94.0%	86	100.0%	80	94.1%	80	98.8%				
Total	96	100.0%	83	100.0%	86	100.0%	85	100.0%	81	100.0%				

				. 1	Degrees	Confer	red by (Campus,	Degree	Level,	and Ger	der					
		2013-14			2014-15			2015-16			2016-17			2017-18		5yr Avg	5yr Avg
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	# Chg	% Chg
UM	989	1,068	2,057	964	1,058	2,022	1,035	1,105	2,140	1,039	1,152	2,191	1,055	1,225	2,280	55.8	7.5%
Certificate	8	31	39	17	56	73	13	46	59	20	61	81	17	73	90	12.8	108.1%
Bachelor's	791	749	1,540	784	770	1,554	848	812	1,660	857	824	1,681	867	893	1,760	55.0	10.2%
Master's	153	248	401	130	196	326	144	217	361	133	238	371	146	229	375	-6.5	-4.9%
Doctoral	37	40	77	33	36	69	30	30	60	29	29	58	25	30	55	-5.5	-28.1%
UMA	162	487	649	188	551	739	169	531	700	168	464	632	139	461	600	-12.3	-2.4%
Certificate	2	39	41	17	57	74	12	64	76	12	47	59	16	47	63	5.5	62.5%
Associate's	47	160	207	37	184	221	32	161	193	36	118	154	23	98	121	-21.5	-31.5%
Bachelor's	113	288	401	134	310	444	125	306	431	120	299	419	100	316	416	3.8	4.8%
UMF	150	315	465	129	278	407	128	263	391	108	294	402	126	290	416	-12.3	-12.7%
Certificate	1	9	10	7	32	39	4	26	30	6	32	38	3	24	27	4.3	286.4%
Bachelor's	146	294	440	119	229	348	121	228	349	101	237	338	116	241	357	-20.8	-22.4%
Master's	3	12	15	3	17	20	3	9	12	1	25	26	7	25	32	4.3	115.8%
UMFK	39	118	157	65	125	190	56	141	197	68	171	239	65	152	217	15.0	43.7%
Associate's	4	9	13	28	10	38	20	9	29	22	7	29	14	10	24	2.8	164.3%
Bachelor's	35	109	144	37	115	152	36	132	168	46	164	210	51	142	193	12.3	39.1%
UMM	25	58	83	36	71	107	27	67	94	30	63	93	24	67	91	2.0	15.2%
Certificate	2	4	6	3	9	12	3	4	7	2	6	8	0	12	12	1.5	85.1%
Associate's	0	3	3	3	6	9	3	6	9	4	5	9	1	6	7	1.0	194.4%
Bachelor's	23	51	74	30	56	86	21	57	78	24	52	76	23	49	72	-0.5	3.0%
UMPI	92	136	228	63	115	178	68	111	179	49	101	150	62	88	150	-19.5	- 37.6%
Certificate	0	0	0	0	0	0	1	0	1	1	0	1	1	0	1	N/A	N/A
Associate's	21	24	45	9	22	31	6	18	24	8	16	24	11	14	25	-5.0	-52.7%
Bachelor's	71	112	183	54	93	147	61	93	154	40	85	125	50	74	124	-14.8	-33.9%
USM	725	1,185	1,910	696	1,225	1,921	705	1,177	1,882	663	1,049	1,712	598	1,088	1,686	-56.0	-10.9%
Certificate	41	98	139	47	81	128	23	66	89	30	84	114	30	104	134	-1.3	-5.9%
Associate's	0	0	0	1	0	1	1	0	1	0	1	1	0	0	0	N/A	N/A
Bachelor's	506	699	1,205	449	765	1,214	498	720	1,218	474	612	1,086	411	668	1,079	-204.5	-25.9%
Master's	127	337	464	152	331	483	129	336	465	112	309	421	116	271	387	-114.8	-33.8%
Doctoral	2	4	6	1	11	12	12	11	23	3	2	5	1	4	5	18.8	493.4%
Law	49	47	96	46	37	83	42	44	86	44	41	85	40	41	81	N/A	N/A
Total	2,182	3,367	5,549	2,141	3,423	5,564	2,188	3,395	5,583	2,125	3,294	5,419	2,069	3,371	5,440	-27.3	-2.2%
Certificate	54	181	235	91	235	326	56	206	262	71	230	301	67	260	327	23.0	36.1%
Associate's	72	196	268	78	222	300	62	194	256	70	147	217	49	128	177	-22.8	-22.6%
Bachelor's	1,685	2,302	3,987	1,607	2,338	<i>3,9</i> 45	1,710	2,348	4,058	1,662	2,273	3,935	1,618	2,383	4,001	3.5	- 0.8%
Master's	283	597	880	285	544	829	276	562	838	246	572	818	269	525	794	-21.5	- 7.8%
Doctoral	39	44	83	34	47	81	42	41	83	32	31	63	26	34	60	-5.8	-25.2%
Law	49	47	96	46	37	83	42	44	86	44	41	85	40	41	81	-3.8	-12.3%

Note: Law includes degrees conferred in the Master of Laws (LL.M.) in addition to the Juris Doctorate (J.D.). Totals for each university appear at the top of each data set.

			201	7-18	Degree	s Cor	ferre	d by Di	scipli	ne, De	egree L	evel, (Camp	us and	Gend	er								
		UM			UMA			UMF	•		UMFK		1	UMM			UMPI			USM			Total	
Discipline & Degree Level	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agriculture, Agriculture Operations, and																								
Related Sciences	16	66	82	-	-	-	-	-	-	-	-	_	-	-	-	-	_	-	-	-	-	16	66	82
Bachelor's	11	56	67	-		-	-			-			-	-		-	-		-		-	11	56	67
Master's	3	10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	13
Doctorate	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	2
Architecture and Related Services	-	-	-	1	4	5	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1	1	5	6
Bachelor's	-		-	1	4	5				-				-		-				-		1	4	5
Master's	-		-	-	-	-		-	-	_	-	-		-	-	-	-		0	1	1	0	1	1
Area, Ethnic, Cultural, Gender, and Group																			_		_	-	_	_
Studies	o	13	13	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	2	3	5	2	16	18
Certificate	0	7	7	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-	~	3	,	0	7	7
Bachelor's	0	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	- 3	1	8	9
Master's	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	° 1	2
Biological and Biomedical Sciences	50	83	133	5	8	13	2	3	5	1	4	5	5	10	15	2	3	5	20	35	55	85	146	231
Bachelor's	43	76	119	5	8	13	2	3	5	1	4	5	5	10	15	2	3	5	20	33	53	78	137	215
Master's	45	2	6	5	0	15	2	5	5	1	4	5	5	10	15	2	5	5	20	2	2	78 4	4	215 8
Doctorate	3	5	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	2	3	4 5	8
Business, Management, Marketing, and	5	5	0	-	-	-	-		-	-		-	-	-	-	-	-	-		-	-	5	5	0
	105	112	207	4.5	50	74	27	10	40	10	<i>c</i>	10		-	4.4	10	12	20	454	122	272	410	224	744
Related Support Services	185	112	297	15	56	71	27	16	43	10	6	16	4	7	11	18	12	30	151	122	273	410	331	741
Certificate	5	4	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	15	23	13	19	32
Associate	-	-	-	4	14	18	-	-	-	2	1	3	0	1	1	-	-	-	-	-	-	6	16	22
Bachelor's	165	95	260	11	42	53	27	16	43	8	5	13	4	6	10	18	12	30	119	92	211	352	268	620
Master's	15	13	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	15	39	39	28	67
Communication, Journalism, and Related																								
Programs	38	45	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	36	53	55	81	136
Certificate	0	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	2
Bachelor's	37	42	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	36	53	54	78	132
Master's	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
Doctorate	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Computer and Information Sciences and																								
Support Services	33	3	36	21	6	27	1	0	1	4	3	7	-	-	-	-	-	-	25	7	32	84	19	103
Certificate	-	-	-	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4
Associate	-	-	-	2	0	2	-	-	-	1	0	1	-	-	-	-	-	-	-	-	-	3	0	3
Bachelor's	28	2	30	17	4	21	1	0	1	3	3	6	-	-	-	-	-	-	25	7	32	74	16	90
Master's	5	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1	6
Education	80	247	327	3	3	6	30	155	185	8	4	12	1	7	8	2	12	14	46	167	213	170	595	765
Certificate	4	53	57	3	3	6	3	24	27	-	-	-	0	1	1	-	-	-	8	48	56	18	129	147
Bachelor's	58	100	158	-	-	-	20	106	126	8	4	12	1	6	7	2	12	14	6	8	14	95	236	331
Master's	16	90	106	-	-	-	7	25	32	-	-	-	-	-	-	-	-	-	32	111	143	55	226	281
Doctorate	2	4	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	6
Engineering	239	64	303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	1	24	262	65	327
Certificate	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0	3
Bachelor's	189	52	241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	1	24	212	53	265
Master's	41	8	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	8	49
Doctorate	6	4	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	10

		UM			UMA			UMF		1	UMFK		1	имм			UMPI			USM			Total	
Discipline & Degree Level	Men	Women	n Total	Men	Wome	n Total	Men	Women	Total	Men	Womer	1 Total	Men	Women	Total	Men	Wome	n Total	Men	Women	Total	Men	Women	Tota
Engineering Technologies and Engineering-																								
Related Fields	120	8	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	1	18	137	9	146
Certificate	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Bachelor's	119	8	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	1	18	136	9	145
English Language and Literature/Letters	21	25	46	1	2	3	6	27	33	0	3	3	1	3	4	1	4	5	25	54	79	55	118	173
Certificate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1	0	1	1
Bachelor's	11	15	26	1	2	3	6	27	33	0	3	3	1	3	4	1	4	5	14	33	47	34	87	121
Master's	10	10	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	20	31	21	30	51
Family and Consumer Sciences/Human																								
Sciences	5	52	57	0	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	58	63
Certificate	-	-	-	0	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	6	6
Bachelor's	5	48	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	48	53
Master's	0	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4	4
Foreign Languages, Literatures, and																								
Linguistics	5	3	8	-	-	-	-	-	-	1	0	1	-	-	-	-	-	-	2	10	12	8	13	21
Bachelor's	4	3	7	-	-	-	-	-	-	1	0	1	-	-	-	-	-	-	2	10	12	7	13	20
Master's	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Health Professions and Related Programs	10	146	156	35	194	229	9	42	51	18	103	121	0	1	1	10	13	23	59	296	355	141	795	936
Certificate	0	1	1	10	36	46	-	-	-	-	-	-	0	1	1	-	-	-	7	25	32	17	63	80
Associate	-	-	-	9	52	61	-	-	-	-	-	-	-	-	-	6	8	14	-	-	-	15	60	75
Bachelor's	9	124	133	16	106	122	9	42	51	18	103	121	-	-	-	4	5	9	35	191	226	91	571	662
Master's	1	21	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	79	95	17	100	117
Doctorate	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	1	1	2	1	1	2
History	11	4	15	-	-	-	7	0	7	-	-	-	-	-	-	1	0	1	11	14	25	30	18	48
Bachelor's	9	2	11	-	-	-	7	0	7	-	-	-	-	-	-	1	0	1	11	14	25	28	16	44
Master's	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3
Doctorate	0	1	1	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	0	1	1
Homeland Security, Law Enforcement,																								
Firefighting and Related Protective Services	-	-	-	8	21	29	-	-	-	8	5	13	-	-	-	9	3	12	-	-	-	25	29	54
Certificate	-	-	-	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Associate	-	-	-	1	8	9	-	-	-	7	5	12	-	-	-	2	1	3	-	-	-	10	14	24
Bachelor's	-	-	-	6	13	19	-	-	-	1	0	1		-		7	2	9	-	-	-	14	15	29
Legal Professions and Studies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	44	85	41	44	85
Certificate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	4	1	3	4
Law - Master (L.L.M.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1	0	1	1
Law - Doctor - Professional Practice (J.D.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	40	80	40	40	80
Liberal Arts and Sciences, General Studies									_	_	-		_			_								
and Humanities	11	13	24	38	122	160	3	4	7	0	9	9	4	13	17	7	17	24	6	17	23	69	195	264
Associate	-	-	-	6	18	24	-	-	-	0	3	3	1	5	6	3	5	8	-	-	-	10	31	41
Bachelor's	11	13	24	32	104	136	3	4	7	0	6	6	3	8	11	4	12	16	6	17	23	59	164	223
Library Science	-	-	-	3	23	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	23	26
Associate	-	-	-	0	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5	5
Bachelor's	-	-	-	3	18	21	-	-	-	-		-	-	-	-	-	-	-	-	-		3	18	21
Mathematics and Statistics	4	2	6	-	-	-	2	1	3	-	-	-	-	-	-	3	0	3	12	6	18	21	9	30
Certificate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1	1	0	1
Bachelor's	3	2	5	-	-	-	2	1	3	-	-	-	-	-	-	3	0	3	5	4	9	13	7	20
Master's	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	2	8	7	2	9

		UМ			UMA			UMF]	UMFK			имм			UMPI			USM			Total	
Discipline & Degree Level	Men	Womer	n Total	Men	Women	Total	Men	Women	Total	Men	Wome	n Total	Men	Women	Total	Men	Womer	n Total	Men	Women	Total	Men	Women	Total
Multi/Interdisciplinary Studies	33	60	93	1	3	4	1	3	4	-	-	-	-	-	-	1	2	3	1	4	5	37	72	109
Certificate	2	5	7	-	-		-	-	-	-	-	-	-	-	-	-	-	-	1	4	5	3	9	12
Bachelor's	14	34	48	1	3	4	1	3	4	-	-	-	-	-	-	1	2	3	-	-	-	17	42	59
Master's	14	15	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	15	29
Doctorate	3	6	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6	9
Natural Resources and Conservation	54	42	96	-	-	-	6	3	9	5	2	7	0	3	3	2	1	3	12	17	29	79	68	147
Certificate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1	1	0	1	2	0	2
Associate	-	-	-	-	-	-	-	-	-	3	1	4	-	-	-	-	-	-	-	-	-	3	1	4
Bachelor's	39	32	71	-	-	-	6	3	9	2	1	3	0	3	3	1	1	2	11	17	28	59	57	116
Master's	11	4	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	4	15
Doctorate	4	6	10	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	10
Parks, Recreation, Leisure, and Fitness																								
Studies	7	3	10	-	-	-	-	-	-	-	-	-	4	5	9	1	1	2	11	6	17	23	15	38
Bachelor's	7	3	10	-	-	-	-	-	-	-	-	-	4	5	9	1	1	2	11	6	17	23	15	38
Philosophy and Religious Studies	7	3	10	-	-	-	3	1	4	-	-	-	-	-	-	-	-	-	5	2	7	15	6	21
Bachelor's	7	3	10	-	-	-	3	1	4	-	-	-	-	-	-	-	-	-	5	2	7	15	6	21
Physical Sciences	21	19	40	-	-	-	7	1	8	-	-	-	-	-	-	-	-	-	7	10	17	35	30	65
Certificate	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	2	1	3
Bachelor's	13	7	20	-	-		7	1	8	-	-	-	-	-	-	-	-	-	7	10	17	27	18	45
Master's	4	8	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4	8	12
Doctorate	2	3	5	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5
Psychology	28	75	103	-	-	-	10	23	33	-	-	-	4	16	20	2	8	10	10	46	56	54	168	222
Certificate		-		-	-					-		-	0	9	9		-		0	1	1	0	10	10
Bachelor's	25	73	98	-	-	-	10	23	33	-	-	-	4	7	11	2	8	10	6	39	45	47	150	197
Master's	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	3	7	5	4	9
Doctorate	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3	3	2	4	6
Public Administration and Social Service	8	60	68	2	3	5	-	-	-	8	4	12	-	-	-	1	11	12	29	72	101	48	150	198
Certificate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	2	2	4
Associate	-	-	-	0	1	1	-	-	-	1	0	1	-	-	-	-	-	-	-	-	-	1	1	2
Bachelor's	4	28	32	2	2	4	-	-	-	7	4	11	-	-	-	1	11	12	6	36	42	20	81	101
Master's	4	32	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	34	55	25	66	91
Social Sciences	57	53	110	0	5	5	6	7	13	2	9	11	0	1	1	2	1	3	56	89	145	123	165	288
Certificate	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1	-	-	-	1	5	6	1	6	7
Bachelor's	49	47	96	0	5	5	6	7	13	2	9	11	-	-	-	2	1	3	55	84	139	114	153	267
Master's	8	6	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	6	14
Transportation and Materials Moving	-	-	-	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Bachelor's	-	-	-	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Visual and Performing Arts	12	24	36	5	5	10	6	4	10	-	-	-	1	1	2	-	-	-	10	28	38	34	62	96
Associate	-	-	-	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Bachelor's	7	22	29	4	5	9	6	4	10	-	-	-	1	1	2	-	-	-	9	25	34	27	57	84
Master's	5	2	7	-	-		-	-	-	-	-	-	-	-	-	-	-	-	1	3	4	6	5	11
Total	1.055	1.225	2.280	139	461	600	126	290	416	65	152	217	24	67	91	62	88	150	598	1.088	1,686	2,069	3,371	5.440
Certificate	17	73	90	16	47	63	3	230	27		102		0	12	12	1	0	130	30	104	134	67	260	327
	"	/3						24		14	-				7				30	104				527 177
Associate		-	-	23	98	121	-	-	-	14	10	24	1	6		11	14	25	-	-	-	49	128	
Bachelor's	867	893	1,760	100	316	416	116	241	357	51	142	193	23	49	72	50	74	124	411	668	1,079	1,618	2,383	4,001
Master's	146	229	375	-	-	-	7	25	32	-	-	-	-	-	-	-	-	-	116	271	387	269	525	794
Doctorate	25	30	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	5	26	34	60
Law	1			1			1			1									40	41	81	40	41	81

Board of Trustees Meeting - REPORTS



University of Maine System

2017-18 Financial Aid Report

Robert Zuercher, UMS Senior Institutional Research & Planning Analyst 10/10/2018

INTRODUCTION

The following financial aid report provides an overview of financial aid types and funding sources within the University of Maine System.

Notes:

- 1. As of 2013-14, all data is based on aid year for loans, scholarships, and grants and is based on fiscal year for tuition waivers and work study. All figures exclude private loans. Prior to 2013-14, all data was reconciled to the fiscal year. The UMS fiscal year runs from July 1 to June 30.
- 2. Some totals may not appear to sum correctly due to rounding.

Data Source: PeopleSoft Database; the University of Maine System. All data as of 10/2/2018.

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HIGHLIGHTS

• Total financial aid in the University of Maine System (UMS) was \$289.7 million in 2017-18. Financial aid increased \$6.2 million, or 2.2%, compared with the previous year. The total number of students receiving aid increased by 0.4%, or 102 students, from last year. The average aid award out of the 23,948 students receiving aid in the system was \$12,096, a 1.8% increase from the prior year.

Financial Aid Source

- Federal aid comprised 61% of total aid awarded in 2017-18, while institutional aid accounted for 32%, and state and private aid accounted for 3% and 4% respectively.
- Institutional aid grew the most over the past five years with an average increase of 9.4%. Compared to last year, institutional aid grew 15.0% or \$12.1 million. Federal funding had a mean change decline of 3.8% over the last five years. Relative to last year, federal funding dropped 1.8% or \$3.2 million. State aid, although up from five years ago, declined by 13.9% or \$1.6 million compared to last year. Private aid (scholarships) also decreased by 8.6% or \$1.0 million relative to last year.

Financial Aid Type

- Loans made up 43% of the total financial aid disbursements. Scholarships, grants, and waivers accounted for 55% of aid awarded, and work study constituted 2%.
- In 2017-18, loans totaled \$125.9 million (a decrease of 4.4%, or \$5.7 million, relative to last year). Unsubsidized loans accounting for 48.0% of all loan aid, or \$60.5 million. Total Direct Loan Program aid amounted to \$122.0 million in 2017-18.
- Scholarships, grants, and waivers totaled \$158.0 million in 2017-18, an increase of 8.2%, or \$12.0 million, compared to the previous year. The average percentage change over all five years was an increase of 4.6%. The university match portion of SEOG made up \$1.3 million of the \$6.1 million dollar total SEOG aid. Unrestricted scholarships from university funding and federal Pell grants compose just under three-quarters (73.3%) of all scholarships, grants, and waivers funding.
- Students received a total of \$5.7 million under the Federal Work Study program, \$4.5 million of which originated from the Federal Government and \$1.2 million in matching funds from UMS institutions. The amount awarded through work study was mostly unchanged from last year.

Cost of Education

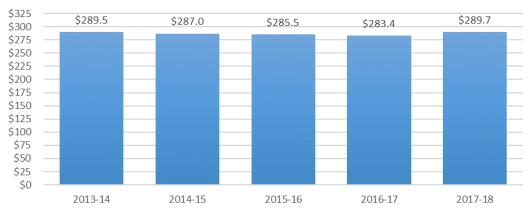
- Changes in the average undergraduate student budget may be due to changes in the reporting methodology implemented in 2017-18. While previous years used a weighted average, an ordinary arithmetic mean is now reported.
- The average student aid package is based on undergraduate, in-state students intending to live oncampus. Family contributions accounted for 27% of the average student aid package in 2017-18.
 Scholarships and waivers comprised 33% of aid. Work study made up 8%. Need-based loans made up 19% of the average student aid package.

<u>Income</u>

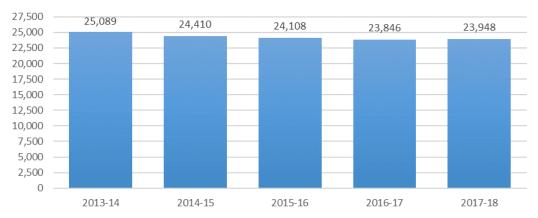
 Approximately 11,636 in-state, undergraduate students received some form of need-based federal financial aid during 2017-18. Out of the combined in-state, undergraduate, need-based federal aid recipients, 47% had annual family incomes of less than \$30,000 and 73% had family incomes of less than \$60,000.

Summary of Total Financial Aid

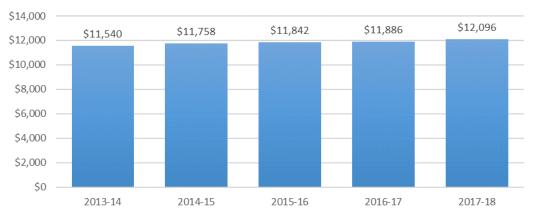
Total financial aid in the University of Maine System (UMS) was \$289.7 million in 2017-18. Financial aid increased \$6.2 million, or 2.2%, compared with the previous year. The total number of students receiving aid increased by 0.4%, or 102 students, from last year. The average aid award out of the 23,948 students receiving aid in the system was \$12,096, a 1.8% increase from the prior year.







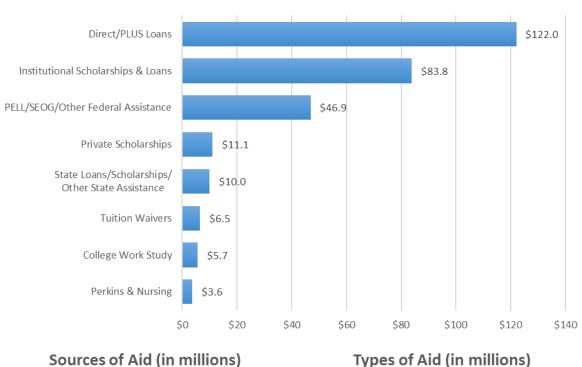






Summary of Financial Aid Distribution by Source and Type

Federal aid comprised 61% of total aid awarded in 2017-18, while institutional aid accounted for 32%, and state and private aid accounted for 3% and 4% respectively. Loans made up 43% of the total financial aid disbursements. Scholarships, grants, and waivers accounted for 55% of aid awarded, and work study constituted 2%.



Aid DIstribution (in millions)



Scholarships, grants, and waivers increased 8.2%, or \$12.0 million, compared to the previous year. The average percentage change over all five years was an increase of 4.6%. Loans decreased 4.4%, or \$5.7 million, compared to last year. Work study was mostly unchanged from last year.

Institutional aid grew the most over the past five years with an average increase of 9.4%. Compared to last year, institutional aid grew 15.0% or \$12.1 million. Federal funding had a mean change of -3.8% over the last five years. Relative to last year, federal funding dropped 1.8% or \$3.2 million. State aid, although up from five years ago, declined by 13.9% or \$1.6 million compared to last year. Private scholarships also decreased by 8.6% or \$1.0 million relative to last year.

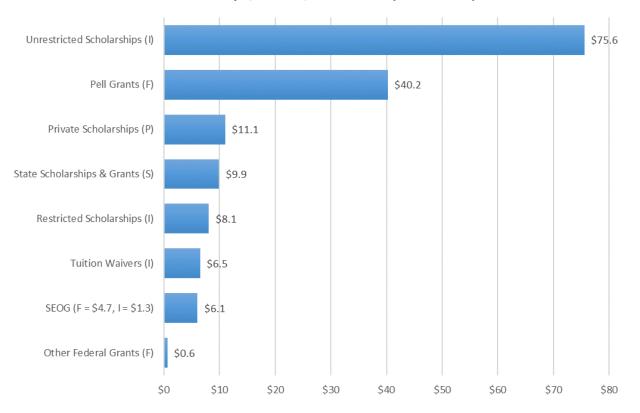
	Financial Aid by Type (\$ in Millions)													
	2013-1	4	2014-15		2015-16		2016-17		2017-18		Avg Chg	Avg Chg		
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%		
Loans	\$151.7	52%	\$143.7	50%	\$134.8	47%	\$131.7	46%	\$125.9	43%	(\$6.4)	-4.5%		
Scholarships, Grants, & Waivers	\$132.0	46%	\$137.5	48%	\$144.7	51%	\$146.1	52%	\$158.0	55%	\$6.5	4.6%		
Work Study	\$5.9	2%	\$5.9	2%	\$6.0	2%	\$5.7	2%	\$5.7	2%	(\$0.1)	-0.8%		
Total	\$289.5	100%	\$287.0	100%	\$285.5	100%	\$283.4	100%	\$289.7	100%	\$0.0	0.0%		

Avg Chg Avg Chg 2013-14 2014-15 2015-16 2016-17 2017-18 % Ś % \$ % \$ Ś % Ś % \$ % Federal 71% \$196.1 68% \$185.6 65% \$178.9 \$175.7 61% (\$7.3) -3.8% \$205.1 63% Institutional \$70.7 \$7.0 9.4% \$65.0 22% 25% \$77.4 27% \$80.8 29% \$92.9 32% State 4% \$10.0 \$0.4 4.9% \$8.6 3% \$9.5 3% \$11.5 \$11.7 4% 3% Private \$10.9 4% \$10.8 4% \$11.0 4% \$12.1 4% \$11.1 4% \$0.0 0.5% Total \$289.5 100% \$287.0 100% \$285.5 100% \$283.4 100% \$289.7 100% \$0.0 0.0%

Financial Aid by Source (\$ in Millions)

Summary of Scholarships, Grants, & Waivers

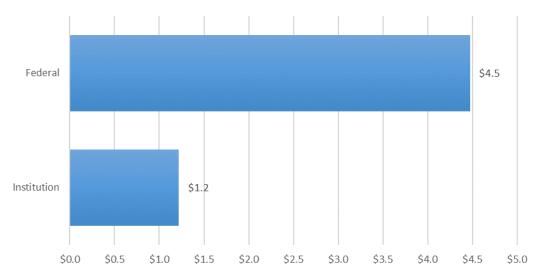
Scholarships, grants, and waivers totaled \$158.0 million in 2017-18. Financial aid in these categories do not require repayment by the student. The chart below shows aid that is either federally funded (F), institutional aid (I), state sponsored (S), or underwritten by private sources (P). Pell and the Supplemental Educational Opportunity Grant (SEOG) are programs based on student need, with some SEOG funding matched by the universities. The university match portion of SEOG made up \$1.3 million of the \$6.1 million dollar total SEOG aid. Multiple criteria may determine restricted and unrestricted scholarship awards, such as merit, need, diversity, or donor-specific criteria. The UMS grants tuition waivers based on specific eligibility requirements; for example, the Native American tuition waiver for members or descendants of American Indian tribes. Unrestricted scholarships from university funding and federal Pell grants compose just under three-quarters (73.3%) of all scholarships, grants, and waivers funding.



Scholarships, Grants, & Waivers (in millions)

Summary of Federal Work Study Program

Students received a total of \$5.7 million under the Federal Work Study program, \$4.5 million of which originated from the Federal Government and \$1.2 million in matching funds from UMS institutions. Students have employment opportunities in a variety of positions for universities and their off-campus partners. Students will ideally have opportunities to work in positions designed to complement the students' major. The Federal Work Study Program is part of the self-help component of a student's financial aid package.

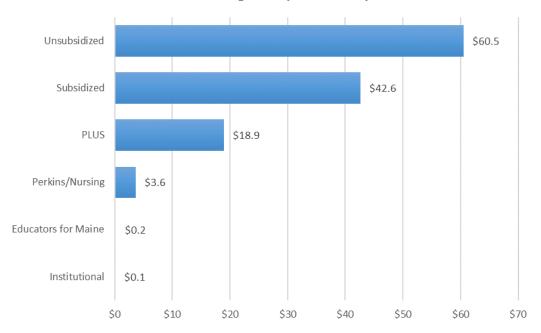


Federal Work Study Program (in millions)

Summary of Loan Programs

In 2017-18, loans totaled \$125.9 million, with unsubsidized loans accounting for 48.0% of all loan aid, or \$60.5 million. The Federal Government backs most loan aid, with some provided by the State of Maine and the UMS.

Unsubsidized, 60subsidized, and PLUS loans are part of the William D. Ford Federal Direct Loan Program. Total Direct Loan Program aid came to \$122.0 million in 2017-18. PLUS loans are designated for parents of dependent undergraduate students, or graduate/professional students. The Federal government administers Direct Loans in cooperation with universities and provides the funding.



Loan Programs (in millions)

Cost of Education

The Financial Aid Office at each university is responsible for developing a student budget that meets the needs of the region's students and the university. Federal guidelines help determine student eligibility for financial aid. The average student aid package is based on undergraduate, in-state students intending to live oncampus.

Up until 2017-18, the Average Undergraduate Student Budget reported weighted average tuition data. However, starting with 2017-18, the UMS changed reporting methods such that an ordinary arithmetic mean is used. Therefore, changes in the Average Undergraduate Student Budget may be the result of this change in methodology.

Family contributions (which may include loans from private sources) accounted for 27% of the average student aid package in 2017-18. Scholarships and waivers comprised 33% of aid. Work study made up 8%. Need-based loans made up 19% of the average student aid package.

Scholarship, grants, and waiver aid increased by an average of 3.4% over the last five aid years. Aid from outside sources (i.e., private scholarships) similarly increased by an average of 4.7% during the same time frame. Need-based loans have remained relatively stable over the last five aid years, showing an average decrease of 0.4%. Likewise, the average amount for work study increased slightly by 0.8% on average. Family contribution decreased by 7.1% on average.

			Avera	age Un	dergraduat	e Stude	ent Budget					
	2013-:	14	2014-1	L5	2015-16 201		2016-3	2016-17		8*	Avg Chg	Avg Chg
	\$ Amt	%	\$ Amt	%	\$ Amt	%	\$ Amt	%	\$ Amt	%	\$	%
Tuition & Fees	\$9 <i>,</i> 020	41%	\$9,091	41%	\$9,101	41%	\$9 <i>,</i> 108	41%	\$8,630	40%	(\$98)	-1.1%
Room & Board	\$9 <i>,</i> 015	41%	\$9 <i>,</i> 060	41%	\$9,295	42%	\$9 <i>,</i> 618	43%	\$8,856	41%	(\$40)	-0.3%
Transportation	\$1,411	6%	\$1,400	6%	\$1,290	6%	\$1 <i>,</i> 255	6%	\$1,336	6%	(\$19)	-1.2%
Books/Supplies	\$1,095	5%	\$1,088	5%	\$1,057	5%	\$1,051	5%	\$1,009	5%	(\$22)	-2.0%
Misc.	\$1,587	7%	\$1,550	7%	\$1,522	7%	\$1,451	6%	\$1,517	7%	(\$18)	-1.1%
Total	\$22,128	100%	\$22,189	100%	\$22,265	100%	\$22,483	100%	\$21,348	100%	(\$195)	-0.9%

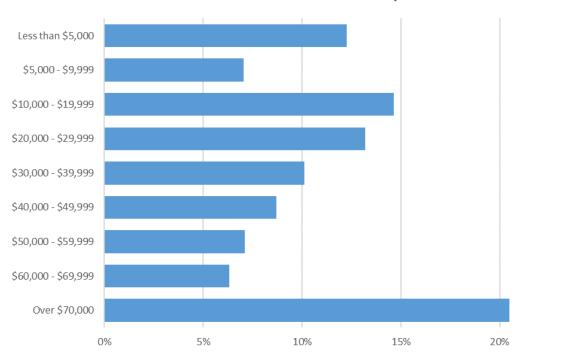
Average Lindergraduate Student Budget

				Avera	ge Student	Aid Pac	ckage					
	2013-:	14	2014 -1	2014-15		16	2016-3	17	2017-1	18	Avg Chg	Avg Chg
	\$ Amt	%	\$ Amt	%	\$ Amt	%	\$ Amt	%	\$ Amt	%	\$	%
Family Contribution	\$7 <i>,</i> 858	36%	\$7,543	34%	\$6,991	31%	\$7 <i>,</i> 269	32%	\$5,731	27%	(\$532)	-7.1%
Work Study	\$1 <i>,</i> 550	7%	\$1,541	7%	\$1,574	7%	\$1 <i>,</i> 551	7%	\$1,602	8%	\$13	0.8%
Scholarship/Waiver	\$6,114	28%	\$6,408	29%	\$6,920	31%	\$6 <i>,</i> 639	30%	\$6,971	33%	\$214	3.4%
Need-Based Loans	\$4,061	18%	\$4,112	19%	\$4,040	18%	\$4,179	19%	\$3,989	19%	(\$18)	-0.4%
Outside Sources	\$2,544	11%	\$2,585	12%	\$2,739	12%	\$2 <i>,</i> 845	13%	\$3 <i>,</i> 055	14%	\$128	4.7%
Total	\$22,128	100%	\$22,189	100%	\$22,265	100%	\$22,483	100%	\$21,348	100%	(\$195)	-0.9%

* Starting in 2017-18, the UMS now reports an ordinary arithmetic mean for tuition. Prior to 2017-18, figures reflect a weighted average.

Income Levels

Approximately 11,636 in-state, undergraduate students received some form of need-based federal financial aid during 2017-18. Students with parental income considered for financial aid purposes are dependent students and those who no longer rely on parental support are independent students. Out of the combined in-state, undergraduate, need-based federal aid recipients, 47% had annual family incomes of less than \$30,000 and 73% had family incomes of less than \$60,000.



Income Levels for Aid Year 2017-18 In-State, Undergraduate, Need-Based Federal Aid Recipients

· · ·			
			Dependent +
Income Levels	Dependent	Independent	Independent
Less than \$5,000	6%	21%	12%
\$5,000 - \$9,999	3%	13%	7%
\$10,000 - \$19,999	9%	23%	15%
\$20,000 - \$29,999	10%	17%	13%
\$30,000 - \$39,999	11%	8%	10%
\$40,000 - \$49,999	11%	6%	9%
\$50,000 - \$59,999	9%	4%	7%
\$60,000 - \$69,999	9%	3%	6%
Over \$70,000	31%	5%	21%
	100%	100%	100%
Summary by Income	Brackets		
Less than \$30,000	28%	74%	47%
Less than \$60,000	60%	92%	73%

In-State, Undergraduate, Need-Based Federal Aid Recipients

25%

Detailed Financial Aid by Source of Funding

		Financia	al Aid	by Soul	rce of	Funding	; (Ş in	Million	S)				
												Avg Chg	Avg Chg
		2013-	14	2014-	15	2015 -2	16	2016 -2	17	2017-:	18	\$	%
Federal	Direct/PLUS Loans	\$145.8	50%	\$138.4	48%	\$129.6	45%	\$126.3	45%	\$122.0	42%	(\$5.9)	-4.3%
	PELL	\$44.0	15%	\$43.1	15%	\$41.5	15%	\$38.2	13%	\$40.2	14%	(\$0.9)	-2.1%
	SEOG & Other Grants	\$5.2	2%	\$5.1	2%	\$4.9	2%	\$4.9	2%	\$5.3	2%	\$0.0	0.9%
	Work Study	\$4.6	2%	\$4.5	2%	\$4.6	2%	\$4.4	2%	\$4.5	2%	(\$0.0)	-0.6%
	Perkins/Nursing	\$5.5	2%	\$5.0	2%	\$4.8	2%	\$5.1	2%	\$3.6	1%	(\$0.5)	-9.1%
	Subtotal	\$205.1	71%	\$196.1	68%	\$185.4	65%	\$178.7	63%	\$175.5	61%	(\$7.4)	-3.8%
Institutional	Scholarships	\$56.1	19%	\$61.9	22%	\$68.4	24%	\$72.3	26%	\$83.7	29%	\$6.9	10.6%
	Tuition Waivers	\$6.3	2%	\$6.1	2%	\$6.3	2%	\$5.8	2%	\$6.5	2%	\$0.1	1.4%
	SEOG Matching	\$1.1	0%	\$1.1	0%	\$1.2	0%	\$1.2	0%	\$1.3	0%	\$0.0	3.9%
	Work Study Matching	\$1.3	0%	\$1.4	0%	\$1.4	0%	\$1.3	0%	\$1.2	0%	(\$0.0)	-1.6%
	University Loans	\$0.2	0%	\$0.2	0%	\$0.2	0%	\$0.2	0%	\$0.1	0%	(\$0.0)	-6.7%
	Subtotal	\$65.0	22%	\$70.7	25%	\$77.5	27%	\$81.0	29%	\$93.1	32%	\$7.0	9.5%
State	Maine State Grant	\$6.0	2%	\$7.1	2%	\$9.4	3%	\$9.6	3%	\$7.5	3%	\$0.4	7.7%
	Racino Scholarship	\$1.8	1%	\$1.4	0%	\$1.3	0%	\$1.2	0%	\$1.6	1%	(\$0.1)	-1.1%
	Educators for Maine	\$0.2	0%	\$0.2	0%	\$0.1	0%	\$0.1	0%	\$0.2	0%	(\$0.0)	-1.3%
	License Plate	\$0.1	0%	\$0.2	0%	\$0.1	0%	\$0.2	0%	\$0.2	0%	\$0.0	4.1%
	Other Assistance	\$0.4	0%	\$0.6	0%	\$0.6	0%	\$0.6	0%	\$0.6	0%	\$0.1	13.1%
	Subtotal	\$8.6	3%	\$9.5	3%	\$11.5	4%	\$11.7	4%	\$10.0	3%	\$0.4	4.9%
Private Schola	rships	\$10.9	4%	\$10.8	4%	\$11.0	4%	\$12.1	4%	\$11.1	4%	\$0.0	0.5%
Total		\$289.5	100%	\$287.0	100%	\$285.5	100%	\$283.4	100%	\$289.7	100%	\$0.0	0.0%

Financial Aid by Source of Funding (\$ in Millions)

Detailed Financial Aid by University

	Financial Aid by University (\$ in Millions)											
											Avg Chg	Avg Chg
	2013-1	4	2014-:	15	2015-	16	2016-:	17	2017-1	.8	\$	%
UM	\$122.9	42%	\$127.8	45%	\$131.0	46%	\$133.2	47%	\$142.2	49%	\$4.8	3.7%
UMA	\$40.3	14%	\$38.2	13%	\$36.4	13%	\$31.4	11%	\$28.2	10%	(\$3.0)	-8.4%
UMF	\$22.9	8%	\$22.3	8%	\$22.3	8%	\$22.4	8%	\$22.6	8%	(\$0.1)	-0.4%
UMFK	\$7.9	3%	\$7.9	3%	\$8.0	3%	\$8.1	3%	\$8.2	3%	\$0.1	0.7%
UMM	\$7.1	2%	\$6.7	2%	\$6.3	2%	\$6.4	2%	\$5.9	2%	(\$0.3)	-4.3%
UMPI	\$8.9	3%	\$8.1	3%	\$8.3	3%	\$7.8	3%	\$7.7	3%	(\$0.3)	-3.3%
USM	\$79.6	27%	\$75.9	26%	\$73.3	26%	\$74.1	26%	\$74.9	26%	(\$1.2)	-1.5%
Total	\$289.5	100%	\$287.0	100%	\$285.5	100%	\$283.4	100%	\$289.7	100%	\$0.0	0.0%

inancial Aid by University (\$ in Millions)

Unduplicated Student Aid Recipients and Average Aid per Recipient

	2013	- 14	2014	-15	2015-16		2016	-17	2017-18		
	#	Average	#	Average	#	Average	#	Average	#	Average	
	Recipients	Aid	Recipients	Aid	Recipients	Aid	Recipients	Aid	Recipients	Aid	
UM	9,385	\$13,092	9,473	\$13,488	9,425	\$13,899	9,673	\$13,775	10,063	\$14,129	
UMA	4,525	\$8,900	4,314	\$8,864	4,219	\$8,616	3,875	\$8,091	3,694	\$7 <i>,</i> 643	
UMF	1,872	\$12,238	1,771	\$12,605	1,827	\$12,187	1,806	\$12,396	1,823	\$12,373	
UMFK	975	\$8,148	917	\$8,662	908	\$8,848	916	\$8,896	884	\$9,257	
имм	745	\$9,528	738	\$9,122	703	\$8,902	701	\$9,174	682	\$8 <i>,</i> 692	
UMPI	1,076	\$8,228	1,019	\$7,903	1,164	\$7,114	849	\$9,142	812	\$9 <i>,</i> 485	
USM	6,511	\$12,224	6,178	\$12,291	5,862	\$12,501	6,026	\$12,297	5,990	\$12,501	
Total	25,089	\$11,540	24,410	\$11,758	24,108	\$11,842	23,846	\$11,886	23,948	\$12,096	

Note: Unduplicated totals above are unduplicated by campus and not the entire University System. Students receiving financial aid at more than one campus may count for each campus where they receive aid.

Detailed Tuition Waivers by University

Amount	of Unrestri		uition wai	/ers	
	2013-14	2014-15	2015-16	2016-17	2017-18
Fire Fighters/Law Enforcement	\$6,975	\$7,812	\$15,810	\$15,066	\$12,870
Foster Care	\$294,659	\$356,786	\$355,476	\$355,585	\$358,722
High School	\$538 <i>,</i> 825	\$490,654	\$792,168	\$571,743	\$779,366
Native American	\$3,586,795	\$3,381,535	\$3,237,156	\$3,009,742	\$3,178,257
Senior Citizens	\$306,147	\$328 <i>,</i> 058	\$369,444	\$366,900	\$423,009
Veterans*	\$78,991	-	-	-	-
Veteran's Dependent	\$1,441,708	\$1,490,596	\$1,484,852	\$1,498,382	\$1,789,076
Total	\$6,254,099	\$6,055,441	\$6,254,906	\$5,817,418	\$6,541,300

Amount of Unrestricted E&G Tuition Waivers

Amount of Unrestricted E & G Tuition Waivers by University, 2017-18

	UМ	UMA	UMF	UMFK	UMM	UMPI	USM	Total
Fire Fighters/Law Enforcement	\$12,870	-	-	-	-	-	-	\$12,870
Foster Care	\$147,576	\$22,344	\$71,740	\$24,192	\$16,416	\$27,132	\$49,322	\$358,722
High School	\$203,771	\$301,908	\$58,940	-	\$71,760	-	\$142,987	\$779,366
Native American	\$1,523,702	\$470,368	\$128,922	\$38,312	\$112,338	\$128 <i>,</i> 665	\$775,952	\$3,178,257
Senior Citizens	\$147,533	\$96,281	\$21,228	\$2,672	\$14,198	\$19,643	\$121,455	\$423,009
Veteran's Dependent	\$765,624	\$297,165	\$164,519	\$73,541	\$58,821	\$28,085	\$401,321	\$1,789,076
Total	\$2,801,076	\$1,188,067	\$445,349	\$138,716	\$273,533	\$203,525	\$1,491,035	\$6,541,300

Count of Unrestricted E & G Tuition Waiver Recipients by University, 2017-18

	UM	UMA	UMF	UMFK	UMM	UMPI	USM	Total
Fire Fighters/Law Enforcement	2	-	-	-	-	-	-	2
Foster Care	19	6	10	6	3	4	9	57
High School	298	445	59	-	148	-	209	1,159
Native American	179	111	17	8	30	33	97	475
Senior Citizens	80	63	11	3	13	11	66	247
Veteran's Dependent	75	52	22	14	10	8	49	230
Total	653	677	119	31	204	56	430	2,170

Native American Room & Board Scholarships, 2017-18

	UM	UMA	UMF	UMFK	UMM	UMPI	USM	Total
Room & Board Scholarship	\$177,640	-	\$19,594	-	\$4,269	\$13,567	\$60,974	\$276,044
# of Recipients	41	-	7	-	3	5	15	71

* The decrease in Veteran's Waiver aid is due to a change in policy that charges the in-state tuition rate to all current and former members of the U.S. Armed Forces starting in aid year 2014-15.

Note: In addition to the Native American Waiver Program, universities also provide room and board for eligible Native American students who live on campus.

Student Loans by University

Subsidized and Unsubsidized Loans* by University (\$ in millions)

	* Excludes PLUS Loans										
	2013-	-14	2014	2014-15		2015-16		-17	2017-18		
	# of loans	\$	# of loans	\$	# of loans	\$	# of loans	\$	# of loans	\$	
UM	12,525	\$44.7	11,195	\$44.4	10,763	\$42.7	10,465	\$41.6	10,279	\$41.3	
UMA	7,372	\$23.6	5,694	\$21.8	5 <i>,</i> 083	\$19.7	4,585	\$16.7	3,753	\$13.6	
UMF	3,080	\$10.6	2,769	\$9.6	2,546	\$8.8	2,455	\$8.6	2,445	\$8.4	
UMFK	1,003	\$3.7	969	\$3.7	991	\$3.9	1044	\$4.0	992	\$4.0	
UMM	780	\$2.7	697	\$2.4	619	\$2.2	585	\$2.0	512	\$1.7	
UMPI	1,184	\$3.6	1,033	\$3.0	968	\$2.7	889	\$2.5	900	\$2.6	
USM	9,240	\$42.1	8,494	\$39.0	7,346	\$33.9	7,042	\$32.5	6,723	\$31.4	
Total	35,184	\$131.0	30,851	\$124.1	28,316	\$113.8	27,065	\$107.8	25,604	\$103.1	

Notes:

1. A student may receive both a subsidized and unsubsidized loan; therefore, the total number of loans does not represent an unduplicated recipient count.

2. Prior to 2013-14, subsidized and unsubsidized loan amounts were measured using fiscal year (July 1 through June 30). As of 2013-14, all amounts reflect the aid year of the respective campus.

Glossary of Student Aid Programs

Federal

Pell Grant - The Pell Grant is the basic program of federal grant assistance to undergraduate students of exceptional financial need. The Federal government administers the program. Grant amounts vary according to institutional costs, number of credits taken, and individual eligibility determinations. This is an "entitlement" program (funding is guaranteed to eligible students).

Supplemental Educational Opportunity Grants (SEOG) - SEOG is a program of grant assistance for undergraduate students of financial need. The institution administers the program. Federal funding is dependent upon an institutional application to the Department of Education. The current institutional match is 25%.

Federal Work Study (FWS) - FWS is a program to provide part-time employment to full-time and part-time undergraduate, graduate, and professional students with financial need. Jobs may be on-campus or with off-campus public or private not-for-profit agencies. This program promotes community service work and employment related to the student's field of study. The institution administers the program. The minimum match is currently 25%. Federal funding is dependent upon an institutional application to the Department of Education.

Perkins Loan - The Perkins Loan Program is a low-interest federal loan program for undergraduate or graduate students with exceptional financial need. Both interest and principal repayments are deferred during time of attendance (assuming at least half-time status while enrolled). Repayment begins nine months after graduation or last attendance. The institution administers the program. Note: the authority for schools to make new Perkins Loans ended September 30, 2017. Final disbursements were permitted through June 30, 2018. Students can no longer receive Perkins Loans.

Nursing Student Loan - The Nursing Student Loan Program is similar to the Perkins Loan Program except that only nursing students are eligible borrowers. The institution administers the program.

Direct Student Loan - The Higher Education Amendments of 1992 initially authorized this program. The program is the same as the FFEL Program, except the source of capital comes from the Federal Government instead of financial institutions. The primary objective of the Direct Loan program is simplification, reduced costs, and improved repayment of the loans by having a coordinated effort between students, institutions, and the U.S. Department of Education. Institutions apply to the federal government in order to participate in the program. **NOTE:** Because of the Health Care and Education Reconciliation Act of 2010, after June 30, 2010, no new loans will be made under the FFEL Program. Therefore, beginning July 1, 2010, all new Stafford, PLUS, and Consolidation Loans made to borrowers can only be made under the William D. Ford Federal Direct Loan (Direct Loan) Program.

Glossary of Student Aid Programs - Continued

Institutional

Institutional Scholarships - All scholarships funded from unrestricted revenues (excluding North American Indian Scholarships) are used to provide aid to students in need of financial assistance or in recognition of talent and/or academic excellence.

Native American Room and Board Grant – This grant is a need based award for qualified native students living in a residence hall of the campus where they are matriculating.

Restricted Scholarships - These scholarships are restricted by the donor and can be need-based or non-need-based. They are funded from income earned by the University endowment fund or other restricted sources and do not represent an expense to the E & G budget.

Loan Program - The University maintains a number of loan programs which include funds established by individual contributors, as well as the Perkins Loan Program. Loans are made to students based on the restrictions established by the source of capital for the program. The loan programs are a continuing source of aid to students based on a revolving fund basis (e.g., as funds are repaid by students, new loans are made).

Exchange Programs – Various exchange programs exist at the institutions.

<u>Faculty Children Tuition Program</u> -- The University has had a Board-approved reciprocal agreement with certain New England universities since 1964, which permits acceptance of eligible students at instate rates. Children of UM faculty are eligible to apply for in-state admission to URI and UCONN.

Graduate Assistant Tuition Program -- In recognition of the desirability of attracting outstanding graduate students (in-state and out-of-state) to the University of Maine System, the System has a graduate assistant tuition assistance program whereby selected graduate students are provided free tuition.

NOTE: The following are considered as part of an employee's "benefit" package and, therefore, are not included in this financial aid report but it should be noted that tuition is waived for employees and their dependents as follows:

Employee Tuition Benefit -- The Board of Trustees encourages employee participation in educational programs by authorizing a waiver of tuition charges. Generally, employees may be eligible to take up to two (2) courses per semester not to exceed four (4) credit hours per course. Such courses shall be contingent on the availability of space. Also, each university shall designate those non-credit courses to which waivers will not apply. Permission from the employee's supervisor is required for any course scheduled during normal working hours; such absences must be made up.

Glossary of Student Aid Programs - Continued

Dependent Tuition Benefit -- The spouse, domestic partner or dependent children of full-time regular University employees are eligible for a waiver of one-half tuition, provided that the spouse, domestic partner or child is attending a university of the University of Maine System as a full-time student or as a part-time student who is matriculated. The spouse, domestic partner or dependent children of part-time regular employees and eligible part-time faculty are eligible for a waiver of one-fourth tuition, provided that the spouse, domestic partner or child is attending a campus of the University of Maine System as a full-time student or as a part-time student who is matriculated.

Tuition Waivers - Waivers generally are of an entitlement nature for students that meet specific eligibility requirements. Four waiver programs are controlled by State of Maine Law: Veteran's Dependent, Tuition Waiver for Children of Firefighters and Law Enforcement Officers Killed in the Line of Duty, Tuition Waiver for Persons in Foster Care and High School Aspirations Incentive Program. The UMS Board of Trustees controls the following waivers:

- Native American Waiver
- Senior Citizens Waiver
- UMS High School Waiver
- USS Maine Commemorative Waiver

Tuition Waiver descriptions may be found at: <u>http://www.maine.edu/admissions-aid/scholarships/tuition-waivers/</u>

State

State of Maine Grant - The State of Maine Grant Programs are designed to promote an educational opportunity for Maine students attending postsecondary institutions. The program is administered by the Maine Education Assistance Division under the Finance Authority of Maine (FAME). Determination of awards to students is based on rules and regulations established by the State that have been adapted to include applicable Federal guidelines.

Educators for Maine Program – Formerly known as the Teachers for Maine Program and the Blaine House Scholars Program, the Educators for Maine Program is designed to provide low interest loans to Maine students who intend to teach in Maine. These loans may be forgiven by teaching in a Maine public elementary or secondary school upon graduation. If the loan recipient does not meet the service requirements, however, the loan must be repaid with interest. The program is administered by the Education Division of the Finance Authority of Maine (FAME).

Racino Scholarship – Two to four percent of the net slot machine income will be credited to the UMS scholarship fund which will be used for Maine residents who demonstrate financial need.

Capital Project Status Report

Executive Summary

Attached is the Capital Project Status Report for the January 27-28, 2019 meeting of the Board of Trustees.

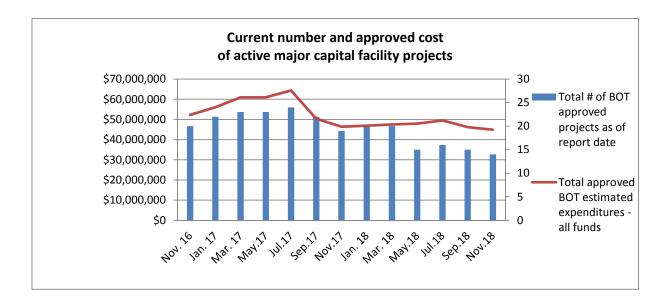
The report reflects a total of 14 projects, with one project having been removed since the previous report, and no new projects having been added.

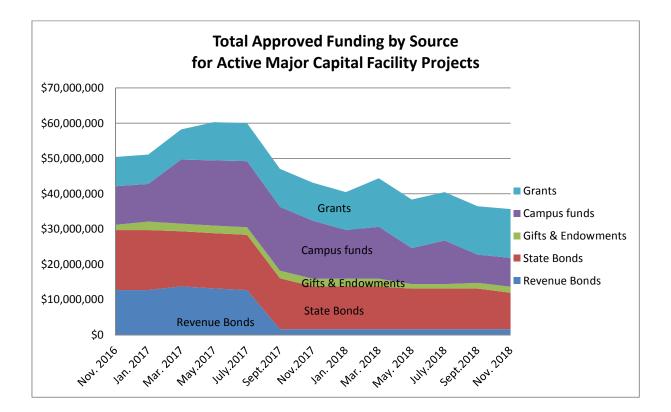
One project will be removed from the next subsequent report due to completion. That is the UMF Science Lab Renovations project (2100065 & 2100068).

Three projects remain on the report with a completion date of 2018. These projects are complete but will remain on the list until final invoices have been processed and paperwork completed.

The largest single project currently in the portfolio continues to be the Engineering Education and Design Center (EEDC). Although the current budget approval is limited to \$9.0 million, the often-cited estimated total cost of the project is \$75 to \$80 million. It is expected that this project ultimately will affect the data in this report more than it does currently.

Please note that more than half of the current major projects being tracked are complete or substantially complete. Those details are included on the attached listing of projects.





01/17/2019

Board of Trustees Meeting - REPORTS

Capital Project Status Report Board Approved Projects January 2019 - Board of Trustees With Grand Totals and % of Current Approved Estimates

	•••			Current Appr	oveu Estimat	C5	0/ Ennandad	
Campus, Project Name (Project ID)	Funding Source(s) & each source's share of expenditures to date	Status	Original Estimated Completion	Current Est. Completion	Original Approved Estimate	Current Approved Estimate	% Expended of Current Approved Estimate	Prior Actions, Information & Notes
UM								
** Advanced Structures and Composites Center Expansion/ASCC Equip W2- Thermoplastics Lab/ASCC Equip W2 Tow Carriage (5100316, 5100414, 5100432)	Grants (77%), 2010 State Energy Bond (11%), Gifts (12%)	Project 5100316 is Complete, Project 5100414 Design in Progress, Project 5100432 is Construction in Progress	2014	2019	\$6,400,000	\$10,400,000	90%	Board Approved \$6.4M in November, 2012. Board approved \$1.6M in March 2014. Board approved increase of \$871,000 in March 2015. BOT approved additional \$1.5M in May 2016 for equipment project.
** Cooperative Extension Diagnostic & Research Lab (5100387)	2014 State Bond (85%), Campus E&G Funds (10%), Grants (5%)	Substantially Complete	2016	2019	\$9,000,000	\$9,400,000	99%	BOT approved \$9M in July, 2015. Board approved increase of \$400,000 in July 2017.
** Aquatic Animal Health Facility (5100440)	Grants (82%), Campus E&G Funds (18%)	Substantially Complete	2017	2019	\$2,300,000	\$2,800,000	82%	Board approved \$2.3M in January, 2017. Board approved increase of \$500,000 (8.6%) in project cost in November, 2017.
Barrows Hall ESRB Lab Renovations (5100424)	Campus E&G Funds (100%)	Complete	2017	2018	\$1,900,000	\$1,900,000	83%	Board approved \$1.9M in March, 2017
Darling Marine Center Waterfront Infrastructure (5100459, 5100460, 5100461)	Grants (100%)	Design in Progress	2017	2019	\$3,000,000	\$3,000,000	5%	Board approved \$3M in July, 2017.
Engineering Education and Design Center (5100458)	Bond (0%), Campus E&G Funds (100%)	Design in Progress	2024	2024	\$1,000,000	\$9,000,000	11%	Board approved \$1M in September, 2017. Board approved additional \$8M in May, 2018.
Wells Commons Generator (5100433)	Campus Auxiliary Reserves (100%)	Substantially Complete	2019	2019	\$525,000	\$525,000	61%	Board approved \$525,000 January, 2018.
CCAR EDA Hatchery Building Roof Replacement (5100456)	Campus Auxiliary Reserves (100%)	Design in Progress	2019	2019	\$562,000	\$562,000	3%	Board approved \$562K in June, 2018.
UMF								
*** Science Labs Renovations (Preble & Ricker (2100065, 2100068)	2013 Lab & Class State Bond (91%), Grants (9%)	Substantially Complete	2014	2018	\$1,377,000	\$1,377,000	89%	Board approved \$1.377M in July 2014.
UMM								
Compressed Natural Gas Heating Conversion (4100028)	Revenue Bonds (100%)	Substantially Complete	2014	2019	\$1,800,000	\$1,800,000	84%	Board approved \$1.8M in July 2014.
USM								
Athletic Field Lighting (6100289, 6100305, 6100306)	Campus E&G Funds (49%), External Lease Financing (51%)	Substantially Complete	2018	2018	\$1,780,000	\$1,780,000	90%	Board approved \$1.78M in March, 2018. Board approved execution of a tax-exempt master lease financing agreement not to exceed \$1M in May, 2018
USM Center for the Arts (6100300)	Gifts (100%)	Pre-Design in Progress	2022	2022	\$1,000,000	\$1,000,000	0%	Board approved \$1M in January, 2018.
Corthell Hall HVAC Upgrades (6100295)	Campus E&G Funds (100%)	Substantially Complete	2018	2018	\$550,000	\$550,000	85%	Board approved \$550K in May, 2018.

Board of Trustees Meeting - REPORTS

Campus, Project Name (Project ID)	Funding Source(s) & each source's share of expenditures to date	Status	Original Estimated Completion	Current Est. Completion	Original Approved Estimate	Current Approved Estimate	% Expended of Current Approved Estimate	Prior Actions, Information & Notes
UMPI								
UMPI Greenhouse (7100010)	Campus E&G Funds (30%), Gifts (70%)	Design in Progress	2018	2019	\$850,000	\$850,000	9%	Board approved \$850K in Septmeber, 2018.
Explanatory Notes:								
* Project is new as of this report.	Funding source(s) reflects primary		Calendar Year	unless otherwise			Percentage expen	ded reflects total expended as of November 30, 2018
** Details of this project include updates since	source(s) for project.		no	ted.			as a percer	ntage of the current approved project estimate.
the last report.								
*** This project has been completed since the								
last report and is not expected to appear on the								
next report.								

University of Maine System

Competitive Procurement Legislative Report

Executive Summary

Pursuant to 5 M.R.S.A., Section 12023, the University of Maine System must submit annually to the Legislature of the State of Maine a report confirming that competitive procurement is the standard practice of the University and any waivers from that practice.

Competitive procurement is the University's standard, as established by Trustees in Policy 701, paragraph IX, which states: "In accordance with the laws of the State of Maine, the Board of Trustees establishes competitive procurement as the standard procurement method of the University and authorizes the Treasurer to promulgate such policies and practices as the Treasurer determines necessary to implement that standard, including regarding the conditions under which competitive procurement may be waived."

Those waivers are set forth by the Treasurer in APL VII-A. As provided in law and corresponding University policy and practice, there are legitimate reasons for waiving competitive procurement as part of standard procurement policy. For example, within the report, a majority of the expenses for which waivers were granted involve purchases as required or provided in a grant awarded to the University or a library acquisition, as distinct from the University's purchases of general operating supplies and services.

In an effort to increase transparency and public accountability, new to this year's report is a description of each transaction and the advance distribution of the report to Trustees in addition to its submission to the Legislature. The actual report to the Legislature will be provided prior to the meeting of the Finance, Facility and Technology Committee.



Office of the Chancellor 15 Estabrooke Drive Orono, ME 04469

www.maine.edu

Honorable Sara Gideon Tel: 207-973-3205 Speaker of the House 2 State House Station Augusta, ME 04333

1 February 2019

The University of Maine Dear Speaker Gideon:

University of Maine at Augusta

University of Maine at Farmington

University of Maine at Fort Kent

University of Maine at Machias

University of Maine at Presque Isle

> University of Southern Maine

Pursuant to 5 M.R.S.A., Section 12023, please accept this letter of transmittal for the required Quasi-Independent State Entity Review Report from the University of Maine System due 1 February 2019.

The University has an estimated \$1.5 billion annual total statewide economic impact, including direct and indirect payroll, student and visitor spending and, increasingly, purchasing of goods and services from Maine-based businesses which in FY18 totaled \$54.3 million.

While competitive procurement is the University's standard, as provided in State law and corresponding University policy, there are legitimate reasons for waiving competitive procurement in some circumstances. For example, within the report of FY18 sole source purchasing that follows, a majority of the expenses for which waivers from our competitive procurement process were granted involve the purchase of goods and services that were specifically named in a grant. In an effort to increase transparency and public accountability, new to this year's report is a description of each transaction as well as a review of this report by the UMS Board of Trustees prior to this submission.

Please contact me if you have any questions or need additional information.

Thank you.

Sincerely,

ames James H. Page, University of Maine System



UNIVERSITY OF MAINE SYSTEM

SOLE SOURCE PROCUREMENT & CONTRIBUTIONS REPORT FEBRUARY 1, 2019

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*This report is submitted pursuant to 5 M.R.S.A., Section 12023 and reflects the period July 1, 2017 to June 30, 2018 (FY18). Please direct questions including requests for additional information to Samantha Warren, University of Maine System Director of Government and Community Relations, at samantha.warren@maine.edu.

UMS STRATEGIC PROCUREMENT

The University of Maine System (UMS or University) has an estimated \$1.5 billion annual total statewide economic impact, a \$7.50 return for every dollar of State appropriation. Beyond supporting nearly 20,000 campus and community jobs and our full-time students and University visitors spending an estimated \$144 million locally, the University positively impacts the Maine economy by purchasing goods and services from businesses based in Maine or that employ Mainers. In FY18, the University invested \$54.3 million directly in the Maine economy through the purchasing of goods and services provided by Maine-based businesses.

As it conducts business with both in- and out-of-state vendors, the University is committed to a competitive procurement process to ensure the greatest value for tuition and taxpayers as well as transparency and fairness for providers of goods and services. As allowed by State law and corresponding University policy, there are legitimate reasons for waiving this competitive process in special circumstances. A waiver from the competitive bid process can never be justified based on price, preference or urgency created by inadequate planning on the part of the requestor, per University policy adopted by the Board of Trustees in 2012.

In FY18, the total value of University procurements exceeding \$10,000 for which the competitive process was waived was \$21,734,742. More than one-half (\$11.2 million) was a result of the vendor being named specifically in a grant award. For example, Syntiro along with several K-12 public school districts are specifically identified as sub-recipients in a federal Department of Education GEAR-UP grant for which the University of Maine at Farmington is the fiscal agent. Funding serves more than 60 Maine middle and high schools and supports thousands of low-income students prepare for and be successful in postsecondary education.

Less than one-third (\$6.2 million) of the total waiver value in FY18 reflects true sole source purchases and many of those purchases were funded by outside grants, as opposed to State appropriation. As a world class research institution, the University of Maine in particular has unique procurement needs, including for specialized equipment or services that may only be available from one vendor. For example, the largest reportable sole source procurement was funded by a federal Department of Energy grant and was for subsea geophysical surveying for a proposed offshore wind project, for which only vendor (Alpine Ocean Seismic Survey, Inc.) had the specialized expertise. In another instance, University of Maine researchers needed to replace fish monitoring tags and only one vendor could provide new replacement tags and data receivers that would be compatible with existing units.

Since procurement has become a consolidated function housed within the System office rather than independent at each campus, the University has saved tuition and taxpayers millions of dollars while considerably reducing its use of sole source waivers. The total value of true sole source procurements has decreased by 21 percent over the five years since this State reporting requirement was enacted, from \$7.96 million in FY14 to \$6.27 million for the current reporting period (FY18).

The FY18 procurements exceeding \$10,000 for which the competitive process was waived are listed in this report in the following categories below.

- Sole Source Purchases
- Goods and/or Services Specifically Named In Grant Awards

- Emergency Purchases
- Library Books or Periodicals

Additionally, as required by 5 M.R.S.A., Section 12023, this report includes a list of all FY18 contributions greater than \$1,000 made by the System or its seven universities. In most cases, the contributions were membership dues for accreditation or affiliate associations like the New England Association of Schools & Colleges, civic organizations and athletic conferences.

As part of a commitment to public accountability and transparency, since last reporting to the Legislature under this Chapter, the UMS has updated the process by which it compiles this report to include a brief description of sole source, emergency and named-in-grant procurements as well as all contributions above \$1,000. Our internal process additionally now includes a review of this report by the Board of Trustees before submission to the Legislature.

FY18 WAIVERED PROCUREMENTS OVER \$10,000

SOLE SOURCE PURCHASES

Sole source purchases are made when goods or services, because of unique characteristics or other reasons, are available from only one source. In cases where an alternate supplier for a similar product or service cannot be identified, the requestor must document that a good faith effort has been made in seeking other sources. A listing of the unique technical specifications required of the product and the companies that were contacted in the search for alternate sources is necessary. Sole source justification cannot be based on quality, price, mere preference or urgency created by inadequate planning or untimely action by the requestor, such as the imminent expiration of a contract that could have been foreseen.

Supplier Name	Amount	Campus	Summary Notes
ALPINE OCEAN SEISMIC SURVEY INC	\$620,759	UM	Grant funded subsea geophysical survey services for potential siting of resources related to the federally grant funded offshore windmill project. Although several firms were vetted, only this one provider possessed the combination of resources and expertise needed.
UNIV OF SOUTHERN MAINE FNDTN	\$420,514	UMS	Externally grant funded contract to provide Interim CEO services for the UMS Maine Center for Graduate Professional Studies while a search was conducted for a permanent CEO was hired.
PRACTICAL APPLICATIONS INC	\$181,214	UM	Federal grant funded chemical effluent treatment system for the Aquatic Animal Health Lab which provides research in support of Maine's aquaculture and fisheries industries.

Supplier Name	Amount	Campus	Summary Notes
CIMETRICS INC	\$150,510	UM	Contract for energy efficiency monitoring and reporting services for building management systems at UM. Cimetrics is long-time provider and this contract extends the existing services and expands to additional facilities. At the end of the 3 year contract, the University will assess the competitive market prior to renewal.
VEMCO	\$102,000	UM	Grant funded purchase of specialized acoustic tags for fish tracking to match existing telemetry receiver equipment. Other vendors were considered but new/old receivers and fish tags would not be compatible.
ALICE JAMES BOOKS	\$98,281	UMF	This is a grant provided by UMF to Alice James Books (AJB). AJB operates a non-profit press on campus (Poetry press) and provides 14 student internships/apprenticeships, especially for Creative Writing majors.
COHERENT INC	\$94,300	UM	Purchase of specialized laser system as part of bio-molecular research lab resources. Supports Maine-based biomedical research.
STEINWAY & SONS	\$92,300	UM	Grant funded like-for-like replacement of the Steinway D Grand Piano for the Minsky Recital Hall to maintain instrument characteristics that best match the hall's acoustic profile.
UNIV OF CONNECTICUT	\$92,036	UM	Grant funded charter of R/V Connecticut, the only heavy lift research vessel available in the northeast with the capability to service the NERACOOS buoy network. These buoys support research for multiple industries in Maine including tourism, shipping, aquaculture and fisheries.
UNIV OF CONNECTICUT	\$92,036	UM	Grant funded additional charter of R/V Connecticut, the only heavy lift research vessel available in the northeast with the capability to service the NERACOOS buoy network. These buoys support research for multiple industries in Maine including tourism, shipping, aquaculture, and fisheries.

Supplier Name	Amount	Campus	Summary Notes
IMPLEMENTATION GRP	\$92,000	UM	Maine Economic Improvement Fund (MEIF) funded consulting services to assist the University in securing more National Science Foundation research grants through the Federal EPSCoR program. EPSCoR seeks to assist states with lesser amounts of Research and Development funding.
LYNX PRODUCT GRP LLC	\$91,500	UM	Like-for-like replacement of cage and bottle washer for the University's Small Animal Facility.
TA INSTRUMENTS WATERS LLC	\$79,849	UM	MEIF funded like-for-like replacement of calorimeter system for the University's environmental engineering lab for ongoing research - exact replacement needed to maintain research integrity.
STRATEGIC MARKETING INNOVATIONS INC	\$77,000	UM	Continuation of existing education outreach to federal executive branch agencies in support of UM's research programs.
GENERAL SCIENTIFIC CORP	\$73,200	UMA	Purchase of magnifying loupes for dental hygiene students with technical specifications required by the dental hygiene academic program.
WET LABS INC	\$61,179	UM	Grant funded underwater spectral scanning equipment for which there is only one source that meets technical research requirements for measuring hyperspectral absorption and attenuation.
LI COR BIOSCIENCES	\$60,347	UM	MEIF funded purchase of photosynthesis system in support of biochemical research supporting several Maine crops including wild blueberries.
CENGAGE LEARNING	\$60,000	UMA	Online non-degree career training service for which pass-through charges to students result in net revenue to the University.

Supplier Name	Amount	Campus	Summary Notes
MERRIMAC INDUSTRIAL SALES	\$59,789	UM	Purchase of LED lights to replace less efficient Metal Halide lights for the Mahaney Dome at UM. Only manufacturer found with LED lights that have separate driver components and therefore can be supported on existing overhead lighting stanchions without costly modifications to reinforce the dome.
EXPERIAN	\$59,150	USM	Grant funded credit reporting services for Financial Distress research study, of three national reporting agencies, only Experian was able to meet the specifications for this study.
POWER ENGINEERS	\$56,900	UM	Grant funded community outreach services related to the floating offshore wind power research project.
TRAVEL INNOVATIONS	\$54,690	UM	Purchase of turnkey academic travel services for group travel to Peru, including ground transportation, housing, and on-the-ground academic tours.
PRETI FLAHERTY BELIVEAU & PACHIOS LLP	\$54,375	UM	Grant funded continuation of legal services related to Power Purchase Agreements related to the offshore floating wind energy project.
GOODWILL INDUSTRIES OF NNE	\$53,187	USM	MEIF and external grant funded program delivery and payroll administration services for USM students participating in the Gateway to Opportunity program - continuation of a program initiated by the Gorman foundation which provides work-based learning for Portland area low income youth.
POLAR ELECTRO INC	\$52,554	UM	Grant funded expansion of athletic training health monitoring system to all remaining UM Athletic teams - matching existing system.
PROFESSIONAL SPORTS PUBLICATIONS	\$51,500	UM	Targeted marketing for the UM Flagship Match recruiting initiative for publication in specific Major League Baseball markets with sole publisher of team yearbooks.

Supplier Name	Amount	Campus	Summary Notes
UNIV OF ARIZONA	\$50,816	USM	Grant funded supplier is developer of software supporting bio sciences research - contract is to complete improvements to that software and is the final phase of this 5+ year project.
AQUANEERING INC	\$50,760	UM	Federal grant funded filtration system for the Aquatic Animal Health Lab which provides research in support of Maine's aquaculture and fisheries industries.
DYNAMIC AVIATION GRP INC	\$50,000	UM	MEIF funded purchase of airborne multi-sensor scanner to measure health of Maine forests in support of the Maine forest products industry.
JAMES LYONS	\$50,000	UM	Specialized services related to boilers at the University's steam plant for which the supplier has unique knowledge and capabilities.
VENDEAN VAFIADES	\$49,000	UMS	Specialized consulting services related to the implementation and achievement of strategic goals set for the 2018-2019-time period. Provider is uniquely qualified because of knowledge, experience, and working relationships with the University and State leadership.
SEA BIRD ELECTRONICS INC	\$46,503	UM	Grant funded maintenance and upgrade of buoys and related equipment from the original manufacturer.
DNV GL	\$46,454	UM	Grant funded purchase of windmill blade design software from only provider whose software is compatible with existing research and infrastructure.
PHOENIX FEEDS & NUTRITION INC	\$45,800	UM	Grant funded purchase of specially designed food for Witter Farm cows - supplier the only available who could provide the needed feed mix and meet delivery specifications.

Supplier Name	Amount	Campus	Summary Notes
UNIV OF CONNECTICUT	\$45,490	UM	Additional grant funded charter of R/V Connecticut, the only heavy lift research vessel available in the northeast with the capability to service the NERACOOS buoy network. These buoys support research for multiple industries in Maine including tourism, shipping, aquaculture, and fisheries.
BANGOR TRUCK EQUIP	\$45,000	UM	Contract for repair services for snow plowing equipment, including emergency repairs from only supplier in close proximity to the UM campus with the ability to respond during snow emergency events.
PUBLIC ARCHAEOLOGY LAB INC	\$43,499	UM	Grant funded consulting services with the only firm currently capable of assisting in the permitting process for offshore wind energy projects, specifically as relates to Section 106 of the National Historic Preservation Act.
STANTEC CONSULTING SVCS INC	\$42,900	UM	Grant funded consulting services for DEP permitting of offshore wind energy project with only local resource possessing the knowledge and direct experience with wind energy permitting.
CITY OF BANGOR	\$42,815	UM	Charges related to hosting UMaine 2018 Student Symposium Conference at Cross Insurance Center- only local location that could accommodate attendee count.
LM AIR TECHNOLOGY INC	\$41,530	UM	Purchase of specialized fume hood and related equipment for the Climate Change Institute lab. Nature of research precludes use of metal equipment, reducing the options to this one supplier.
BIO TEK INSTRUMENTS INC	\$40,024	UM	Grant funded like-for-like replacement of biological sample plate reader to maintain data integrity for multi-year research projects.

Supplier Name	Amount	Campus	Summary Notes
EXACTITUDE INC	\$40,000	UM	UM has installed proprietary electronic handicap door actuators across campus. There is no other source for purchase, installation and repair of this product.
JOHNSON CONTROLS	\$39,980	UM	Upgrade of room sensors and control system in existing proprietary building environmental control system.
INSTRON A DIV OF IL TOOL WORKS INC	\$39,458	UM	MEIF funded calibration and maintenance of existing proprietary scientific test equipment. Equipment is utilized in support of the University's research in the use and production of composite- based materials.
WINTHROP INTELLIGENCE	\$37,800	UM	Proprietary on-line database to help college athletics leaders increase revenue and save money. Provides access to how other Division 1 colleges handle internal finances and negotiate deals and partnerships with third party suppliers. Data not available from any other source. Partially grant funded.
APA LLC	\$36,995	UM	Purchase of specialized air exhaust system components and related equipment for the Climate Change Institute lab. Nature of research precludes use of metal equipment, reducing the options to this one supplier.
GRONK FITNESS EQUIP	\$35,435	UM	Replacement of worn exercise equipment to match existing equipment that was competitively bid in 2007 - replacement with same for same equipment is essential for user experience and support & maintenance continuity.
CLEAR CHANNEL AIRPORTS	\$35,220	UM	Advertising located at the Bangor Airport (BGR) as part of UM's broader marketing strategy. Since Clear Channel Airports has an exclusive contract with BGR, the University has no other options for contracting for this targeted advertising and location.

Supplier Name	Amount	Campus	Summary Notes
RAMSEY SOLUTIONS	\$35,000	UM	Contract for turnkey co-branded K-12 school financial literacy education program to assist Maine K-12 students in building their financial literacy. Provider is only one identified that supports the co-branded approach.
INSTRON A DIV OF IL TOOL WORKS INC	\$34,995	UM	Grant funded purchase of like-for-like replacement equipment for Advanced Composites Center's testing lab. Purchase integrates with equipment already in place used by trained and experienced researchers and avoids incompatibilities with existing equipment.
ORBETRON LLC	\$34,306	UM	Upgrade of existing proprietary wood extrusion system used in the composites lab - supporting research to expand Maine's composites manufacturing industry.
COBSCOOK CMNTY LEARNING CENTER	\$34,251	UM	Lodging and food for students and faculty for a two week field-based course in Wildlife Ecology – most proximate (least driving time possible) to Moosehorn National Wildlife Refuge where course takes place.
BIO RAD LAB INC	\$32,186	UM	Grant funded purchase of thermocycler for conducting DNA research for the Cooperative Extension Diagnostic & Research Lab, supporting Maine agriculture and fisheries - specific equipment must match existing equipment used in ongoing research.
A-VIBE	\$32,000	UM	Grant funded contract for continued maintenance of the Inter-Chem-Net website which allows collaboration between University and K12 chemistry students as well as collaborative sharing of lab diagnostic equipment across the Inter-Chem-Net user population.
BRIDGET HARR	\$31,800	USM	Grant funded consultant to prepare report to US Congress on the Violence Against Women Act/Measuring Effectiveness Initiative - retains previously contracted consultant to maintain continuity.

Supplier Name	Amount	Campus	Summary Notes
COLDTUB	\$29,900	UM	Purchase of a second 10-12-person capacity hydrotherapy cold tub for athletic training that matches existing equipment and maintains continuity.
EXPLORANCE INC	\$29,200	UM	Grant funded course evaluation system that allows administering of surveys in online and paper form as well as integrates in the PeopleSoft student information system - both capabilities are unique to this supplier.
SPECTRUM REACH	\$29,000	UMA	Targeted marketing advertising purchase for cable TV ad time for selected cable networks promoting UMA.
COY LAB PRODUCTS INC	\$28,776	UM	Federal grant funded purchase of an anaerobic glove box for research into an understanding of how microbes that occur in the sediment under the Gulf of Maine process nitrogen in the water. This research supports efforts to find ways to deal with the man-made increase of nitrogen levels in sea water off the Maine coast.
AQUA DIVING ACADEMY	\$28,000	UM	Maintenance contract for UM scuba diving equipment - supplier is the only authorized service provider in Maine for the brand of equipment in use by the University.
SCREENVISION DIRECT	\$27,905	UMF	Targeted marketing displayed at movie theaters in the targeted geographic area, Screenvision manages advertising sales for these specific theaters.
INSTRON A DIV OF IL TOOL WORKS INC	\$27,665	UM	Grant funded replacement of the data acquisition system component in an existing proprietary testing equipment system in use at the University's composite material research center.
BERNSTEIN SHUR SAWYER & NELSON PA	\$27,001	USM	External legal services related to an HR matter for which continuity of services was determined to be essential.

Supplier Name	Amount	Campus	Summary Notes
CHRISTOPHER J HALLET	\$27,000	UMPI	Grant funded payment for executive director services for the Northern Maine Educational Collaborative for which the University serves as fiscal agent.
BOSTON HARBOR CRUISES	\$27,000	UM	Only vessel available in the time needed with the capacity to recover and redeploy ocean observing buoys.
LOTEK WIRELESS	\$25,445	UM	Grant funded equipment for fish research. Radio telemetry tags and receivers for fish tagging. Tags, transmitters and receivers are designed to work together. This purchase is compatible with previous purchased equipment and tag inventory.
HANNAFORD	\$25,000	UM	Continued purchase of food for Darling Marine Center for which the annual volume does not meet the required order for the University's contracted wholesaler. Two other providers were considered, however were not able to accommodate those with special dietary need.
SIDE X SIDE INC	\$25,000	USM	Contract to provide summer art institute for USM, providing professional development for Maine K12 teachers, thought other providers were considered, none could provide the same turnkey solution that fully meets the Institute's objectives.
HU FRIEDY MFG CO LLC	\$24,679	UMA	Instrument kits for dental hygiene students with technical specifications required by the dental hygiene academic program. Reviewed product from two other suppliers and found they did not have required features needed for students.
TOBII PRO	\$24,530	USM	Purchase of a multiple eye tracking system in support of research lab in the USM Linguistics department for which this is the only device that can be connected to several different computer systems as required by the researcher.
GRAY TELEVISION GRP INC	\$24,480	UMA	Targeted spot advertising for UMA Bangor in specifically identified timeslots and programs focused on target market segment.

Supplier Name	Amount	Campus	Summary Notes
CAPE ELEUTHERA INST	\$23,900	UM	Purchase of turnkey study abroad services at the Cape Eleuthera Institute in the Bahamas as part of field-based delivery of BIO 387 class on the effects of Climate Change. Cape Eleuthera provides a unique experience that directly matches the objective of the class.
YSI INC	\$23,685	UM	Grant funded instrumentation for measuring water quality in the Gulf of Maine, deployed on ocean buoys. Research supports the Maine aquaculture industry and is funded through MEIF. In order to maintain long term data integrity, sensors need to match existing sensors in use over the last three years.
TIMBERLINE INSTRUMENTS	\$23,535	UM	Purchase of ammonia analyzer for research conducted by the School of Marine Sciences. Only analyzer that can be used in the field as required.
FONDRIEST ENVIRONMENTAL INC	\$23,484	UM	MEIF funded purchase of underwater test equipment deployment system to support UM Climate Change studies into the effect of climate change on Maine aquaculture and fisheries.
TIME WARNER CABLE MEDIA LLC	\$23,120	UMA	Targeted spot advertising for UMA in specifically identified timeslots and cable programs focused on target market segment in Portland metro market.
HONEYWELL INTRNTL	\$23,058	UM	Upgrade and expansion of proprietary energy management system.

Supplier Name	Amount	Campus	Summary Notes
CAMPBELL SCIENTIFIC INC	\$22,878	UM	Grant funded purchase of data loggers to match and replace existing equipment deployed in ocean buoys as part of the Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) which spans coastal waters from the Canadian Maritime Provinces to the New York Bight. NERACOOS provides weather and ocean data to fishers and commercial shippers determining if conditions are safe for passage and to emergency managers issuing storm warnings. Matching existing components is essential to ensure operational efficiency and data integrity.
NOLDUS INFORMATION TECHNOLOGY INC	\$22,675	UM	MEIF funded purchase of system to monitor Zebrafish and their larval behavior as part of broader genetics biomedical research initiatives.
CROSS INSURANCE ARENA	\$22,600	USM	Rental fees for use of the Cross Arena in Portland for the May 2018 USM Commencement ceremony. The Cross Arena is the only enclosed venue proximate to USM that can accommodate the entire USM graduating class, guests, faculty and staff (over 6,000 participants).
TREMONTI CONSULTING LLC	\$22,500	UM	Grant funded continued work by commercialization and innovation consultant with existing relationships with potential UMaine research partners and research foundations.
PERRY VIDEX LLC	\$22,200	UM	Grant funded purchase of a used rotary kiln in support of research into use of wood fiber-based fuel distillation as an alternative to oil and other fossil fuels.
SEA BIRD ELECTRONICS INC	\$22,133	UM	Grant funded purchase of buoy-based ocean sensors deployed as part of National Weather Service monitoring and prediction system - sensors must match existing deployed equipment to ensure compatibility with existing systems.

Supplier Name	Amount	Campus	Summary Notes
GEOMAR HELMHOLTZ-CENTRE OF OCEAN RESEARC	\$21,793	UM	Grant funded lab services to date calcareous algae samples in support of marine research into ocean acidification for which this is the only lab worldwide that provides such service. The research impacts ocean-based industries in Maine and beyond.
QUANTUM DESIGN INC	\$21,788	UM	MEIF funded maintenance contract with original equipment manufacturer for existing Magnetic Property Measurement System at the UM Surface Science lab.
SEA BIRD ELECTRONICS INC	\$21,615	UM	MEIF funded like for like replacement of ocean buoy sensors that are part of the SEANET program that provides real time and archived data that supports the Maine fishing and aquaculture industries.
KATAHDIN AREA COUNCIL BSA	\$21,606	UM	Contracted use of Camp Roosevelt for two required Forestry Field courses as part of the University's Forest Management program, training future professional foresters. The facility is the only one of its kind within a reasonable commute of the Orono campus that has forest holdings of sufficient size to allow safe separation of chain saws and large forestry equipment from other users of the facility as well as abutting land owners.
TRANE	\$21,498	UM	Air Conditioning Unit Evaporator Coil replacement (same-for-same) for existing air conditioning unit that failed. Cost prohibitive alternative would be outright replacement of entire system.
INERT CORP	\$20,845	UM	Purchase and installation of a solvent purification system with unique properties as part of the overall renovation of the UM Engineering Science Research Building at UM which supports multiple research projects and disciplines.
DNV GL	\$20,741	UM	Grant funded training on proprietary wind turbine blade software used in research related to wind power generation.

Supplier Name	Amount	Campus	Summary Notes
SARGENT CORP	\$20,420	UM	Contract for fabrication and repair services for snow plow blades, including emergency repairs from only supplier in close proximity to the UM campus with the ability to respond during snow emergency events.
KB PORT LLC	\$20,136	UM	Upgrade of proprietary systems and manikins in the UM Nursing high fidelity simulation lab. Original installation was the result of a competitively bid capital improvement project. This lab supports the University Nursing program's primary mission of meeting Maine's growing need for well-educated and prepared nurses.
REGENT PUBLISHING SVCS LTD	\$20,040	UM	Printing order for the third addition of the Historical Atlas of Maine with the publisher who printed the first and second addition for the University.
BZDELL SPORT PSYCHOLOGY LLC	\$20,000	UM	Sport Psychology services for the UM Men's Ice Hockey program. The only provider with a practice that specializes on the specific unique needs of collegiate ice hockey programs.
BERNSTEIN SHUR SAWYER & NELSON PA	\$19,303	USM	Additional outside legal services related to an HR matter for which continuity of services was determined to be essential.
SYSTEM SPECIALTIES INC	\$19,014	UM	Like-for-like replacement of industrial grade/scale hot water heating system for which campus has several similar installations and an extensive inventory of spare parts.
BERNSTEIN SHUR SAWYER & NELSON PA	\$18,790	USM	Additional outside legal services related to an HR matter for which continuity of services was determined to be essential.
NATIONAL CINEMEDIA LLC	\$18,450	UMF	Targeted marketing displayed at movie theaters in the targeted geographic area, supplier manages advertising sales for these specific theaters.

Supplier Name	Amount	Campus	Summary Notes
AALEN UNIV OF APPLIED SCIENCES	\$18,440	UM	Turnkey study abroad program including lectures and company visits as part of for-credit travel course encompassing business and engineering. Note that UM has an academic relationship with Aalen and that fees paid to Aalen are pass- through from fees collected from the students.
CAMP CEDAR INC	\$18,300	USM	Lodging and food for students and faculty for a field-based course in tourism for which coursework has been designed around the unique characteristics of the facility. A competitive bid for food and lodging for next year is in development.
SMARTERSIGN INC	\$18,200	UM	Addition of hardware and software licenses for expansion of use of exiting digital signage platform in use on the UM campus.
BERNSTEIN SHUR SAWYER & NELSON PA	\$18,050	USM	Additional outside legal services related to an HR matter for which continuity of services was determined to be essential.
NELSON ANALYTICAL LLC	\$18,000	UM	Grant funded service provider to conduct lab testing services for water samples collected under the Maine Healthy Beaches grant program in York County. Volunteers and staff collect water samples and take them to the lab (travel reimbursement is not included in the grant) so close physical proximity is a requirement for the program.
WINDY KNOLL FARM	\$18,000	UM	Grant funded corn silage (feed for dairy cows) for Witter Farm at UM - only farm within area with the capacity to produce the quantity of silage needed.
GREENWAY EQUIP SALES	\$18,000	UM	Warranty and out of warranty repair and maintenance of John Deere equipment - John Deere has protected territories for its dealers and this is the only local dealer.

Supplier Name	Amount	Campus	Summary Notes
MTS SYSTEMS CORP	\$17,842	UM	MEIF funded contract for calibration services for existing proprietary testing equipment. Calibration is required to maintain testing accreditation. Previous attempts to use third party calibration services has led to increased cost and damage to equipment. Equipment supports the University's research in composite materials.
FORCE GLOBAL INC	\$17,821	UM	Specialized equipment ordered as part of a pass- through for commercialization services performed for a Maine company to refine manufacturing processes for which the University is paid to develop the manufacturing processes by the business (a Maine-based container manufacturer).
SPECTRO ANALYTICAL INSTRUMENTS	\$17,281	USM	Replacement parts and service for existing desktop X-ray Fluorescence Analyzer. Repair of existing system represents a substantial savings over purchase of a new unit (~\$85,000). Proprietary system and components necessitates purchase directly from manufacturer.
BERNSTEIN SHUR SAWYER & NELSON PA	\$17,258	USM	Additional outside legal services related to an HR matter for which continuity of services was determined to be essential.
PINE TREE FOOD EQUIP INC	\$17,000	UM	Warranty and out of warranty repair and maintenance of Rational and Caddy branded food service equipment deployed in dining halls - both have protected territories for their dealers and this is the only local dealer.
BERNSTEIN SHUR SAWYER & NELSON PA	\$16,715	USM	Additional outside legal services related to an HR matter for which continuity of services was determined to be essential.
GLUU INC	\$16,575	UMS	Maintenance and support services for existing IT identity management platform that allows users to sign into multiple required information systems using one common sign on and authentication platform (single sign on).

Supplier Name	Amount	Campus	Summary Notes
JOHNSON CONTROLS	\$16,568	UM	Maintenance services for existing Johnson building control systems - proprietary system for which only manufacturer can perform maintenance.
CAPPEX COM	\$16,500	USM	Reorder of targeted mailing list for potential students for which the supplier has proprietary content.
HEAT EXCHANGE & TRANSFER INC	\$15,720	UM	MEIF funded purchase of a heat oil transfer system for forest bio-products research for which no other supplier could meet the high temperature requirement for the research. Research supports Maine forest products industries.
ELECTRON OPTICS SVC	\$15,600	UM	Grant funded upgrade to existing X-ray Scanning Electron Microscope system. Alternatives investigated all would require replacing entire microscope system at considerable additional (and unnecessary cost).
GERMANN INSTRUMENTS INC	\$15,530	UM	Grant funded purchase and installation of instrumentation to measure shrinkage in Portland cement pastes and mortars as part of ongoing research to expand Maine's composites-based industries.
PINE TREE FOOD EQUIP INC	\$15,500	UM	Warranty and out of warranty repair and maintenance of Rational and Caddy branded food service equipment deployed in on-campus event center - both have protected territories for their dealers and this is the only local dealer.
IMPROPER BOSTONIAN MAGAZINE	\$15,300	UM	Targeted marketing for the UM Flagship Match recruiting initiative for publication in specific target markets with sole publisher of publication focused on that market.
CATAMOUNT COMMERCIAL CONSTRUCTION	\$15,101	UM	Purchase of residency hall replacement bathroom vanity countertops to match exactly existing countertops including size and plumbing locations.

Supplier Name	Amount	Campus	Summary Notes
COMMUNITY CARE	\$15,000	USM	Grant funded implementation of Life Enrichment Advancing People (LEAP) program in Bangor area to support people with developmental, cognitive, and intellectual disabilities. Provider was selected after agency named in grant could not continue - selection was made in collaboration with and approved by the grantor.
QIAGEN INC	\$15,000	UM	Grant funded purchase of tissue analyzer to match existing deployed equipment thus maintaining research data integrity and results.
UPCEA	\$14,900	UM	Consulting services in the form of online program environmental scans, feasibility studies, and market studies performed by the consulting division of the University Professional and Continuing Education Association (UPCEA) of which the University is a member. This particular portfolio of services is only provided by UPCEA to its members and represents specific services that cannot otherwise be obtained. The services will support the University's new UMaineGOLD - Graduate Online Degrees program.
NRCCUA	\$14,657	USM	Purchase of high school student data for marketing and recruitment for USM - campus purchases from both known suppliers of this type of data.
MECHANICAL SVCS INC	\$14,651	UM	Installation and upgrade of HVAC actuators in proprietary system installed in the Flowing Seawater Lab - research supports multiple Maine- based ocean-based industries.
LYCEUM AGENCY	\$14,500	USM	Grant funded contract for speaker Henrietta Lacks, who delivered keynote at Convocation.
JOHNSON CONTROLS	\$14,500	UM	Maintenance services for existing Johnson building control systems - proprietary system for which only manufacturer can perform maintenance.

Supplier Name	Amount	Campus	Summary Notes
NORTHEAST LAB SVCS INC	\$14,500	UM	Continued contract for sampling and testing services for a monitored well in a legacy hazardous waste facility for which continuity is essential.
WATERVIEW CONSULTING	\$14,500	UM	MEIF funded consulting services in support of water sustainability programs through the George Mitchell Center - other firms were evaluated and it was determined that this one firm could provide all services needed under one umbrella.
KATHRIN HAVRILLA	\$14,495	USM	Copywriting services related to active USM Marketing initiatives for which consistency is essential, thus retaining as sole source provider used in last fiscal year.
PLEASANT RIVER LUMBER CO	\$14,477	UM	Purchase of green wood sawdust and kiln dried wood shavings for the Witter Farm from only supplier within economically feasible distance that can provide the volume of product needed.
BERNSTEIN SHUR SAWYER & NELSON PA	\$14,383	USM	Additional outside legal services related to an HR matter for which continuity of services was determined to be essential.
APPLIED AERONAUTICS LLC	\$14,325	UMA	Purchase of unmanned aircraft systems for which no other supplier could be located that meets the operational requirements of the UMA academic Aviation program.
UNIV OF DELAWARE	\$14,250	UMS	Participation in a national study of instructional costs and productivity among and across higher education institutions in the US - participants will share proprietary comparison data and best practices across the peer group.
CINEMANEXT SPAIN	\$14,160	UM	Purchase of a high intensity sunlight simulation instrument used in Mechanical Engineering research for which the only alternatives lacked required intensity or were substantially larger in scale than required.

Supplier Name	Amount	Campus	Summary Notes
NORTEK USA LLC	\$13,845	UM	MEIF funded purchase of acoustic doppler generator for which other options do not transmit at the needed frequency for the research - ocean- based research supporting multiple ocean-based industries.
WRIGHTS MEDIA LLC	\$13,800	UMA Purchase of rights to use online badge fo News Best Online Programs 2018" for ma purposes - supplier has exclusive right to	
POINT LOOKOUT	\$13,800	UM Grant funded use of conference facilities f which a central geographic location was no to keep participant travel within the allowat diem and for which there are no other vials options in the summer when the conferen- take place.	
JOHNSON CONTROLS	\$13,701	UM	Maintenance services and upgrades for existing Johnson building control systems - proprietary system for which only manufacturer can perform maintenance.
C MICHAEL SANDBERG	\$13,675	USM	Grant funded contract with training facilitator for an Early Child Care Education for which maintaining continuity of facilitation is essential across multiple years of the grant. Note that training takes place at multiple sites across Maine.
HORIZON SOLUTIONS LLC	\$13,517	UM	Specialized equipment ordered as part of a pass- through for commercialization services performed for a Maine company to refine manufacturing processes for which the University is paid to develop the manufacturing processes by the business (a Maine-based manufacturer).
TREASURER STATE OF MAINE	\$13,400	UM	Grant funded purchase of Light Detection and Ranging data in partnership with the Maine GeoLibrary at the State of Maine to reduce costs and maximize use of grant funds. The data will be retained and has applications in forestry, engineering and other research projects on campus, further reducing costs. Grant funded.

Supplier Name	Amount	Campus	Summary Notes
CLEAR CHANNEL AIRPORTS	\$13,306	UM	Advertising located at the Portland Jetport (PWM) as part of UM's broader marketing strategy. Since Clear Channel Airports has an exclusive contract with PWM, the University has no other options for contracting for targeted advertising at location.
SCHOODIC EDUC & RESEARCH CTR INST	\$13,030	UM	UM School of Biology and Ecology hosts a freshman orientation event at the Schoodic Education and Research Center - the Center provides content and resources that support the academic program. Rather than house students elsewhere and incur costs and lose time to transport them, students are housed and fed at the Center as well.
CITY OF AUGUSTA	\$13,000	USM	Rental of the Augusta Civic Center for the PBIS Conference which provides professional development for K12 special needs teachers - only location centrally located that could accommodate the event.
SWANK MOTION PICTURES INC	\$12,682	UM Purchase of licensing rights for projection of movies on campus for student entertainmen Studios have granted exclusive license distribution to this supplier.	
GOOD GROUP DECISIONS	\$12,663	USM MEIF funded facilitation of strategic plannin the Muskie Center at USM with facilitator w provided similar services and for which con is the overriding factor.	
BIGELOW LAB FOR OCEAN SCIENCE	\$12,500	UM	Grant funded use of temperature controlled room as part of research into ocean acidification and impact on lobster larval survival - Bigelow Lab is a collaborator and has the needed facility onsite, thus eliminating the need to transport samples offsite.
SWANK MOTION PICTURES INC	\$12,435	UM	Purchase of licensing rights for projection of movies on campus for student entertainment. Studios have granted exclusive license distribution to this supplier.

Supplier Name	Amount	Campus	Summary Notes
CCM HOCKEY US INC	\$12,480	UM	Purchase of hockey sticks for the UM men's ice hockey program. Players have specific manufacturer preference and these sticks are custom made to match each player's unique individual needs.
YSI INC	\$12,324	UM	Instrumentation for measuring water current, speed, direction, and temperature. These instruments will be placed on existing on ocean current monitoring buoys. No other supplier interfaces with existing buoys. Grant funded.
PERRY VIDEX LLC	\$12,250	UM	Grant funded rental of a used rotary kiln (which was subsequently purchased) in support of research into use of wood fiber-based fuel distillation as an alternative to oil and other fossil fuels.
ADVANCED TELEMETRY SYSTS	\$12,000	UM	Grant funded replenishment of glue-on transmitters for avian (turkeys) research to match existing receivers and inventory.
PROFESSIONAL SPORTS PUBLICATIONS	\$12,000	UM	Targeted marketing for the UM Flagship Match recruiting initiative for publication in specific National Football League markets with sole publisher of team yearbooks.
YSI INC	\$11,987	USM	Instrumentation for measuring water temperature, salinity, dissolved oxygen, clarity, and chlorophyll fluorescence. These instruments integrate with existing software support systems and hardware. Research supported by this purchase is focused on marine life ecosystems near shore and its role in establishing and maintaining sustainable marine fisheries.
SHIMADZU SCIENTIFIC INSTRUMENTS INC	\$11,978	UM	MEIF funded purchase of spectrophotometer device needed to calibrate water-based sensors utilized as part of ongoing aquaculture and fisheries research - only device found with the level of sensitivity needed to properly calibrate the instruments.

Supplier Name	Amount	Campus	Summary Notes
UNISENSE AS	\$11,976	UM	MEIF funded specialized equipment to measure fine scale chemical micro-profiles in marine sediment cores as part of aquaculture and fisheries research. Only one company provides this specialized equipment required for the success of the research project.
HUMAN SVCS RESEARCH INST	\$11,960	USM Grant funded website modification and maintenance services for the CompareN website (allows consumers to compare I costs in Maine) as required by the collab research partner for this project.	
TRANS WORLD FIBER OPTICS	\$11,938	UMS Essential testing services for ongoing fibe cable network deployments taking place states for a fiber network owned by the U for which consistency in process and rest essential to maintain network integrity ar efficiency.	
CATHERINE BOHLS	\$11,875	USM	Grant funded contract with training facilitator for an Early Child Care Education for which maintaining continuity of facilitation is essential across multiple years of the grant. Note that training takes place at multiple sites across Maine.
NATIONAL INSTRUMENTS CORP	\$11,813	UM	MEIF funded continuation of licensing for software system that has been embedded in testing equipment used in the University's ongoing composites research.
POONAM ARORA	\$11,600	USM	Consulting services in diversity and inclusion from a scholar with specific and distinctive qualifications and experience with Middle Eastern, African, and Muslim populations which were the focus of the project to create a framework for diversity on the USM campuses.
CCM HOCKEY US INC	\$11,410	UM	Purchase of goalie equipment for the UM men's ice hockey program. Players have specific manufacturer preference and this goalie gear is custom made to match each player's unique individual needs.

Supplier Name	Amount	Campus	Summary Notes
NEW DHC INC	\$11,400	UM	Contract for the only available heavy lift barge services in Cobscook Bay area to haul and deploy buoys and 2,000 lb mooring blocks for aquaculture research for the UMaine Sustainable Ecological Aquaculture Network (SEANET) under a National Science Foundation grant. The research supports expanding and sustaining Maine's fresh and saltwater aquaculture industry.
STERIS CORP	\$11,385	UM	Maintenance services for existing proprietary lab equipment used in aquaculture research for which manufacturer is sole provider.
LAWRENCE LIVERMORE NATL LAB	\$11,250	UM MEIF funded radiocarbon analysis of same which researcher and collaborators have u this lab for the duration of the research an continue to do so to ensure data integrity.	
GILMAN ELECTRICAL SUPPLY	\$11,250	UM Purchase of walkway lights for which the University has standardized - manufacture protected sales territory for which this sup designated for UM.	
JODI SOLOMON SPEAKERS BUREAU	\$11,000	D UM Grant funded speaker who is the author of book which is the subject of the speech.	
HAMAMATSU CORP	\$10,683	UM	Purchase of photon detection equipment for which the manufacturer was chosen to ensure data integrity with and among the other research partners. Research supports expansion of viable markets for Maine-based wood fiber.
JOHNSON CONTROLS	\$10,600	UM	Maintenance services for existing Johnson building control systems - proprietary system for which only manufacturer can perform maintenance.
BERNSTEIN SHUR SAWYER & NELSON PA	\$10,458	USM	Additional outside legal services related to an HR matter for which continuity of services was determined to be essential.

Supplier Name	Amount	Campus	Summary Notes
GILMAN ELECTRICAL SUPPLY	\$10,400	UM	Purchase of walkway lights for which the University has standardized - manufacturer has protected sales territory for which this supplier is designated for UM.
LAB AIDS INC	\$10,381	UM Grant funded restocking of consumable in laboratory kits used by students - de reuses kits and restocks rather than bu new kits each semester as a means to costs.	
SUGARLOAF MTN CORP	\$10,205	UMF	Continued use of event facility for cultivation and development of alumni and school guidance counselors to drive enrollment at UMF. Facility has been used for several years previous - this is the first year the cost exceeded the bidding threshold.
AMCOMP	\$10,200	USM Course Materials for Workman's Comp train and professional certification. Materials on available from Amer Assoc of Workers Com Professionals (AMCOMP), which is the certi organization.	
AV TECHNIK LLC	\$10,030	UMA	Continued use of AV service provider for UMA commencement for which providing continuity of service has been essential.
UNIVERSITY INN ACADEMIC STES	\$10,010	UM	Lodging for Research in STEM Education 2018 conference at UM, the only hotel facility within walking distance to the UM campus (a requirement of the conference).

NAMED IN GRANT PURCHASES

Goods and/or services specifically named in grant awards. When these goods and/or services are available from multiple sources the competitive procurement standard applies unless the grant requires, was contingent upon, or was otherwise awarded with the explicit expectation that a specific good or service would be procured to carry out the award.

Supplier Name	Campus	Amount
SYNTIRO	UMF	\$ 1,507,388
ENVIRONETIX TECHNOLOGIES CORPORATION	UM	\$ 750,000

Supplier Name	Campus	Amount
MAINE FOREST PRODUCTS CNCL	UM	\$ 537,900
LEICA MICROSYSTEMS INC	UM	\$ 497,479
COASTAL ENTERPRISES INC	USM	\$ 415,000
US TREASURY	UM	\$ 381,419
COLUMBIA UNIV	UM	\$ 373,924
HILLS INC	UM	\$ 291,762
AGILENT TECHNOLOGIES INC	UM	\$ 291,303
DOWNEAST INSTITUTE	UMM	\$ 250,000
DOWNEAST INSTITUTE	UM	\$ 214,685
BERGERABAM INC	UM	\$ 202,974
CJP HEALTH PA	UMF	\$ 200,521
MT BLUE REGIONAL SCHOOL DISTRICT	UMF	\$ 197,409
OLD DOMINION UNIV RESEARCH FNDTN	UM	\$ 196,161
LIGERO TECHNICAL SVCS LLC	UM	\$ 173,000
TEXAS TECH UNIV	UM	\$ 171,887
PUBLIC CATALYST GRP CORP	USM	\$ 146,420
AVCOG	USM	\$ 144,000
MSAD 44	UMF	\$ 140,961
UNIV OF TEXAS AT EL PASO	UM	\$ 139,648
NEW POWER VENTURES LLC	UM	\$ 126,000
NICANTE INC	USM	\$ 122,500
AOS 96 MACHIAS SCHOOL DEPT	UMF	\$ 116,830
US DEPT OF AGRICULTURE	UM	\$ 116,408
ALPHA ONE	UM	\$ 113,341
MSAD 58	UMF	\$ 111,000
RSU 74	UMF	\$ 107,150
COLLEGE OF THE ATLANTIC	UM	\$ 101,544
UCGIS	UM	\$ 100,203
BIGELOW LAB FOR OCEAN SCIENCE	UM	\$ 95,938
GOODWILL INDUSTRIES OF NNE	USM	\$ 90,482

Supplier Name	Campus	Amount
MSAD 37	UMF	\$ 86,000
UNIV OF OREGON	UM	\$ 83,756
GULF OF MAINE RESEARCH INST	UM	\$ 81,792
UNIV OF NEBRASKA	UM	\$ 80,641
UNIV OF WASHINGTON	UM	\$ 76,264
GENERATION US	USM	\$ 75,000
MSAD 3	UMF	\$ 69,000
RSU 39	UMF	\$ 69,000
RSU 10	UMF	\$ 69,000
RSU 73	UMF	\$ 69,000
RSU 4	UMF	\$ 69,000
NORTHERN MAINE DEVELOPMENT COMMISSION	USM	\$ 66,000
BRIDGET HARR	USM	\$ 63,840
COOS WATERSHED ASSN	UM	\$ 59,347
JILL WARD	USM	\$ 54,167
SHANGHAI OCEAN UNIV	UM	\$ 54,000
STANLEY WHITE ENGINEERING LLC	UM	\$ 52,000
MARIKO CHANG CONSULTING INC	UM	\$ 49,384
HEALTH ECONOMY LLC	UMF	\$ 49,000
BIGELOW LAB FOR OCEAN SCIENCE	UM	\$ 48,024
MSAD 59	UMF	\$ 46,000
MSAD 20	UMF	\$ 46,000
MSAD 70	UMF	\$ 46,000
MAINE INDIAN EDUC	UMF	\$ 46,000
RSU 56	UMF	\$ 46,000
RSU 38	UMF	\$ 46,000
MSAD 27	UMF	\$ 46,000
PREUSSER RESEARCH GRP INC	USM	\$ 46,000
PREUSSER RESEARCH GRP INC	USM	\$ 45,250
UNIV OF CONNECTICUT	UM	\$ 44,330

Supplier Name	Campus	Amount
GOODWILL INDUSTRIES OF NNE	USM	\$ 42,750
UNIV OF NEW HAMPSHIRE SYST	UM	\$ 40,000
GREAT SCHOOLS PARTNERSHIP	USM	\$ 36,128
NEW ENGLAND OCEAN CLUSTER	USM	\$ 35,000
UNIV OF NEW ENGLAND	UM	\$ 33,796
UNIV OF NEW HAMPSHIRE SYST	USM	\$ 31,883
FRIENDS OF CASCO BAY	USM	\$ 30,000
BIGELOW LAB FOR OCEAN SCIENCE	UM	\$ 28,806
SAINT JOSEPHS COLLEGE	UM	\$ 28,200
MAINE ACCESS IMMIGRANT NETWORK	USM	\$ 25,340
MSAD 33	UMF	\$ 25,000
BAILEYVILLE SCHOOL DEPT	UMF	\$ 25,000
RSU 78	UMF	\$ 25,000
TOWN OF JONESPORT SCHOOL DEPT	UMF	\$ 25,000
MSAD 13	UMF	\$ 25,000
MSAD 14	UMF	\$ 25,000
CORNVILLE REGIONAL CHARTER SCHOOL	UMF	\$ 25,000
MAINE ACADEMY OF NATURAL SCIENCES	UMF	\$ 25,000
NEW ENGLAND OCEAN CLUSTER	USM	\$ 25,000
GEI CONSULTANTS INC	USM	\$ 24,000
RESEARCH FNDTN OF CUNY	UM	\$ 22,080
NERACOOS	UM	\$ 21,500
BERGERABAM INC	UM	\$ 21,174
FRIENDS OF CASCO BAY	USM	\$ 20,000
OHIO STATE UNIV	UM	\$ 19,655
REBECCA J STEPHANS	USM	\$ 19,200
HAMMOND LUMBER CO	UM	\$ 18,147
UNIV OF NORTH CAROLINA AT CHAPEL HILL	USM	\$ 18,000
SAGE DATA SECURITY INC	USM	\$ 17,600
AMERICAN STUDENT ASSISTANCE	USM	\$ 16,125

Supplier Name	Campus	Amount
OCEAGE INC	UM	\$ 15,694
DISTELL COM	UM	\$ 15,670
GALLUP INC	USM	\$ 14,985
UNIV OF NEW HAMPSHIRE SYST	UM	\$ 14,909
WOODS HOLE OCEANOGRAPHIC INSTITUTION	UM	\$ 14,896
STORM LOBSTER CO	UM	\$ 13,725
BOWDOIN COLLEGE	UM	\$ 13,707
WEST VIRGINIA UNIV RESEARCH CORP	UM	\$ 13,094
PEER ASSOC INC	UMM	\$ 13,000
PRESUMPSCOT REGIONAL LAND TRUST INC	USM	\$ 12,800
WOODS HOLE OCEANOGRAPHIC INSTITUTION	UM	\$ 12,528
CORNELL UNIV	UM	\$ 11,837
CAMP CAPELLA INC	UM	\$ 11,700
UNITED STATES GEOLOGICAL SURVEY	UM	\$ 11,000
AVCOG	USM	\$ 11,000
LIPPOLD CONSULTING LLC	USM	\$ 11,000
TRICIA MOSHER CONSULTING	USM	\$ 10,800
RUTGERS STATE UNIV OF NEW JERSEY	UM	\$ 10,313

EMERGENCY PURCHASES

These may be made only to meet bona fide emergencies arising from unforeseeable causes. Emergency purchases should be made on the basis of competitive procurement and approved in advance whenever practicable.

Supplier Name	Amount	Campus	Summary Notes
INSIGHT PUBLIC TOR INC	\$ 215,453		Expansion of network backup software system to remediate IT failure risk identified during server consolidation.

Supplier Name	Amount	Campus	Summary Notes
HEADWALL PHOTONICS INC	\$ 125,150	UMFK	Grant funded purchase of a large Unmanned Aerial Vehicle (UAV) equipped with a hyper-spectral imaging camera system to be used primarily to develop high resolution mapping of the Maine woods including plant and soil chemistry as well as the ability to map the overall health of Maine's wooded areas, including fisheries. The UAV system is a collaborative tool providing data available to researchers in the UMS, the Maine Department of Inland Fisheries and Wildlife as well as private industry. Funding was provided through MEIF.
ACIS	\$ 97,370	USM	All-inclusive travel, accommodations, ground transportation, and event scheduling for USM Chamber Singers trip to Vietnam. Although staff executed a competitive process, it did not meet the overall requirements of University policy (e.g. publicly posting bid notice).
JO D SAFFEIR	\$ 93,800	USM	MEIF funded Program Director services for the USM Food Studies Program. Failed national search was held, this contract is to provide continuity of services as the program determines if adequate funding can be found to continue the program (if so a new search will be conducted).
COMEVO INC	\$ 49,500	UMA	Grant funded comprehensive on-line orientation solution for UMA to address decline in enrollment and retention. As campus conducted due diligence, it realized that a more comprehensive solution and approach would yield better results and timing necessitated executing immediately.
WELLSPRING WORLDWIDE INC	\$ 46,400	UM	Grant funded purchase of a software platform for the University's commercialization staff. Need for a more robust system was unanticipated and current system capabilities have been eclipsed by increased commercialization activities and no time is available to conduct a competitive process without negatively impacting current department efforts.
MILLER MARINE SVCS INC	\$ 36,600	UM	Grant funded emergency charter of a seagoing vessel to recover a valuable buoy and attached data systems that had slipped its mooring and was drifting further out to sea. Loss of the buoy would have exceeded \$250,000.
GEOCAMP ICELAND	\$ 31,500	USM	Comprehensive study abroad services for academic trip to Iceland. Insufficient time existed to conduct competitive bidding and meet timeline committed to students. Students pay for the trip and costs pass through.

Supplier Name	Amount	Campus	Summary Notes
JOEL WINCOWSKI	\$ 30,000	UMPI	Consulting services to help increase enrollment and retention at UMPI. Closely prior to the beginning of Fall 2017 semester, enrollment data showed a decline. The campus did not have the time to execute a full search and contracted with former interim VP Enrollment from UM for a short fixed length contract to immediately address the decline.
D STAFFORD & ASSOC	\$ 27,400	USM	As identified in an audit concluded in Aug 2017, USM was at risk for penalties based on its reporting required under the Federal Cleary Act. Consultant was immediately retained to provide actionable steps in order to avoid any financial penalties.
NEARPEER INC	\$ 25,000	UM	Pilot program for social media platform designed to help new students feel connected to each other, thus improving their likelihood of successfully transitioning to higher education. The platform specifically seeks to reduce the numbers of students who fail to return to the University after attending new student orientation. Sufficient time to conduct a competitive process was not available since summer orientation was about to begin, but if pilot is successful a formal competitive process will be conducted for next year.
HOLIDAY INN BY THE BAY	\$ 24,125	USM	Contract with Holiday Inn by the Bay (HIBB) in Portland for the 2018 Research Integrity Symposium, for which attendees were scheduled to attend from across the US and Europe. The event took place in May 2018. A Contract with HIBB was signed by University staff in 2016 for the 2018 event and those staff members are no longer with the University, therefore records cannot be located to determine if a competitive selection process was conducted.
KEITH DANNER	\$ 15,000	USM	The need for a multicultural counselor to assist students was identified at the beginning of the semester, the lack of which has created retention risk. Direct hire of a counselor was considered, but time did not exist to conduct a search.
HAMPTON INN	\$ 14,317	UM	Payment for a block of hotel rooms for a math conference that took place on the UM campus. Employee booked outside of University policy, which was not apparent until after the event, and corrective steps have been taken.

Supplier Name	Amount	Campus	Summary Notes
ALLEN UNIFORM INC	\$ 14,000	USM	Purchase of uniforms for USM Facilities Management. Original purchase order was well below bidding threshold, however unanticipated purchase volume over the course of the year drove over the bidding limit. Contract has since been converted to a competitively bid contract.
ABATEMENT PROFESSIONALS CORP	\$ 13,850	UMS	Asbestos mitigation for asbestos found during data cable installation. Two abatement companies contacted, only this supplier was available. Further delay would have increased cabling project costs.
MASSACHUSETT S INSTITUTE OF TECHNOLOGY	\$ 12,500	USM	Grant funded fees for development of new Game Design curriculum for USM. Although not specifically named in the grant, MIT is a collaborator and was able to provide access to its already deployed curriculum thus reducing time and costs needed to deploy this new curriculum.
INFAB REFRACTORIES INC	\$ 11,575	UMFK	Repair of refractory cement linings on two wood pellet boilers discovered during inspection. With classes starting in a week and therefore needing to re-fire the boilers, most immediately available qualified supplier was selected.
RISING REVOLUTION STUDIO	\$ 11,047	UMS	Fabrication and installation of ADA-related signage on the USM campus for which further lack of signage could result in legal action against the University. Since Facilities Management lacked available resources to address directly, most immediately available qualified contractor was selected.
AAA NORTHERN NEW ENGLAND	\$ 10,720	UM	Airfare for study abroad class in Turkey. Department's attempt to book through normal channel failed and had to move quickly or risk losing the seats. Students pay for the trip and costs pass through.
AAA FIRE EXTINGUISER CO INC	\$ 10,378	USM	Fire extinguisher inspection and replacement services. Original purchase order was well below bidding threshold, however unanticipated purchase volume over the course of the year drove over the bidding limit. Competitively bid contract going into effect for FY19.

IBRARY COLLECTIONS

Purchase of materials for addition to a library collection including costs of books, catalogs, periodicals, audiovisual and electronic media, and other publications. For instance, the first transaction listed with Elsevier is for an extensive collection of online academic journals, books, and other content made available across the University.

Supplier Name	Campus	Amount
ELSEVIER INC	UM	\$ 2,031,216
EBSCO INFO SVCS EBSCO SUBSCRIP SVCS	UM	\$ 145,066
OCLC ONLINE COMPUTER LIBRARY CTR INC	UM	\$ 75,000
MAINE INFONET COLLABORATIVE	UM	\$ 73,612
SPRINGER CUSTOMER SVC CTR LLC	UM	\$ 68,587
CLARIVATE ANALYTICS US LLC	USM	\$ 64,448
OCLC ONLINE COMPUTER LIBRARY CTR INC	USM	\$ 63,000
EBSCO INFO SVCS EBSCO SUBSCRIP SVCS	UM	\$ 58,161
OCLC ONLINE COMPUTER LIBRARY CTR INC	UM	\$ 57,232
PROQUEST LP	UM	\$ 50,928
PROQUEST LP	UM	\$ 49,610
FACTS ON FILE INC	UMFK	\$ 45,645
BERKELEY ELECTRONIC PRESS	UM	\$ 41,864
PROQUEST LP	UM	\$ 41,196
AMAZON COM LLC	UM	\$ 37,000
PROQUEST LP	UM	\$ 34,527
TREASURER STATE OF MAINE	UM	\$ 32,720
PROQUEST LP	UM	\$ 29,112
JSTOR	USM	\$ 27,579
EBSCO INFO SVCS EBSCO SUBSCRIP SVCS	UMFK	\$ 26,617
PROQUEST LP	UM	\$ 26,067
ELSEVIER INC	USM	\$ 25,369
OCLC ONLINE COMPUTER LIBRARY CTR INC	UM	\$ 24,444
INNOVATIVE INTERFACES INC	UM	\$ 23,580
ELSEVIER INC	USM	\$ 22,724
EBSCO INFO SVCS EBSCO SUBSCRIP SVCS	UMM	\$ 21,233
PROQUEST LP	UM	\$ 18,815
WALDO	UM	\$ 18,463
EBSCO INFO SVCS EBSCO SUBSCRIP SVCS	UM	\$ 16,920
JSTOR	UM	\$ 15,318

Supplier Name	Campus	Amount
EBSCO INFO SVCS EBSCO SUBSCRIP SVCS	UMA	\$ 13,567
CENGAGE LEARNING	UM	\$ 12,583
MBS DIRECT LLC	UMM	\$ 12,163
LYRASIS	UM	\$ 11,750
IBISWORLD INC	USM	\$ 11,500

FY18 CONTRIBUTIONS GREATER THAN \$1,000

Payee	Amount	Description
OSHER MAP LIBRARY FOUNDATION	\$1,562,493	The donation of the Osher Map Library holdings to USM included a requirement that the funds held in the USM Cartography Endowment Fund be transferred to the Osher Map Library Foundation
ADVISORY BOARD CO	\$177,500	Annual membership in the Academic Affairs, Student Affairs, Continuing Educ & Business Affairs Forum to the Advisory Board; Annual membership in the Academic Performance Solutions/Academic Resource Benchmarking Forum.
NEW ENGLAND ASSN OF SCHOOLS & COLLEGES	\$109,767	Annual Membership dues for the New England Association of Schools and Colleges for all seven UMS campuses - Higher Education Accreditation Organization.
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	\$76,600	Annual Membership fee for shared Network Operations Center at 300 Bent Street in Cambridge, MA (major Internet connection hub for all New England colleges and universities) for NetworkMaine at the UMS.
AMERICA EAST CONFERENCE	\$70,000	Annual Membership in the America East Athletic Conference for UM; Annual Membership in the America East Academic Consortium.
EDUCATE MAINE	\$52,050	Sponsorship of Educate Maine's Project Login (\$50,000); Sponsorship of Maine Teacher of the Year Gala (\$2,050).
NEW ENGLAND OCEAN CLUSTER	\$50,000	Grant Funded Sponsorship of the New England Ocean Cluster for education opportunities and program development to foster collaborative relationships among marine-focused businesses and entrepreneurs with the aim of generating environmentally and economically sustainable ideas.

Payee	Amount	Description
INTERNET2	\$36,082	Annual Membership fees for the Internet2 (an association of over 500 higher education and research institutes who share a coast to coast high speed dedicated research information network).
HOCKEY EAST	\$35,341	Annual Membership in the Hockey East Athletic Conference for UM.
CAA FOOTBALL	\$30,000	Annual Membership dues for the Colonial Athletic Association for the UM Football program.
AMERICAN ASSN OF STATE COLLEGES & UNIVS	\$29,061	Annual Membership dues for the American Association of State Colleges; Annual Membership in Grants Resource Center.
UNIV OF RHODE ISLAND	\$25,341	Grant Funded Annual Membership dues for the Northeastern Regional Association of State Agricultural Experiment Station Directors operated by University of Rhode Island.
NORTH ATLANTIC CONFERENCE	\$24,600	Annual Membership dues for the North Atlantic (athletic) Conference for UMF and UMPI.
LITTLE EAST CONFERENCE	\$23,000	Annual athletic conference dues for the Little East Conference for USM Athletics.
NEREN INC	\$22,159	Annual Membership dues for the North East Research and Education Network; Fees for Internet network services for Internet2 provided by NEREN for NetworkMaine at UMS.
NC SARA	\$22,000	Annual Membership for the National Council for State Authorization Reciprocity Agreements for all UMS campuses.
BATES COLLEGE	\$21,550	Grant funded Maine Campus Compact Annual Membership dues; AmericCorp VISTA Program cost share contribution.
ASSN OF PUBLIC & LAND GRANT UNIVS	\$21,516	Annual Membership dues for the Association of Public & Land Grant Universities for UM.
MAINE DEVELOPMENT FNDTN	\$21,050	Annual Membership dues for Maine Development Foundation for UMA and UM; Sponsorship of Annual Meeting and Sponsorship of Policy Leaders Academy for UM; Sponsorship of Leadership Maine.
COUNCIL FOR OPPORTUNITY IN EDUCATION	\$20,251	Grant Funded Annual Membership dues for the Council for Opportunity in Education for UMF, UMFK, UMPI, USM.
USCAA	\$20,000	Annual Membership dues for the United States Collegiate Athletic Association for UMFK, UMM, and UMPI Athletics.

Payee	Amount	Description
QUILT INC	\$16,000	Annual Membership dues for Quilt, a national coalition of non-profit U.S. regional research and education networks representing 40 networks across the country, for NetworkMaine at UMS.
AMERICAN ASSN COLLEGES FOR TEACHER EDUC	\$15,576	Annual membership to the American Association of Colleges for Teacher Education for UM and UMF.
AMERICAN ACADEMY OF ARTS AND SCIENCES	\$15,000	Sponsorship of the American Academy of Arts and Sciences for UM funded through a bequest.
MAINE & CO	\$15,000	Grant funded Corporate level sponsorship of Maine & Company for UMS and UM.
MAINE DISCOVERY MUSEUM	\$15,000	Sponsorship of the 2018 Maine Science Festival for UM and UMS.
COUNCIL ON SOCIAL WORK EDUC	\$14,382	Annual Membership dues for the Council on Social Work Education for UM, UMPI, USM.
NACUBO	\$14,025	Annual Membership dues for the National Association of College and University Business Officers.
AMER ASSN OF COLLEGES OF NURSING	\$13,122	Annual Membership in the American Association of Colleges of Nursing for UMFK and USM.
SHEEO	\$11,987	Annual Membership dues for the State Higher Education Executive Officers association for UMS.
CAMPUS COMPACT FOR NH	\$11,832	Grant funded AmeriCorps VISTA Program cost share contribution.
SEA GRANT ASSN	\$11,000	Grant funded membership for the Sea Grant Association.
EDUCAUSE INC	\$10,747	Annual membership dues in EDUCAUSE professional association for IT for all UMS campuses.
NORTHEAST EXTENSION DIRECTORS	\$10,593	Membership and cost share for the operation of the Northeast Extension Directors Association.
COUNCIL ON GOVERNMENTAL RELATIONS	\$10,500	Annual membership dues for the Council on Governmental Relations (association of Research Universities, Medical Schools and Research Institutes).
SECOND NATURE INC	\$10,300	Annual membership dues for the Presidents' Climate Leadership Commitment through Second Nature for UMA, UMF, UMFK, UM, UMPI.
COUNCIL OF GRADUATE SCHOOLS	\$9,931	Annual membership dues for the Council of Graduate Schools for UM and USM.
AACSB INTL	\$9,930	Annual membership dues to the Association to Advance Collegiate Schools of Business.
COUNCIL OF PUBLIC LIBERAL ARTS COLLEGES	\$9,500	Annual membership dues for the Council of Public Liberal Arts Colleges for UMF.

Payee	Amount	Description
BANGOR PUBLISHING CO	\$9,295	Digital Leader level sponsorship and Business Gold level sponsorship with association digital display ads in the Fiddlehead Focus online media outlet in Fort Kent for UMFK.
RSU 22	\$9,100	Annual membership dues for the Regional PREP education network for the UM College of Education.
ASSN OF COLLEGIATE SCHOOLS OF ARCHITECT	\$8,604	Annual membership dues for the Association of Collegiate Schools of Architecture.
AAC & U	\$8,138	Annual membership dues to the Association of American Colleges and Universities.
MCC	\$8,050	Maine Campus Compact membership dues for USM.
NAIA	\$7,800	Annual membership dues for the National Association of Intercollegiate Athletics for UMFK Athletics.
CENTER FOR COMPUTER ASSISTED LEGAL INSTR	\$7,500	Annual membership dues for the Center for Computer- Assisted Legal Instruction.
BANGOR REGION CHAMBER OF COMMERCE	\$7,348	Annual membership dues for the Bangor Region Chamber of Commerce; Sponsorship of the Non-Profit of the Year Award.
CAMPUS COMPACT	\$7,212	Grant funded National Campus Compact membership dues.
AMERICAN COLLEGIATE ATHLETIC ASSN	\$7,000	Annual membership in the American Collegiate Athletic Association for sports teams at UMPI.
ASSOCIATION OF UNIV CTRS ON DISABILITIES	\$6,765	Annual membership dues for the Association of University Centers on Disabilities.
WICHE	\$6,650	Annual membership dues for the Western Interstate Commission for Higher Education for their State Authorization Reciprocity Agreement programs.
COMMON APPLICATION INC	\$6,500	Annual membership dues for the Common Application (allows perspective students to use a common application supported by over 750 institutions).
PORTLAND REGIONAL CHAMBER	\$6,425	Annual membership dues for the Portland Regional Chamber for USM.
ASEE	\$5,966	Annual membership dues for the American Society for Engineering Education.
AMERICAN COUNCIL ON EDUCATION	\$5,825	Annual membership dues for the American Council on Education for USM.
YANKEE SMALL COLLEGE CONFERENCE	\$5,750	Annual membership dues for the Yankee Small College (athletic) Conference for UMA and UMM Athletics.

Payee	Amount	Description
BANGOR AREA STORM WATER GRP	\$5,600	Annual membership in the Bangor Area Storm Water Group for UM and UMA. The group's mission is to use public education and sound science to improve regional water quality through collaborative storm water management in the Greater Bangor Urbanized Areas.
GIRAFFE EVENTS LLC	\$5,450	Grant funded sponsorship of the 2018 New England Made Giftware & Specialty Food Show by the Maine Small Business Development Center at USM.
ASSOCIATION OF ASSISTIVE TECH ACT PRGRMS	\$5,250	Grant funded annual membership dues for the Association of Assistive Technology Act Programs for UMA.
DAMARISCOTTA RIVER ASSN	\$5,000	Grant funded sponsorship of the Maine Coastal Observing Alliance which monitors and seeks to improve water quality in the Damariscotta River estuary.
FOODCORPS INC	\$5,000	Grant funded cost share for FoodCorps Service Member Fellowship.
MAINE COAST FISHERMENS ASSN	\$5,000	Grant funded sponsorship in support of development of the "Discovering how the Midcoast Hunger Prevention Program can access fish from the Portland Fish Exchange" research project for the Maine Sea Grant program at UM.
MASSACHUSETTS HISTORICAL SOCIETY	\$5,000	Grant funded sponsorship of the New England Regional Fellowship Consortium for the Osher Library at USM.
MOOK SEA FARMS INC	\$5,000	Grant funded sponsorship in support of UM Maine Sea Grant Development Award, awarded to Meredith White at Mook Sea Farm.
PORTLAND OVATIONS	\$5,000	Grant funded sponsorship of Yo Ma performance (\$5000) at USM.
TOWN OF PENOBSCOT ALEWIFE COMMITTEE	\$5,000	Grant funded sponsorship of "Bagaduce River Herring Population Dynamics and Habitat Range" Research Project funded through the UM Sea Grant Program.
PINE TREE ADMISSION CONSORTIUM	\$4,800	Annual membership dues for the Pine Tree Admission Consortium for UMF and UM.
ANEP	\$4,500	Grant funded annual membership dues in the Association of National Estuary Programs.
BIGELOW LAB FOR OCEAN SCIENCE	\$4,500	Grant funded sponsorship of program development funding for the "Growth and Physiology of Early Stage Crustaceans" research initiative from Sea Grant program grant funds.

Payee	Amount	Description
COUNCIL FOR ADVANCE & SUPPORT OF EDUC	\$4,500	Membership dues for the Council for Advancement and Support of Education for USM.
WOODS HOLE OCEANOGRAPHIC INSTITUTION	\$4,463	Grant funded sponsorship for the "Selection in Response to Short-term Temperature Stress in Early Larval Lobster Stages" Sea Grant research project.
ASSOCIATION OF GOV BOARDS OF UNIV & COLL	\$4,425	Annual membership dues for the Association of Governing Boards of Universities and Colleges.
MAINE STATE CHAMBER OF COMMERCE	\$4,425	Annual membership dues for Maine State Chamber of Commerce for UMS and USM; Sponsorship of student table at Maine State Chamber annual meeting for UM.
COUNCIL ON UNDERGRADUATE RESEARCH	\$4,305	Annual membership dues for The Council on Undergraduate Research.
CITI PROGRAM A DIVISION OF BRANY	\$4,300	Annual subscription for the CITI Program for research ethics and compliance training.
AACRAO	\$4,188	Annual membership dues to the American Association of Collegiate Registrars and Admissions Officers.
ASSN OF AMERICAN LAW SCHOOLS	\$4,055	Annual membership dues for the Association of American Law Schools.
PLANT & LIFE SCIENCES PUBLISHING	\$4,000	Annual membership dues to Plant and Life Sciences Publishing (Northeast Regional Agriculture Engineering Service) at Cornell University (Cornell dba Plant and Life Sciences Publishing).
VERMONT STATE COLLEGES	\$4,000	Annual membership dues for the New England Hockey Conference which operates out of Castleton University in Vermont - for USM Athletics.
NATIONAL ASSN STUDENT FINANC AID ADMINS	\$3,881	Annual membership dues for the National Association of Student Financial Aid Administrators for UMFK, UMPI, UM.
OUTREACH INC	\$3,700	Grant funded sponsorship of Kids Care packaging event at the 2016 Maine Hunger Dialog (meals packaged went to the Good Shepard Food Bank) for Cooperative Extension at UM.
WINTERGREEN ARTS CTR	\$3,644	Grant funded sponsorship of the Color PI Run to celebrate National Pi Day for UMPI.
NCAA	\$3,600	Annual membership dues for the National Collegiate Athletic Association for UMF, UM, UMPI, USM.
UCAR NCAR	\$3,500	Membership for the National Center for Atmospheric Research.
NATIONAL ASSN OF UNIV FOREST RSRCS PROGS	\$3,402	Annual membership dues for the National Association of University Forest Resources Programs for UM.
NATIONAL ASSN OF MARINE LABORATORIES	\$3,400	Membership for the National Association of Marine Laboratories.

Payee	Amount	Description
NATIONAL ASSN OF COLLEGE & UNIV ATTRNYS	\$3,385	Annual membership dues for the National Association of College and University Attorneys for UMS.
UPCEA	\$3,300	Membership for the University Professional and Continuing Education Association.
NACDA	\$3,275	Annual membership dues for the National Association of Collegiate Directors of Athletics for UM and UMF Athletics.
COMPANSOL	\$3,180	Grant funded annual membership fees for databases in support of the Upward Bound and TRiO programs.
NERCOMP INC	\$3,096	Annual membership dues for the Northeast Regional Computing Program, the regional affiliate of EDUCAUSE and an association of IT professionals in New England.
IACBE	\$3,050	Annual membership dues for the International Accreditation Council for Business Education for UMFK.
FULBRIGHT ASSN INC	\$3,000	Membership in the Fulbright Association for UM and USM.
INDEPENDENT COLLEGE BOOKSTORE ASSOC	\$3,000	Annual membership for the Independent College Bookstore Association for UM.
MAINE PUBLIC HEALTH ASSN	\$3,000	Annual membership dues for the Maine Public Health Association.
NATL NETWORK OF PUBLIC HEALTH INSTS INC	\$3,000	Membership in the National Network of Public Health Institutes.
NERACOOS	\$3,000	Grant funded annual membership dues for the Northeastern Regional Association of Coastal Ocean Observing Systems for UM.
NIWR	\$3,000	Grant funded annual membership dues for the National Institutes for Water Resources for UM.
NACA	\$2,961	Annual membership dues for the National Association of Campus Activities for UMM, UM, USM.
TRIO	\$2,950	Membership for the TRIO Training Institute.
АВА	\$2,935	Annual membership dues to the American Bar Association.
BETA GAMMA SIGMA INC	\$2,925	Annual Membership dues for the Beta Gamma Sigma Business Honor Society for UM and USM.
MAINE YOUTH CAMPING FNDTN	\$2,917	Membership dues for the Maine Youth Camping Foundation for UM for the Bryant Pond and Tanglewood 4H Camps.
NATIONAL LEAGUE FOR NURSING	\$2,907	Annual membership dues for the National League for Nursing for UMA, USM.

Payee	Amount	Description
MAINE EDUCL OPPORTUNITY ASSN	\$2,895	Annual membership dues for the Maine Educational Opportunity Association; Sponsorship of the association's annual meeting.
NATIONAL ASSN OF COLLEGE STORES	\$2,875	Annual membership dues for the National Association of College Stores for UMA, UM, USM.
WATERVILLE COUNTRY CLUB INC	\$2,875	Annual membership dues for home course for UMF Golf Team.
CONVENT & VISITORS BUREAU GTR PORTLAND	\$2,873	Annual membership dues for the Convention & Visitors Bureau of Greater Portland for USM.
COLLEGE BOARD	\$2,800	Annual membership dues for the College Board.
ENGINEERS WITHOUT BORDERS USA INC	\$2,800	Membership fee for UM chapter of the Engineers Without Borders organization.
ASSOCIATION OF SMALL BUSINESS DEV CTR	\$2,778	Grant funded annual membership dues for the Association of Small Business Development Centers for USM.
COLLEGIATE WATER POLO ASSN	\$2,750	Annual collegiate Water Polo Association dues for sports team at UM, dues includes officials for matches.
WAKING WINDOWS PRESENTS LLC	\$2,750	Grant funded sponsorship for USM Convocation.
CENTRAL LINCOLN COUNTY YMCA	\$2,700	Annual membership dues for YMCA memberships for 27 students at the UM Darling Marine Center in Walpole.
EASTERN COLLEGE ATHLETIC CONF INC	\$2,650	Annual membership dues for the Eastern College Athletic Association for UM Athletics.
CERF	\$2,500	Grant funded sponsorship of the Coastal Estuarine Research Federation.
EASTERN MAINE DEVELOP CORP	\$2,500	Sponsorship of Eastern Maine Development Corporation's 2017 fall conference.
HOLOCAUST HUMAN RIGHTS CTR OF MAINE	\$2,500	Grant funded sponsorship of the Holocaust Human Rights Center of Maine.
MAINE HUMANITIES CNCL	\$2,500	Grant funded membership in the Maine Humanities Council New Commons 2017 Partnership.
MAINE SPORTS HALL OF FAME	\$2,500	Grant funded sponsorship of the Maine Sports Hall of Fame Induction Ceremony.
UPSTANDER PROJECT	\$2,500	Grant funded sponsorship for USM Convocation.
NASFAA	\$2,495	Membership for the National Association of Student Financial Aid Administrators.
ADHA	\$2,340	Annual membership in the American Dental Hygienists' Association.

Payee	Amount	Description
ACADEMY HEALTH	\$2,332	Annual membership dues to AcademyHealth. AcademyHealth is a nonpartisan, nonprofit professional organization dedicated to advancing the fields of health services research and health policy.
NASPA STUDENT AFFAIRS ADMINS IN HIGH EDU	\$2,299	Annual membership dues for NASPA - Student Affairs Administrators in Higher Education for UMA, UM, USM.
GREATER BANGOR CONVENTION & VISITORS BUR	\$2,250	Membership for UM; Sponsorship of annual Convention and Visitors Bureau member meeting.
INDIANA UNIV	\$2,250	Membership for the Research and Education Networking Information Sharing and Analysis Center for UMS.
MAINE BOARD OF OVERSEERS OF THE BAR	\$2,205	Grant funded membership in the Maine Board of Overseers of the Bar for Maine Law.
NASM	\$2,195	Annual membership dues for the National Association of Sports Medicine for UM.
NATIONAL HISTORY DAY INC	\$2,150	Annual State Fee for the National History Day organization for the Margaret Chase Smith Library UM.
MAINE INTL TRADE CTR	\$2,050	Annual membership dues for StudyMaine for UM and USM; Sponsorship of 2018 Maine International Trade Day for USM.
NATIONAL ASSN COLLEGE ADMISSION COUNSEL	\$2,040	Annual membership dues for the National Association of Admissions Counselors for UMF, UMM, UM, UMPI.
EQUAL JUSTICE WORKS	\$2,000	Annual membership for the Equal Justice Works for the Maine Law School.
GORHAM COUNTRY CLUB	\$2,000	Annual membership fee for USM Golf team as their home course.
GULF OF ME MARINE EDUC ASSN	\$2,000	Grant funded sponsorship of awards presented at the National Marine Educators Association annual meeting.
LITERACY VOLUNTEERS OF BANGOR	\$2,000	Grant funded annual sponsorship of the Literacy Tea (April 2017) hosted by the Literacy Volunteers of Bangor for UM.
NE INTERCOLLEGIATE AMATEUR ATHLETIC ASSN	\$2,000	Annual membership dues for the Northeast Intercollegiate Amateur Athletic Association.
UCGIS	\$2,000	Grant funded annual membership dues for University Consortium for Geographic Information Science.
WABANAKI HEALTH & WELLNESS NPC	\$2,000	Grant funded sponsorship for USM Convocation.
AIAA STORE	\$1,965	Annual membership dues to the American Institute of Aeronautics and Astronautics.
NATIONAL ASSN OF COLLEGES & EMPLOYERS	\$1,955	Annual membership dues for the National Association of Colleges and Employers.

Payee	Amount	Description
KNOX LINCOLN COUNTY 4-H LEADERS ASSN	\$1,935	Grant funded sponsorship of 4H scholarships.
MAINE STATE BAR ASSN	\$1,930	Annual membership dues for Maine State Bar Association for Maine Law School.
NATA ONLINE	\$1,914	Annual membership dues for the Network for the Advancement of Patient Blood Management, Haemostasis and Thrombosis for UMF, UMFK, UM, USM.
MACHIAS BAY AREA CHAMBER OF CO	\$1,875	Annual membership dues for the Machias Bay Area Chamber of Commerce for UMM.
MITCHELL INST	\$1,875	Shared table sponsorship for Mitchell Institute 2017 Fall Gala for UM and UMS.
MAINE CAMPUS COMPACT	\$1,850	Grant funded Maine Campus Compact membership dues.
UNIV OF VERMONT & STATE AGRIC COLLEGE	\$1,850	Grant funded sponsorship of UM Cooperative Extension's share of assessment in support of the costs for maintaining an Executive Director for the Northeast Extension Directors association.
NACAS	\$1,750	Membership dues for the National Association of College Auxiliary Services.
CASE	\$1,745	Annual membership dues for the Council for Advancement and Support of Education.
AMERICAN ASSN OF LAW LIBRARIES	\$1,744	Annual membership to the American Association of Law Libraries.
NASAD	\$1,711	Grant funded annual membership dues for the National Association of Schools of Art and Design for UM.
ACCED I	\$1,700	Annual membership dues to the Association of Collegiate Conference and Events Directors- International.
ONLINE LEARNING CONSORTIUM	\$1,700	Membership for the Online Learning Consortium.
HIGHER EDUC USER GROUP INC	\$1,600	Annual membership dues for the Higher Education Users Group - a professional association for users of Oracle-based information systems.
PHI BETA KAPPA DELTA CHAPTER OF MAINE	\$1,565	Membership dues for student inductees into the Phi Beta Kappa Academic Honor Society.
AWP	\$1,550	Annual membership dues for the Association of Writers and Writing Programs.
CONSORTIUM FOR OCEAN LEADERSHIP	\$1,500	Grant funded two-year membership in the Consortium for Ocean Leadership for the School of Marine Sciences at UM.

Payee	Amount	Description
MAINE AQUACULTURE ASSN	\$1,500	Grant funded annual membership in the Maine Agriculture Association for UM.
TRUSTEES OF PHILLIPS ACADEMY	\$1,500	Membership for the Institute for Recruitment of Teachers for which Phillips is fiscal agent.
UNIV OF NEW ENGLAND	\$1,500	Sponsorship for the Maine Geriatrics Conference.
NEACRAO	\$1,470	Annual membership dues for the New England Association of Collegiate Registrars and Admissions Officers for all UMS campuses.
АРРА	\$1,411	Annual membership dues for the APPA: Leadership in Educational Facilities professional association.
KENNEBEC VLY CHAMBER OF COMMERCE	\$1,402	Annual membership dues for the Kennebec Valley Chamber of Commerce for UMA.
SPACE GALLERY	\$1,400	Grant funded sponsorship for the USM Convocation Collaboration.
NATL ASSOC OF EDUCATIONAL PROCUREMENT	\$1,345	Membership in the National Association of Educational Procurement.
AVIATION ACCREDITATION BOARD	\$1,320	Annual membership dues for the Aviation Accreditation Board International for UMA.
US TRACK & FIELD CRS CNTRY COA	\$1,300	Annual membership dues for the U.S. Track & Field and Cross Country Coaches Association for UM and USM.
AMERICAN LIBRARY ASSN	\$1,266	Annual membership dues for the American Library Association.
MAINE HIGHER EDUC CNCL	\$1,250	Annual membership dues for the Maine Higher Education Council.
AMERICAN MATHEMATICAL SCTY	\$1,229	Annual membership dues for the American Mathematical Society.
AASHE	\$1,220	Annual membership dues to the Association for the Advancement of Sustainability in Higher Education.
READING RECOVERY COUNCIL OF NA INC	\$1,210	Grant funded sponsorship of Reading Recovery Training Center.
COUNCIL FOR HIGHER EDUC ACCREDITATION	\$1,200	Annual membership for the Council for Higher Education Accreditation for UMA and UMF.
EDWARD T GIGNOUX INN OF COURT	\$1,200	Annual membership in the Edward T Gignoux Inn of Court for the Maine Law School.
NASH	\$1,200	Annual membership dues for the National Association of System Heads for UMS.
NATL ASSN OF DEANS & DIRECS SCHLS SCL WK	\$1,200	Membership for the National Association of Deans and Directors of Schools of Social Work.
NORTHERN ILLINOIS UNIV	\$1,200	Grant funded sponsorship for the Art Education Research Institute.

Payee	Amount	Description
UNIV OF MAINE ALUMNI ASSN	\$1,200	Grant funded sponsorship of reunion and homecoming events at UM.
AHEAD	\$1,195	Annual membership dues to the Association on Higher Education and Disability.
APPIC	\$1,180	Annual membership dues for the Association of Psychology Postdoctoral and Internship Centers.
IUFRO	\$1,121	Membership in the International Union of Forest Research Organizations.
NCURA	\$1,110	Membership for the National Council of University Research Administrators.
HIGHER EDUC CONSORTIUM FOR SPECIAL EDUC	\$1,100	Membership in the Higher Education Consortium for Special Education for UM.
MAINE MARITIME MUSEUM	\$1,100	Grant funded sponsorship for the "Lobstering and the Maine Coast" exhibit.
MAPLE PRODUCERS ASSN OF NOVA SCOTIA	\$1,100	Grant funded sponsorship of the Maple Grading School from the Maple Producers Association of Nova Scotia.
NALP	\$1,095	Annual membership dues for the National Association for Law Placement for the Maine Law School.
FIRST ROBOTICS KICKOFF	\$1,090	Sponsorship of FIRST Robotics Competition - an international high school robotics competition.
IN *INTERNATIONAL DISTRIC	\$1,080	Annual membership dues for the International District Energy Association for UM.
NACEP	\$1,055	Membership for the National Alliance of Concurrent Enrollment Partnerships for UMA.
NATIONAL INTRAMURAL RECR	\$1,041	Annual membership dues for the NIRSA: Leaders in Collegiate Recreation (National Intramural- Recreational Sports Association) for UMF, UM.
АРА	\$1,006	Annual membership in American Psychological Association.

University of Maine System

Space Reduction Initiative Update

Executive Summary

Trustees in January 2018 approved in principle an initiative to remove by demolition as much as a further 300,000 gross square feet (GSF) of vacant, under-utilized or poorer condition space and to eliminate the backlog of capital investments and operating costs associated with that space at campuses statewide.

This is an update regarding that initiative, which is focused on improving the condition and use of the University's facility infrastructure and, in turn, improving the University's fiscal and marketplace competitiveness.

The system-wide Capital Advisory Team has solicited and received a first round of proposed space reduction projects under this initiative. The projects have been reviewed and are under discussion and consideration by the team and in consultation with the Treasurer.

Campuses have proposed 27 demolition projects totaling approximately 181,000 gross square feet of space. These proposals were incentivized by and contingent on funding being available from a central pool to support these projects. The source of that funding remains to be determined.

If the projects were to go forward under the guidelines previously shared with Trustees and detailed in the attached agenda sheet, very, very preliminary estimates indicate the total cost of all projects would be approximately \$4.7 million, for an average cost of approximately \$26 per square foot. Again, these are very, very preliminary estimates, but serve to suggest a scope and scale of the project status.

Of the total pool of projects, at least 24 of the projects, which account for approximately 76,000 gross square feet of space, would have their costs completely funded by the central pool of funding.

The further approximately 105,000 gross square feet of space being proposed for removal would require central funding and campus matching funds, per the current guidelines.

In all, based on the preliminary information, the central pool would fund approximately \$2.4 million and campus-matching funds would be sought for \$2.3 million.

The single largest project in the pool is the Dickey-Wood residence hall on the Gorham campus of the University of Southern Maine. It would stand to receive the largest amount of funding – the maximum \$1 million permitted for a single project under the current guidelines – from the central pool of the currently proposed projects. It also would be

confronted with the largest campus matching obligation - \$2.3 million - under the current guidelines. The project is sufficiently large that it is the only project expected to hit the cap of matching central funds set by current guidelines and it is alone among the proposed projects in having any noteworthy campus match obligation.

Remembering that campuses have been removing space already, the breakdown of the further potential projects under this particular initiative thus far are these:

Campus	# of Projects	Proposed square feet
UMFK	6	12,017
UMA	2	3,729
UMF	7	25,770
UM	4	7,549
USM	8	131,992

The prior agenda sheet and resolution approved by Trustees is attached for background.

Board of Trustees Meeting - REPORTS

Board of Trustees Meeting - Preliminary Space Reduction Initiative Approval, UMS



AGENDA ITEM SUMMARY

- 1. NAME OF ITEM: Preliminary Space Reduction Initiative Approval, UMS
- 2. INITIATED BY: James H. Page, Chancellor
- **3. BOARD INFORMATION:**
- 4. OUTCOME: Enhance Fiscal Positioning

BOARD ACTION:

BOARD POLICY: 701 – Operating and Capital Budgets 712 – Debt Policy 802 – Disposition of Real Property

5. BACKGROUND:

The University of Maine System seeks authorization to remove by demolition as much as 300,000 gross square feet (GSF) of vacant, under-utilized or poorer condition space and to eliminate the backlog of capital investments and operating costs associated with that space at campuses statewide.

A pending Sightlines analysis indicates the University already has sold, demolished, vacated or otherwise reduced the amount of space it uses in carrying out its mission by about 250,000 GSF. The requested funding and associated demolition initiative is intended to continue that effort and to make additional progress possible. The effort to constrain any growth of facility space and to reduce it when possible is in keeping with the Trustees' directives to the University on that specific point and also its directives and aspirations to increase the density (i.e. utilization) and the net asset value (i.e. condition) of the University's facility portfolio.

This request carries the support of the Capital Advisory Team, a standing stakeholder group that was created with the sanction of Trustees and chaired by the Treasurer to review and advise the Treasurer on capital matters. The membership is updated annually and includes representatives of facility, finance and budget personnel, chief business officers, chief academic officers, Presidents and others. The group assists with and helps guide funding requests to the legislature, the annual capital budget process and special capital related initiatives such as this.

The facilities to be removed would be proposed by campus leadership, reviewed by the capital advisory team and authorized, per existing Trustee policy, by the Treasurer. Projects costing in excess of \$500,000 would also be presented to Trustees per current policy and protocol. No campus would be compelled to participate. Rather, funding would be allocated to those choosing to propose projects that best advanced the Trustee directives above.

Board of Trustees Meeting - Preliminary Space Reduction Initiative Approval, UMS

Additional details about what the project would aim to achieve, assessments of its potential impact and details about how the funds would be allocated and administered are attached.

The project would be funded by the sale bonds to be approved at a later time by Trustee pursuant to the usual Trustee and University practices and at the direction of the University Treasurer and Controller. The intention would be to generate approximately \$10 million in proceeds.

The matter before Trustees today is the preliminary approval to pursue the initiative. It would only truly move forward once Trustees approve the funding mechanism.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustee approval at the January 29, 2018 Board meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee to authorize the University of Maine System to pursue the removal by demolition of as much as 300,000 gross square feet of vacant, under-utilized or poorer condition space and to eliminate the backlog of capital investments and operating costs associated with that space at campuses statewide, with final approval of the funding mechanism to occur at a later meeting.

01/18/2018

University of Maine System

Security and Master Planning Update

Executive Summary

This is a follow-up to prior Trustee interest in the engagement of security personnel and a security perspective in the System-wide facility master planning process.

The master planning effort is part of a three-tiered planning process which Trustees directed be undertaken and which requires a master plan, a 5-year capital plan and a 1-year capital work plan be maintained by each University and, taken together, for the System. This effort was formally adopted by Trustees in March 2015. Since that time, four Universities have developed master plans that have been accepted by Trustees. A fifth campus had a robust pre-existing plan which it has maintained in keeping with the directive. A sixth campus master plan was approved by the Finance, Facilities, and Technology Committee to be forwarded to the Consent Agenda at the January 27-28, 2019 Board of Trustees meeting.

In that context, the University recently revisited the planning process to ensure security personnel and a security perspective were being incorporated in the planning process.

The public safety chiefs within the University of Maine System convened in the fall of 2018 with the architectural and design firm conducting the master planning effort as well as with the leadership of the System-wide Capital Planning and Project Management office and Safety Management office for a discussion about this topic.

There were three primary outcomes:

- 1. The professional services firm involved in master planning provided a summary document of various elements of security consideration and activity at each campus. That document is attached for further background.
- 2. The University chiefs also discussed and agreed that each had experienced good communication on their respective campuses and had been able to participate in the master planning process to the extent desirable or warranted.
- 3. Crucially, the chiefs independently identified that their involvement and ability to be involved at the individual project design level and with regard to special projects such as improving building access control, was also strong and important.

The Capital Planning and Project Management office agreed in future to ensure the continued involvement of security personnel and the public safety perspective in planning and project management efforts.



MEMORANDUM

То	
	Chip Gavin, Chief Facilities Management and General Services Officer
From	
	Mark D. Lee
Date	
	October 1, 2018
Projec	t
	University of Maine System
	University of Maine System Master Plan-University of Southern Maine
	No. 15442
Subjec	t
	Safety and Security Considerations in UMS Master Plans

Chip, as a follow up to your inquiry regarding safety and security measures that have been part of the master planning processes that Harriman has been undertaking, the following listing describes physical campus planning items in some detail. Campus security incorporates aspects related to individual buildings, the campus as a whole, technology and operations. The current scope of the master plans is limited and does not address specific initiatives beyond the scale of the campus or those identified below.

University of Maine, Darling Marine Center (Below text taken directly from the DMC Master Plan) Safety and security of all who use the DMC campus is of paramount importance. Improved safety and security can be active or passive and include, but are not limited to, the strategies listed below.

- Provide an appropriate level of lighting to building entrances, building perimeters, pathways, and parking lots.
- Create a safe separation of vehicles and pedestrians on roads and walking areas.
- Include key card access controls (or current best practices for entry control) to all new buildings and plan similar upgrades to building entry access for existing facilities.
- Promote a culture for staff and residents where safety is taken seriously.
- Develop clear campus entry locations such as the Community Engagement Center to manage the flow of visitors through campus.
- Utilize technology such as security cameras, door alarms, and motion sensors to alert staff to potential suspicious activity within and around buildings.

Improvements to the physical security infrastructure on campus has been a particular recent focus for the DMC and had resulted in several initiatives. These include a new campus check-in system, a secured key box for visitor housing keys, and new signage at the campus entrance and at the waterfront. Student dormitory keys have recently been upgraded, with support from UMaine Facilities Management. Future initiatives will result in electronic key card access to all research, education, and residential facilities, with the first priority being student housing upgrades. Security cameras also will be installed.

AUBURN, ME 04210 207.784.5100

46 HARRIMAN DRIVE

123 MIDDLE STREET PORTLAND, ME 04101 207.775.0053

33 JEWELL COURT, SUITE 101 PORTSMOUTH, NH 03801 603.626.1242 •

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170 MILK STREET, SUITE 5 BOSTON, MA 02109-3438 617.426.5050

www.harriman.com



University of Maine Farmington

- Recommendation to relocate Early Childhood Education Center and associated playground from the center of campus. (Initiative K)
- Remove portion of Perkins Street that runs through the center of student housing complex (Initiative F)
- Reinforce pedestrian campus core with vehicular circulation at the perimeter. (Initiatives C, D, F, H, K)
- Improved exterior campus lighting that contributes to a safe and secure environment. (Master Plan Recommendations-Site Lighting)
- Improve passage from Main Campus to Prescott Field by creating a new stair and lit path along Scott Hall. (Discussions with UMF Spring 2016 Parking Task Force)
- Installation of security cameras in key locations. (Discussions with UMF Spring 2016 Parking Task Force).

University of Maine at Augusta

- Establish flow of visitors to a primary campus entry by realigning drives and developing a campus "front door" with the Enrollment Services Center. (Initiative A)
- Improve exterior campus lighting that contributes to a safe and secure environment. (Master Plan Recommendations-Site Lighting)
- Reinforce pedestrian campus core with vehicular circulation at the perimeter.
- Consolidate buildings onto a contiguous parcel of land. (Bangor Initiative C2)

University of Maine at Fort Kent

- Establish flow of visitors to a primary campus entry by realigning drives and developing a campus "front door" with the UMFK Welcome Center. (Initiative A)
- Improve exterior campus lighting that contributes to a safe and secure environment. (Master Plan Recommendations-Site Lighting, Initiative F)
- Discussion with administration during staff interviews by the planning consultants regarding the potential to establish a dedicated safety/security force on campus. Currently Fort Kent Police are the primary responders.
- Reinforce pedestrian campus core with vehicular circulation at the perimeter. (Initiatives A, B, F, G, K)

University of Maine at Presque Isle

- Reinforce pedestrian campus core with vehicular circulation at the perimeter. (Initiatives C, D, J)
- Improve exterior campus lighting that contributes to a safe and secure environment. (Master Plan Recommendations-Site Lighting, Initiative K)

University of Sothern Maine

• Guiding Principal #4 – Public Safety

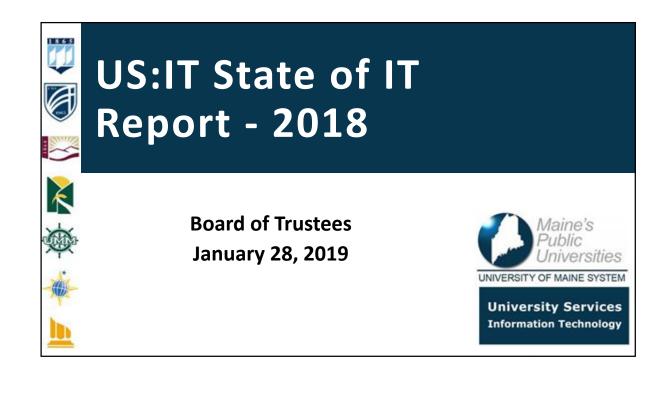
Public Safety—the plan and subsequent implantation seeks to provide the safest campus environment possible through physical, programmatic and operational improvements.

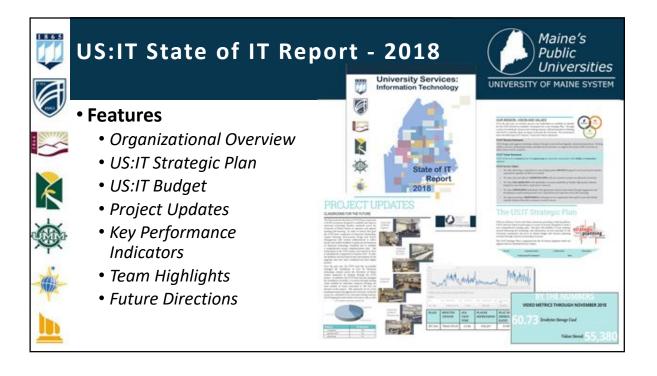
• Discussion with Campus Safety staff during interviews by the planning consultants regarding deficiencies of location on Gorham Campus as well as need for lockdown



capabilities, age and condition of safety equipment. (Appendix, RA Space Utilization)

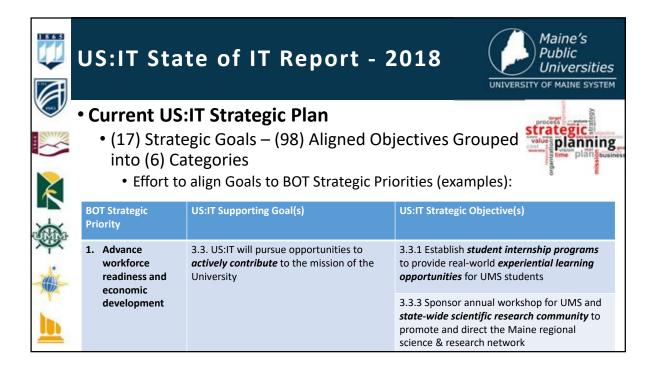
- Discussion with Residential Life and Campus Safety staff during interviews regarding the introduction of student housing to the Portland Campus will increase safety and security requirements and possibly a community outreach post. (Appendix, RA Space Utilization)
- Discussion with Campus Safety staff during interviews by the planning consultants regarding location of a community outreach post in Glickman Library. (Appendix, RA Space Utilization)
- Reinforce pedestrian campus core with vehicular circulation at the perimeter. (Portland Phasing, Short-Term – Residential Quad, Gorham Phasing, Immediate – Reestablish a Campus Heart)



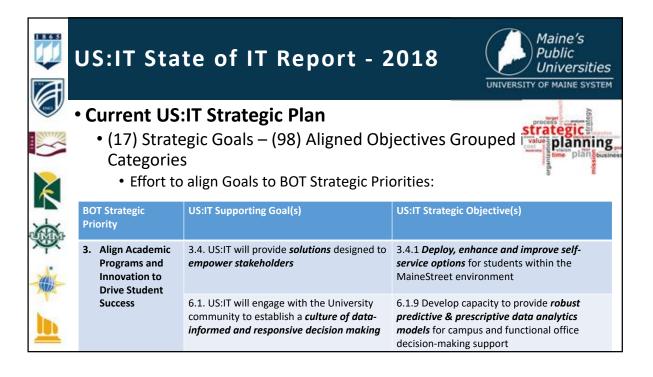


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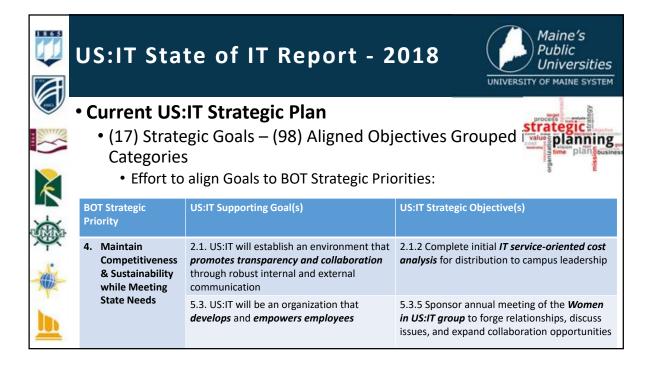


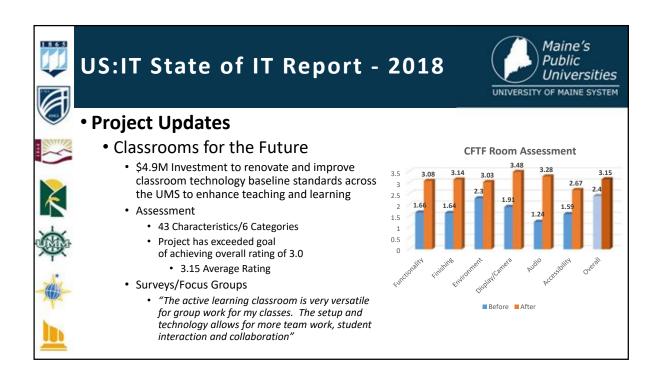


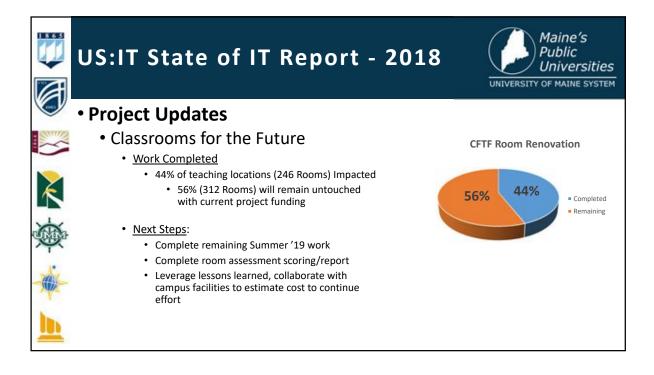
	US:IT Sta	te of IT Report - 2	2018 Maine's Public Universities UNIVERSITY OF MAINE SYSTEM
	Current US:	IT Strategic Plan	process
	 (17) Strategic Goals – (98) Aligned Objectives Grouped Categories 		
Z	 Effort to align Goals to BOT Strategic Priorities: 		
	BOT Strategic Priority	US:IT Supporting Goal(s)	US:IT Strategic Objective(s)
	2. Increase Maine Educational Attainment	3.1. US:IT will actively collaborate with stakeholders to optimize alignment of IT activities and services to support System and Campus strategic initiatives	3.1.7 Enhance recruitment and admissions activity through partnership and collaboration with enrollment management teams to best leverage available tools and data
h			3.1.8 Actively support the <i>launch and growth</i> of online programs for UMS campuses

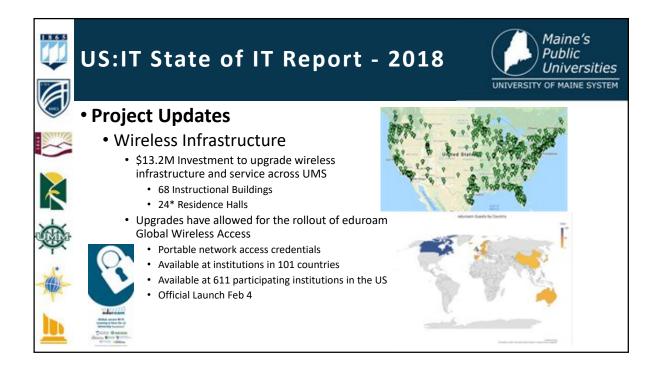


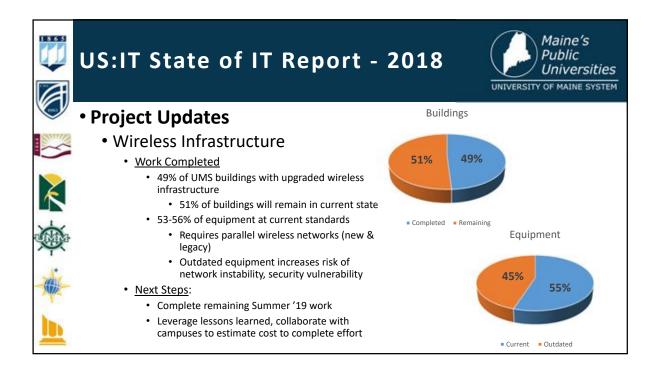
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	 Current US: 	IT Strategic Plan	process - carrier
	 (17) Strategic Goals – (98) Aligned Objectives Grouped Trategic Goals – (98) Aligned Trategic Goals – (98) Aligned Objectives Grouped Trategic Goals – (98) Aligned Trategic Goals		
Z	 Effort to align Goals to BOT Strategic Priorities: 		
	BOT Strategic Priority	US:IT Supporting Goal(s)	US:IT Strategic Objective(s)
	4. Maintain Competitiveness & Sustainability while Meeting	1.2. US:IT will be a customer-focused IT solution provider that <i>ensures unparalleled customer service</i> with high standards for responsiveness	1.2.2 Establish and operationalize <i>cross-</i> <i>departmental Service Delivery Teams</i> to promote efficiency, collaboration and efficacy
h	State Needs	1.3 US:IT will achieve <i>consistency</i> in the scope and delivery of <i>system-wide services</i>	1.3.3 Complete <i>migration or decommission</i> of remaining <i>legacy services</i> hosted on aged campus hardware to enhance reliability

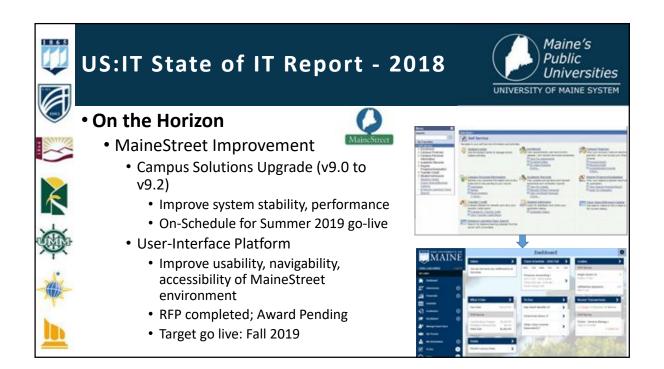


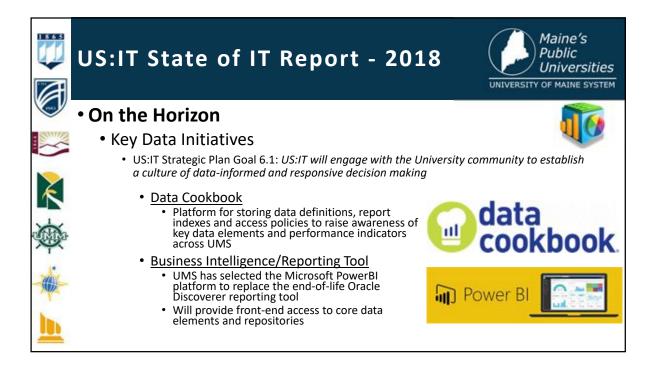




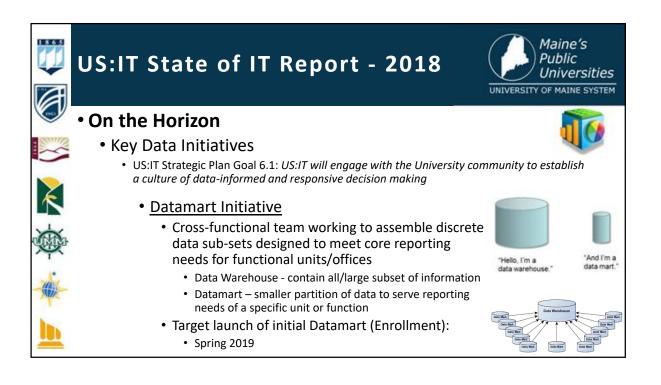








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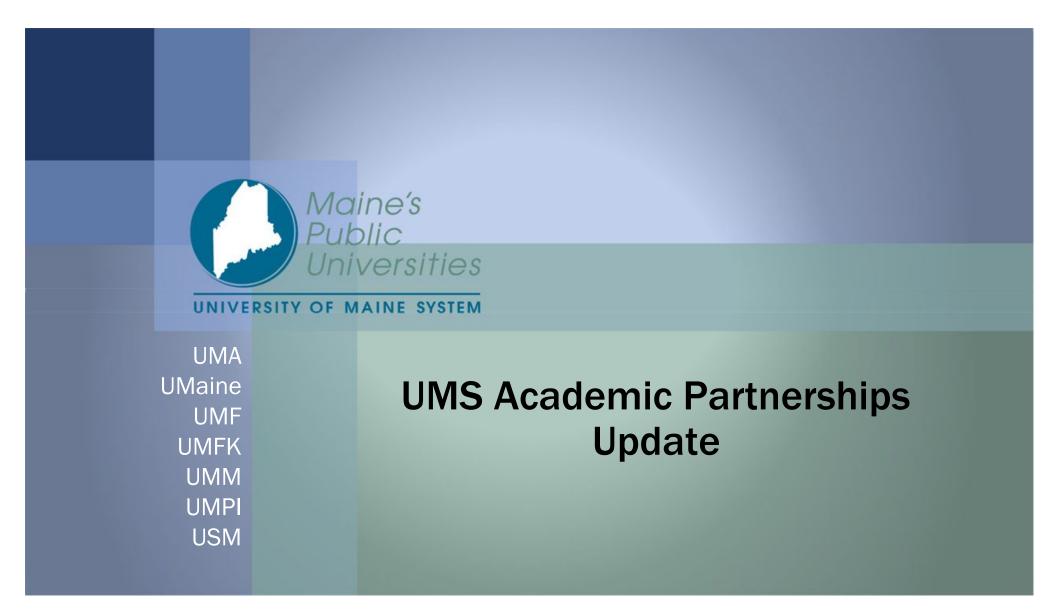
US:IT State of IT Report - 2018

1865

Questions or Comments to david.demers@maine.edu



University Services Information Technology

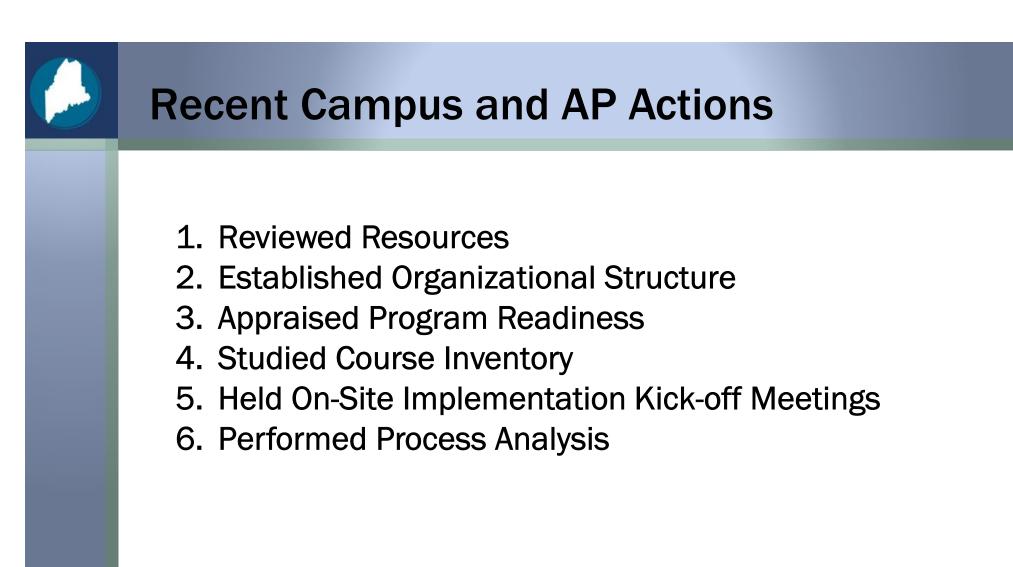




Academic Partnerships Update

1.Recent Actions
 2.Recommendations
 3.Timeline

Maine's Public Universities

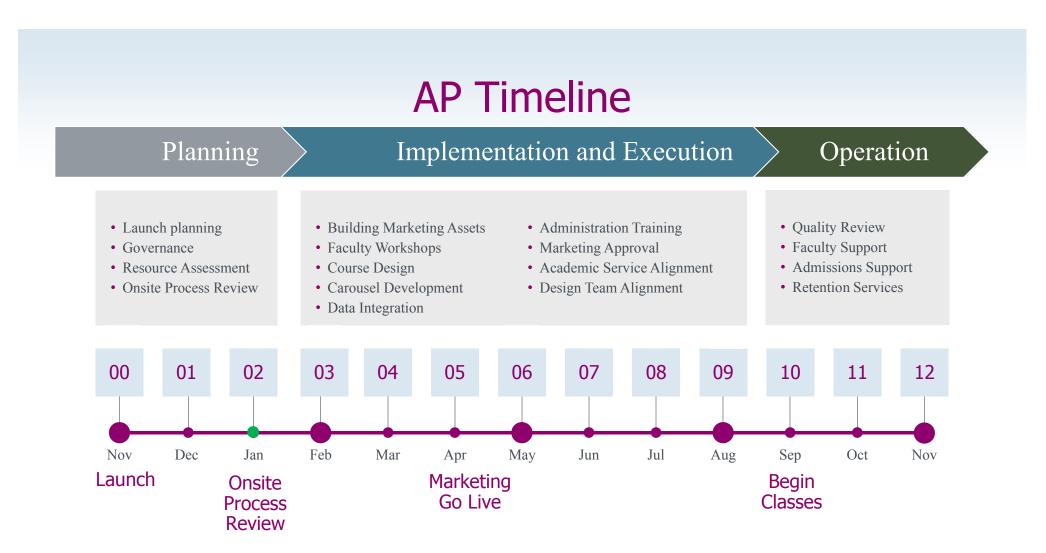


Maine's Public Universities

Recommendations
 Change Part-time/Full-time definition from 4.5/9 to 3/6. Provide online orientation.
3. Align FA and Bursar calendars for 6 start dates; 7 week
sessions.
4. Various recommendations to decrease our time to accept
(From >8 weeks to 7 days).
 modify application to include statement of purpose, instead of sending separate document.
II. reducing, removing, or modifying the requirement of full letters of recommendation.
III. Change to electronic acceptance letters.
5. Create an electronic intent to graduate form.

Maine's Public Universities

4





Grand Challenges for Tomorrow: Research, Development, and Commercialization for Maine and Beyond



Joan Ferrini-Mundy President, University of Maine and University of Maine at Machias

Philip Hamilton Vice Chair, University of Maine Board of Visitors



UMaine Draft Strategic Values

Fostering Learner Success

Growing and Stewarding Partnerships

Creating and Innovating for Maine and **Beyond**



UMS BOT Strategic Priorities

Advancing Workforce Readiness and Economic Development

Increasing Maine Educational Attainment

Aligning Academic Programs and Innovation to Drive Student Success and Employer

Maintaining Competitiveness and Sustainability to Meet Critical State Needs



Advancing Workforce Readiness and Economic Development

The State of Maine's declared higher education public policy requires UMS universities to cooperate among themselves and with Maine businesses to develop educational programs that advance the Maine economy. Given Maine's demographic and economic challenges and workforce needs, UMS must strategically manage a collaborative, student-centered public higher education system that maximizes learner employability and economic opportunity and development, characterized by flexible, 21st century life-long learning opportunities, business and economic development, and **research that drives economic innovation**, all derived from effective partnerships and continuous feedback among students, parents, public education systems, policy makers, and employers.



Advancing Workforce Readiness and Economic Development

Action 2:

Strengthen research and economic development efforts to support Maine industries and to foster business formation and expansion.

Immediate Deliverable:

As chartered by the Chancellor, and in consultation with other System presidents and the Vice Chancellor for Academic Affairs, the University of Maine President will, by March 2019, deliver a multi-year plan for prioritizing expanded research and development across the University of Maine System.

MEIF Sectors



MAINE

As stipulated in Maine law, the System directs MEIF dollars specifically to support university-based research in designated research areas:

- 1. Aquaculture and Marine Sciences
- 2. Biotechnology
- 3. Composites and Advanced Materials Technologies
- 4. Environmental Technologies
- 5. Information Technologies
- 6. Advanced Technologies for Forestry and Agriculture
- 7. Precision Manufacturing



"MOON SHOT" – GRAND CHALLENGE

First, I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the earth.

• President John F. Kennedy, May 25, 1961



What is a Grand Challenge?

- A Grand Challenge initiative is a set of goals that are ambitious, yet achievable, and that serve as "North Stars" for cross-sector and multi-disciplinary collaboration
- Grand Challenges focus on solutions to problems that affect people around the globe, such as energy, food production, and/or health and wellness – or in a nation, region, or state
- Grand Challenges require research as part of the solution



National Academy of Engineering: 14 Grand Challenges for Engineering

- 1. Make solar energy economical
- 2. Provide energy from fusion
- 3. Develop carbon sequestration
- 4. Manage the nitrogen cycle
- 5. Provide access to clean water
- 6. Improve urban infrastructure
- 7. Advance health informatics

- 8. Engineer better medicines
- 9. Reverse-engineer the brain
- 10. Prevent nuclear terror
- 11. Secure cyberspace
- 12. Enhance virtual reality
- 13. Advance personalized learning
- 14. Engineer the tools of scientific discovery

Determined in 2008 by a committee of engineers, scientists, entrepreneurs and visionaries



- Developed through engagement with the public and with stakeholders
- Meaningful and widely supported as imperatives
- Solution requires interdisciplinary, convergent research across fields
- University-based research, development, and commercialization have a key role
- Impact of solving is positive and important



Example of Grand Challenge



MAINE's FOREST BASED ECONOMY (Bioeconomy) Industry diversification through developing new economic revenue streams to produce sustainable, bio-based products for both domestic and global markets - while conserving natural lands for recreation, tourism, and wildlife

2016

Total Impact - \$8.5 Billion \$1/20 Maine GDP 1/24 jobs in Maine

CHALLENGE Grow to \$12 Billion What JD Irving's 3-year hiring plan means for Maine -Bangor Daily News January 24, 2019 300 expected hires in Maine operations, shipping, supply and logistics, retail sales & finance





What are some major challenges in the state of Maine where evidence, data, and innovation are already making a difference and/or could make a bigger difference?



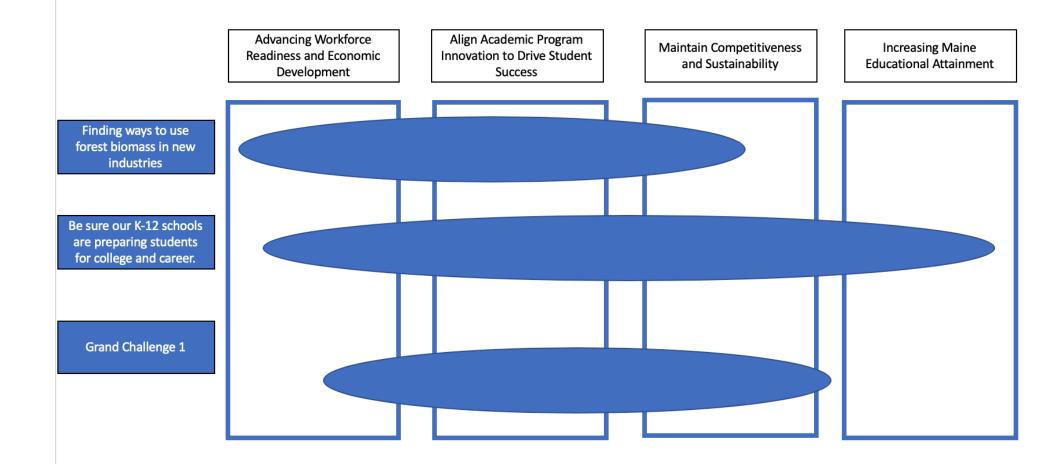
For example:

- Finding ways to use Maine forest biomass in new industries.
- Be sure Maine K-12 schools are preparing all students for college and career.

Board of Trustees Meeting - PRESENTATIONS



Mapping Grand Challenges to UMS BOT Strategic Priorities





What are some major challenges in the state of Maine where evidence, data, and innovation are already making a difference and/or could make a bigger difference?



COMMMENTS AND CONCLUSIONS