



Board of Trustees  
15 Estabrooke Drive  
Orono, ME 04469

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www.maine.edu

May 10, 2018

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

FR: Ellen N. Doughty, Clerk of the Board

RE: **May Board Meeting**

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

Enclosed are the materials for the **Board of Trustees Meeting on Sunday and Monday, May 20-21, 2018**, hosted by the University of Maine Fort Kent. Directions are included in the Board meeting materials. Parking is available in the Nadeau 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](http://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](http://www.maine.edu/board).***

On Sunday, May 20<sup>th</sup>, the Board meeting will be called to order at 2:30 pm in Cyr Hall, Room 113. The Board will go directly into an Executive Session until 4:45 pm. At 5:00 pm the Board meeting will reconvene in the Nadeau Conference Room with a meeting with the UMFK Board of Visitors. A reception in the Bengal's Lair is scheduled for 6:00 pm, followed by dinner at Nowland Hall at 7:00 pm.

On Monday, May 21<sup>st</sup>, the Board meeting will be called to order at 8:00 am with an opportunity for continental breakfast and networking starting at 7:30 am. The Board meeting on Monday will be in the Nadeau Conference Room.

Meeting rooms have been reserved for the Faculty & Student Representatives if they would like to meet in their respective groups. The Faculty Representatives can meet in Alumni Conference Room and the Student Representatives can meet in Grindle Conference Room. These rooms are available starting at 1:00 pm on 5/20/18.

Overnight accommodations for those that have requested, have been made at the Northern Door Inn, 356 W. Main St, Fort Kent, 04743, PH 207-834-3133. The Student Representatives will be staying at the Inn of Acadia, 384 St. Thomas St., Madawaska, 04756, PH 207-728-3402.

Incoming messages can be left with the UMFK President's Office at 834-7504 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 telephone (581-5844). 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

University of Maine at Fort Kent, 23 University Drive, Fort Kent, ME 04743

**Directions**

Fort Kent is a scenic 3½ hour drive north of Bangor via Interstate 95. Take exit 264 (Sherman Mills) and Route 11 North. An alternate route is to follow 1-95 North to the Houlton exit then U.S. Route 1 north to Caribou and Route 161 north to Fort Kent. The University of Maine at Fort Kent is located on Route 11.



**Campus Map Legend**

- 1** Nadeau Hall
- 2** Fox Auditorium
- 3** Cyr Hall
- 4** Crocker Hall
- 5** Physical Plant
- 6** Nowland Hall
- 7** Gagne House
- 8** Guy House
- 9** Powell Hall
- 10** Acadian Archives
- 11** Blake Library
- 12** Old Model School
- 13** Madawaska House
- 14** Haenssler Honors Ctr.
- 15** Acadia House
- 16** St. David House
- 17** N. Cyr House
- 18** The Lodge
- 19** Sports Center
- 20** Alumni Memorial Field
- 21** Armory Building
- P** Parking Lot



## The Northern Door Inn

356 W Main St Fort Kent, ME 04743  
Toll-free 1-866-834-3133  
Phone 207-834-3133

### Map and Directions

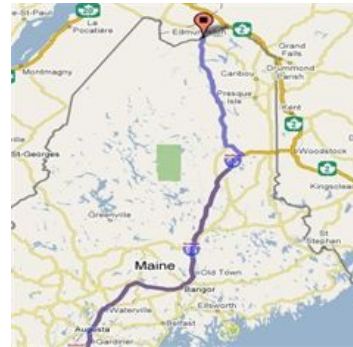
#### US RTE 1 North

Take Interstate 95 North, keep going... and going and going. Get off at exit 302 in Houlton, ME, almost to the end of 95. Turn left onto US1. Keep going... and going and going. When you see a sign that says Key West 2390 miles the other way, right by the bridge to Canada look to your left, you are there. **Note:** You can shorten your trip by taking 161 North out of Caribou to Fort Kent.



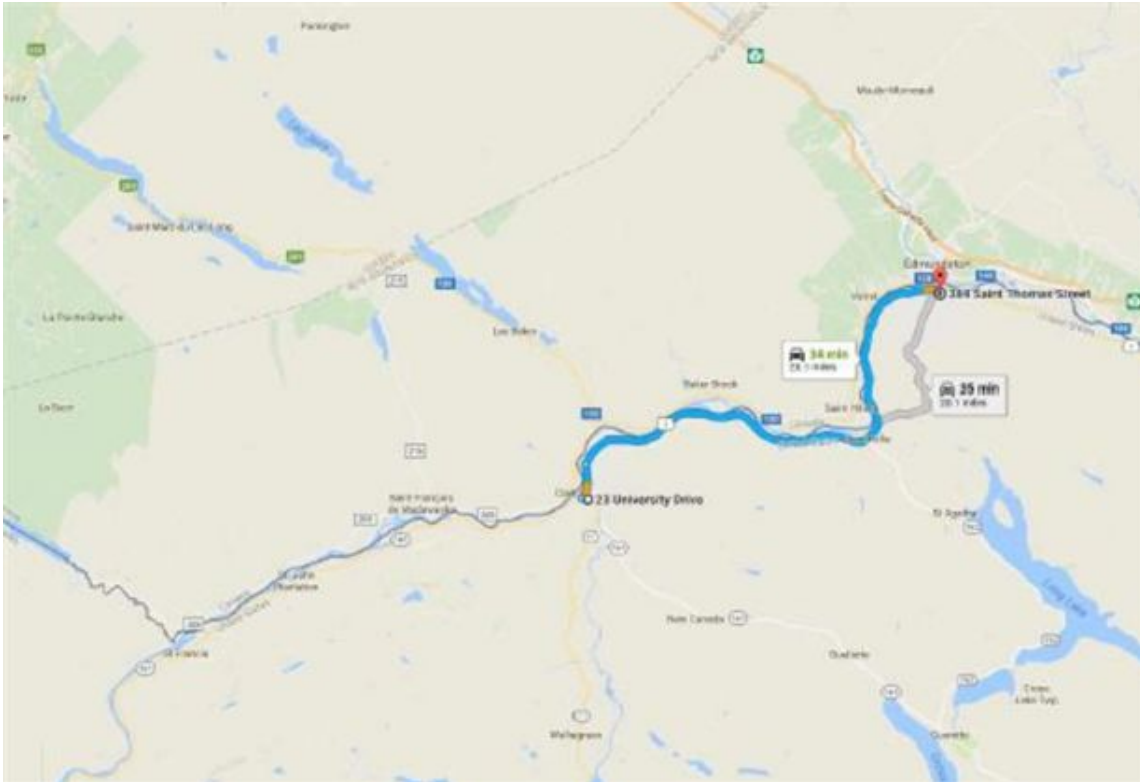
#### ROUTE 11

Route 11 North. Again take I 95 north, this time get off at exit 286 in Smyrna Mills, Turn left on Oakfield Rd, and look for Route #212. About 10.1 miles West you will find Rt.11. Stay on Rt 11 north for about 79 miles until you get to Fort Kent. Turn left on Rt #1. About .6 miles, right across from the International Bridge to Canada is the Northern Door Inn. **Note:** You can shorten your trip by getting off at exit 264 at Sherman and getting onto Rt 11 there. Stay on Rt 11 North all the way into Fort Kent.



#### Fort Kent

It's really hard to get lost in Fort Kent but here's the map just in case. Just look for the bridge over the St John River to Canada and directly across the street is the prettiest little Inn in the state of Maine, that's us.



**FROM - UMFK (23 University Dr. Fort Kent, ME 04743)**  
**TO - INN OF ACADIA (384 St. Thomas St., Madawaska, ME 04756)**

Distance 20.1 miles  
Approximate Time: 34 minutes

Head southwest on University Dr. towards Aroostook Rd/Pleasant St.  
Turn Right onto Aroostook Rd/Pleasant St (0.2mi)  
Turn Right onto W. Main St. (1.3mi)  
Continue onto US-1 S/Frenchville Rd (18.3mi)  
Turn Right onto 10<sup>th</sup> Ave (449ft)  
Turn Left onto St. Thomas Street – Destination will be on the left

## Acceptance of Minutes

The following minutes will be presented to the Board of Trustees for approval at the May 20-21, 2018 Board meeting:

March 18-19, 2018 - Board of Trustees Meeting  
March 23, 2018 - Finance, Facilities, Technology Committee Meeting  
April 4, 2018 - Investment Committee Meeting  
May 2, 2018 - Finance, Facilities, Technology Committee Meeting  
May 4, 2018 - Audit Committee Meeting  
May 7, 2018 - Human Resources & Labor Relations Committee Meeting  
May 15, 2018 - Human Resources & Labor Relations Committee Meeting

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

UMS Board of Trustees Meeting

University of Maine Fort Kent  
Nadeau Conference Room

5-22-18

May 20-21, 2018

**AGENDA**

Meeting Room for Faculty Representatives – Alumni Conference Room, Nadeau Hall  
1:30 pm - 2:30 pm - Dr. Neely meeting with Faculty Representatives

Meeting Room for the Student Representatives – Grindle Conference Room, Nadeau Hall  
(These rooms are available starting at 1:00 pm on 5/20/18.)

**Sunday, May 20, 2018**

**Call to Order @ 2:30 pm** - Room 113, Cyr Hall

The Board will go directly into executive session.

**Executive Session** from 2:35 pm to 4:45 pm - Room 113, Cyr Hall

**Call to Order/Reconvene Public Meeting @ 5:00pm** Nadeau Conference Room

**BOT/BOV Meeting @ 5:00 pm**  
Tab 1 - [Meeting with UMFK BOV](#)

**Reception @ 6:00 pm** - Bengal's Lair, Cyr Hall (**Cash Bar**)  
(By Invitation Only)

**Dinner @ 7:00 pm** - Nowland Hall  
(By Invitation Only)

**Monday, May 21, 2018**

**Coffee & Networking @ 7:30 am**

**Call to Order/Reconvene @ 8:00 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.*

**Acceptance of Minutes**

**Committee Reports/Actions (5 minutes)**

**Chair's Report** (45 minutes)

Tab 2 - [Resolution for Jason E. Coombs](#)

Tab 3 - [Resolution for Norman L. Fournier](#)

Tab 4 - Resolution for Susan J. Hunter

Tab 5 - Resolution for Kathryn A. Foster

**Chancellor's Report (25 minutes)**

**Vice Chancellor for Finance and Administration & Treasurer's Report (30 minutes)**

Tab 6 - Financial Update

Tab 7 - Multi-Year Financial and Structural Gap Analysis

Tab 8 - FY2019 Proposed Unified Operating & Capital Budget And Student Charges

Tab 26 - USM LED Lighting Project

**Vice Chancellor for Academic Affairs' Report (45 minutes)**

Tab 9 - Academic Affairs Update

Tab 10 - Presentation from Nursing Directors/Deans - New Nursing Program Initiatives

**Consent Agenda (10 minutes)**

Action items from the May 2, 2018 Finance, Facilities & Technology Committee Meeting:

Tab 11 - Lease Request (Sigma Phi Epsilon), UM

Tab 12 - Lease Request (USDA), UM

Tab 13 - Full Design Engineering Education and Design Center, UM

Tab 14 - Naming Lafayette and Rawcliffe 4-H Science Engineering Center, UM

Tab 15 - Master Plan Acceptance, UMA

**Action Items**

Tab 16 - Confirmation of Faculty & Student Representatives to the Board of Trustees (10 minutes)

Tab 17 - Election of Board Officers (10 minutes)

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

**Discussion Items**

Tab 18 - Key Performance Indicators (KPI) and SRAP Update (20 minutes)

Tab 19 - MaineStreet Discussion (25 minutes)

Tab 20 - Assessment of the UMaine Strategic Plan (20 minutes)

**Executive Session (2 hours) – Room 113, Cyr Hall**

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

Tab 21 - Confirmation of the Boards of Visitors Appointments

Tab 22 - Tenure at Time of Hire, UM School of Computing & Information Science

Tab 23 - Tenure at Time of Hire, UM Business School

Tab 24 - Tenure at Time of Hire, USM

Tab 25 - Appointment of Interim President at UMF

Tab 27 - Chancellor Contract

**Date of the Next Meeting:** July 16, 2018 at the University of Maine hosted by UMS

**Attachments:**

UMFK BOV Membership List for 2017-2018

Financial Update

- Managed Investment Pool

- Pension Fund

- Operating Fund

- Multi Year Financial and Structural Gap Analysis

- FY2019 Proposed Unified Operating & Capital Budget and Student Charges



- Forecast Report - April 2018

Tenure at Time of Hire

- UM School of Computing & Information Science Background Information
- UM Business School Background Information
  - Faculty Evaluation Standards
- USM Background Information

2018 BOV Master List of Bio's for Proposed Candidates

2018 BOV Master List of All Members by Campus

UMA Master Plan Final Presentation

UMaine Strategic Plan Background Information

Full Design Engineering Education

Vice Chancellor for Academic Affairs Report

Resolution for Jason E. Coombs

Resolution for Norman L. Fournier

Resolution for Susan J. Hunter

Resolution for Kathryn A. Foster

**Reports:**

UMS Interactive Dashboard

Capital Project Status Report Executive Summary

-Capital Project Status Report

Agenda Calendar

2017 Workforce Profile Report

2017 Turnover Analysis

Five Year Plan to Build up Engineering in the UMS

**Presentations:**

UMS MaineStreet Discussion

Nursing Initiatives Presentation

UMFK BOV Presentation

**Handouts:**

Grant 4 Education

KPI/SRAP Update

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.



## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Meeting with UMFK 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 UMFK BOV will meet with the BOT for a discussion of campus BOV strategic goals and concerns.

Attachment:

[UMFK BOV Membership List for 2017-2018](#)  
[UMFK BOV Presentation](#)

5/22/18



## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Resolution for Jason E. Coombs
2. **INITIATED BY:** Trustee James Erwin, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**
5. **BACKGROUND:**

Mr. Jason E. Coombs has served as the Student Trustee for the University of Maine System since May 12, 2016 and completed his term on April 30, 2018. Trustee Coombs has been a dedicated member of the Board and served on the Academic and Student Affairs Committee and the Finance, Facilities, Technology Committee. He is also a Trustee representative on the University of Maine Foundation.

Mr. Coombs has worked closely with the Student Representatives to the Board of Trustees and has been an effective advocate of the student perspective. At commencement in May he will receive a BA in Liberal Studies from the University of Maine at Augusta. He intends to continue his education at UMA to earn a BS in Public Administration.

### 6. **TEXT OF PROPOSED RESOLUTION**

A resolution for Board approval will be presented at the May 20-21, 2018 Board of Trustees meeting.

Attachment:

[Resolution for Jason E. Coombs](#)



## AGENDA ITEM SUMMARY

- 1. **NAME OF ITEM:** Resolution for Norman L. Fournier
- 2. **INITIATED BY:** Trustee James Erwin, Chair
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**
- 5. **BACKGROUND:**

Mr. Norman L. Fournier has served as a Trustee for the University of Maine System since September 20, 2007. He has set a high standard for the level of involvement for a Board member.

Trustee Fournier was Vice Chair of the Board in 2009 and 2010. In addition he served as UMS Trustee representative to the University of Maine Pulp and Paper Foundation for nine years. He has represented the Board of Trustees at nearly every commencement since 2008.

Trustee Fournier exemplified a commitment to the quality and investment in university space and infrastructure that is now part of standing Trustee policy. His commitment to the University has also been demonstrated through his unfailing availability and presence, no matter how challenging the schedule.

- 6. **TEXT OF PROPOSED RESOLUTION:**

A resolution for Board approval will be presented at the May 20-21, 2018 Board of Trustees meeting.

Attachment:  
[Resolution for Norman L. Fournier](#)



## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Resolution for Susan J. Hunter
2. **INITIATED BY:** Trustee James Erwin, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**
5. **BACKGROUND:**

Dr. Susan J. Hunter has served as the 20<sup>th</sup> President of the University of Maine since July 1, 2014. She also became the President at the University of Maine at Machias on July 1, 2017. Dr. Hunter will retire from the University of Maine System on June 30, 2018.

She began her full-time career at the University of Maine in 1991 as a faculty member in the Department of Biological Sciences. Her administrative positions included Chair of the Department of Biological Sciences, Associate Provost and Dean for Undergraduate Education, and five years as the Executive Vice President for Academic Affairs and Provost. Just prior to her appointment as UMaine's first woman president, Dr. Hunter served as Vice Chancellor for Academic Affairs for the University of Maine System.

6. **TEXT OF PROPOSED RESOLUTION:**

A resolution for Board approval will be presented at the May 20-21, 2018 Board of Trustees meeting.

Attachment:  
[Resolution for Susan J. Hunter](#)



## AGENDA ITEM SUMMARY

- 1. **NAME OF ITEM:** Resolution for Kathryn A. Foster
- 2. **INITIATED BY:** Trustee James Erwin, Chair
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**
- 5. **BACKGROUND:**

Dr. Kathryn A. “Kate” Foster has served as the 14<sup>th</sup> president at the University of Maine at Farmington from July 1, 2012 to June 30, 2018. Prior to UMF, Dr. Foster spent 15 years at the University of Buffalo, the largest campus in the State University of New York System. There she served as director of the school’s Regional Institute, Chair of the Department of Urban and Regional Planning, and Associate Chair for Undergraduate Education and Director of Undergraduate Studies.

Dr. Foster has accepted an appointment as of July 1, 2018 to serve as the 16<sup>th</sup> President of the College of New Jersey (TCNJ) in Ewing Township, New Jersey.

- 6. **TEXT OF PROPOSED RESOLUTION:**

A resolution for Board approval will be presented at the May 20-21, 2018 Board of Trustees meeting.

Attachment:

[Resolution for Kathryn A. Foster](#)



## AGENDA ITEM SUMMARY

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

Vice Chancellor for Finance and Administration and Treasurer Ryan Low will provide a brief financial update at the May 20-21, 2018 Board of Trustees meeting.

Attachments:

[Managed Investment Pool Flash Report](#)  
[Pension Fund Flash Report](#)  
[Operating Fund Flash Report](#)  
[Forecast Report - April 2018](#)

5-17-18



## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Multi-Year Financial and Structural Gap Analysis
2. **INITIATED BY:** James H. Page, Chancellor
3. **BOARD INFORMATION:** X **BOARD ACTION:**
4. **OUTCOME:** Enhance fiscal positioning **BOARD POLICY:** Policy 701 – Operating & Capital Budgets
5. **BACKGROUND:**  

Vice Chancellor Ryan Low will present an update of the Multi-Year Financial Analysis for fiscal years 2019 – 2023.

Attachment:

[Multi-Year Financial and Structural Gap Analysis](#)

5/10/2018





## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** FY2019 Proposed Operating & Capital Budget and Student Charges
2. **INITIATED BY:** James H. Page, Chancellor
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**  
Enhance fiscal positioning Policy 701 – Operating & Capital Budgets

5. **BACKGROUND:**

Vice Chancellor Ryan Low will present the FY2019 Proposed Operating & Capital Budget and Student Charges for the University of Maine System.

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

6. **TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees accepts the recommendations of the Finance, Facilities and Technology Committee and approves the FY2019 Proposed Unified Operating & Capital Budget, Recommended Student Charges, and proposed Transfers from the Budget Stabilization Fund and Institutional Reserves.

Attachments:

[FY2019 Proposed Operating & Capital Budget & Student Charges](#)

5/10/2018



**AGENDA ITEM SUMMARY**

- 1. NAME OF ITEM:** Vice Chancellor for Academic Affairs Report
- 2. INITIATED BY:** James H. Page, Chancellor
- 3. BOARD INFORMATION:** X **BOARD ACTION:**
- 4. OUTCOME:** **BOARD POLICY:**  
All Primary & Secondary Outcomes
- 5. BACKGROUND:**

9

Dr. Robert Neely, Vice Chancellor for Academic Affairs, will provide an update on the following Academic Affairs items.

**Program Innovation Fund:**

The UMS 2017-2018 Program Innovation Fund (PIF) process formally began on October 16, 2017 with the submission of pre-proposals from interested faculty on each of the seven campuses. The three primary criteria for the 2017-2018 PIF cycle were collaborative programming, enrollment growth, and career readiness, with additional secondary criteria regarding academic merit, impact and assessment of outcomes. Forty-three pre-proposals were received and evaluated by the VCAA and the Chief Academic Officers Council (CAOC) during the Fall, 2017 semester, with 22 of those projects invited for submission of a full proposal. Nineteen full proposals were received by the due date of March 23, 2018. Each of those proposals were reviewed by members of the CAOC, as well as the VCAA, with each proposal receiving at least three separate reviews.

The CAOC met on May 3, 2018 for discussion of each proposal and the reviewer scores/comments to arrive at a prioritization of proposals. As a result of that meeting, six PIF proposals were recommended for full or partial funding in FY19. The VCAA will summarize the topic and expectations for the successful proposals.

**Exploration of UMS Collaboration with an Online Program Manager (OPM):**

The Board of Trustees will receive information from the VCAA regarding potentially partnering with an OPM as part of the UMS intent to strategically identify and market online opportunities for maximum enrollment growth. An OPM brings an array of services and investments currently not possible in the UMS, including market research, extensive marketing nationally, student recruitment and customer relationship management, data tracking and analytics to maximize student success, faculty instructional support, and course design systems, among other services. The cost of working with such a provider involves tuition sharing for the programs mutually-identified for the partnership.

To launch exploration of an OPM, the University of Maine System (UMS) initiated a Request for Proposal (RFP) process through the UMS Office of Strategic Procurement to explore services that could potentially be provided by an OPM. The intent of the RFP was to evaluate consulting services and/or products and services to expand the national reach and responsiveness of the UMS online offerings. More specifically, the goal is to strategically explore a set of priority programs for which collaboration with an OPM represents high potential to increase student enrollment and graduation to meet the workforce and educational needs in and outside of Maine.

As a result of the RFP process, Academic Partnerships, a privately-held company serving more than 50 universities to grow online markets was selected as a potential partner. Academic Partnerships focuses on partnering with public universities, and their clientele range from R1, research-intensive and flagship institutions to teaching universities and regional campuses. With Academic Partnerships identified as a potential partner, a first exploratory conversation was held on April 24, 2018 with the Chief Academic Officers Council to determine if any program candidates exist for which the consultant and the UMS would be mutually interested. The CAOC meeting resulted in sufficient interest for follow-up discussions with each campus and disciplinary groups.

**Early College Programming:**

In July 2017, the UMS received funds from the legislature to expand and improve the quality of Early College (EC) programs in the State of Maine. A portion of those funds were used to hire a UMS Lead Coordinator for Early College, Dr. Amy Hubbard, who will be introduced and present at the May, 2018 BOT meeting.

Distribution of EC funds to campuses began in December, 2017 to support scholarships for students who had successfully completed the UMS Early College programs and are now matriculating at a UMS campus, as well as provide reimbursement for some EC expenses in the first half of FY2018. During the Spring, 2018 semester, funds were also distributed to the UMS campuses to develop new and innovative Early College programs to enhance enrollment and enrich these programs. Additional plans for the funds include designing professional development workshops for guidance counselors, university faculty, and high school teachers; pathways to careers; new ways to provide access to high school teacher-to-master's degrees/credentialing; software management systems for enrollment, assessment, and accreditation; and website development for Early College.

**UMS Nursing Initiatives:**

Since the October, 2018 Maine Nursing Summit hosted by the UMS on the University of Maine Campus, each of the nursing programs have launched initiatives to be responsive to the nursing needs of Maine, particularly with respect to engagement with health care providers, and in some cases other university partners. The Deans or Directors of each UMS campus offering nursing programming have been invited to the May, 2018 BOT meeting to provide a brief summary of their work and respond to questions.

Attachment:

[Vice Chancellor for Academic Affairs Report](#)



## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Presentation from Nursing Directors/Deans – New Nursing Initiatives

2. **INITIATED BY:** Dr. Robert Neely, Vice Chancellor for Academic Affairs

3. **BOARD INFORMATION:** X **BOARD ACTION:**

4. **OUTCOME:** **BOARD POLICY:**

Primary Outcomes:

- Increase enrollment
- Improve student success and completion
- Enhance fiscal positioning

Secondary Outcomes:

- Relevant academic programming
- University workforce engagement

5. **BACKGROUND:**

UMFK Director of Nursing and Allied Health, Erin Soucy; USM Assistant Professor of Nursing, Patricia Thompson-Leavitt; UM Director of School of Nursing and Professor of Nursing, Mary Walker and UMA President Rebecca Wyke will update the Board on the Nursing Program advancements, initiatives and development plans. The update will highlight initiatives and partnerships that are part of the UMS strategic effort to increase Maine's nursing education capacity.

Presentations:

[Nursing Initiatives Presentation](#)

Handouts:

[Grant 4 Education](#)

5-22-18



**AGENDA ITEM SUMMARY**

- 1. **NAME OF ITEM:** Lease Request, UM
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**  
 Improve student success and completion 802 – Disposition of Real Property  
or University as Lessor of Real Prop.
- 5. **BACKGROUND:**

The University of Maine System acting through the University of Maine (UM) requests authorization to amend a ground lease with the Maine Alpha Alumni Corporation of Sigma Phi Epsilon (Fraternity). The original lease began September 19, 1968. The amendment will extend the lease for an additional fifty (50) years.

This request is pursuant to Board Policy 802, Disposition of Real Property, which requires Board approval for leases exceeding ten years or \$500,000. In this case, the requirement is in regards to the duration and approval by the full Board is required.

The ground lease consists of 2.02 acres in the Town of Orono, Maine. The proposed terms of the lease include a fifty (50) year renewal beginning on the date of execution of the agreement with options for renewal as agreed by both parties. The current renewal would continue to include an annual rent of \$1.

The land is being used for the purposes of operating a University recognized fraternity house. The structure located on the land is owned by the Fraternity and subject to the terms of the lease with the University.

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 to authorize the University of Maine System acting through the University of Maine to amend the lease with the Maine Alpha Alumni Corporation of Sigma Phi Epsilon for land located in the town of Orono, Maine, subject to review and approval of all final terms and conditions by the University of Maine System Treasurer and General Counsel.



**AGENDA ITEM SUMMARY**

- 1. **NAME OF ITEM:** Lease Request, UM
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**  
 Support Maine through research and economic development 802 – Disposition of Real Property or University as Lessor of Real Prop.
- 5. **BACKGROUND:**

The University of Maine System acting through the University of Maine (UM) requests authorization to amend a land lease with the USDA (Government). The original lease began July 1, 1968 and was amended four times to increase the amount of leased land. The current amendment extends the terms of the existing lease for two optional ten year renewal periods to be exercised at the option of the Government beyond the current termination date of June 30, 2018.

This request is pursuant to Board Policy 802, Disposition of Real Property, which requires Board approval for leases exceeding ten years or \$500,000. In this case the requirement is in regards to the duration and approval by the full Board is required.

The land lease consists of a total of 1.71 acres in the Town of Orono, Maine and 0.872 acres in the Town of Presque Isle, Maine. The proposed terms of the lease include two additional ten year renewal options beginning at the termination of the current lease on June 30, 2018 and with no further consideration required.

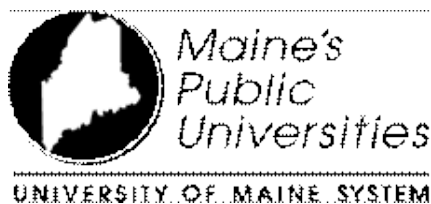
The land is being used by the United States Department of Agriculture, Agriculture Research Service to house a soil and water research facility in Orono, and for a soil and water research and storage facility in Presque Isle. When the original lease began fifty years ago, the University did not complete an appraisal of the land, nor has one been done since, thus no information regarding the value of the land is available.

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 to authorize the University of Maine System acting through the University of Maine to amend the lease with the Government for land located in the towns of Orono and Presque Isle, Maine, subject to review and approval of all final terms and conditions by the University of Maine System Treasurer and General Counsel.





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

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](#)



## AGENDA ITEM SUMMARY

- 1. **NAME OF ITEM:** Naming, Lafayette and Rawcliffe 4-H Science and Engineering Center, UM
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**  
 Increase Enrollment 803 Naming of Physical Facilities  
 University workforce engagement
- 5. **BACKGROUND:**

The University of Maine System acting through the University of Maine requests authorization for the naming of a facility pursuant to Board of Trustee Policy 803.

Policy 803 states, in part: "...The naming of any physical facility in the University of Maine System is reserved to the Board of Trustees. Naming of any other campus area or object is reserved to the President of that University..... Facilities may be named for any individual, living or dead, except for current employees or current members of the Board of Trustees. Other acceptable names include, but are not limited to, geographical designations, functions, or University groups.... Recommendations to the Chancellor and Trustees for names of physical facilities shall be made by the President of a University after consultation with such committees as may be established for this purpose....."

The Policy also states that "facilities may be named for, or on the recommendation of, a major contributor to the cost of the facility. A contribution equivalent to at least 25% of the project cost is suggested for a naming gift for a physical facility" and that naming "gifts may also be made when a donor establishes an endowment whose income is adequate to provide at least 75% of expected annual operating costs (utilities, custodial and maintenance)."

In this case, the proposed name as recommended by the President of the University of Maine, Susan J. Hunter, is the Lafayette and Rawcliffe 4-H Science and Engineering Learning Center.

This facility is located at 491 College Avenue. It is currently occupied by the Cooperative Extension, Pest Management Office. The Pest Management Office will be moving to the University of Maine Cooperative Extension Diagnostic and Research Laboratory this spring. The 491 College Avenue facility will then become a 4-H center for youth engagement in areas of STEM education.

4-H is the largest out-of-school educational program in Maine. Partnerships with local schools and University academic programs through 4-H are occurring across our state.

5/10/2018

The naming is part of a \$125,000 renovation and is in honor of Danny and Carla Lafayette and on behalf of their donation of \$31,500 in this instance and more than \$500,000 in the past to the University.

This renovated facility will provide an excellent location to bring K-12 students to the campus to experience hands-on educational activities with a focus on STEM. The center can serve as a launch point for engagement with academic programs that have a K-12 outreach component such as the RISE Center, the College of Engineering and others.

The location of the facility on College Avenue is very close to campus with available parking. The repurposing of this facility renovation will advance the outreach of 4-H and increase access to campus resources and programs for K-12 students and teachers.

Currently, the facility, which is of wood construction and 3,230 gross square feet, has a Sightlines net asset value of 87%. This investment would be expected to improve that NAV.

The renovated facility is expected to open in the fall of 2018.

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 to authorize the University of Maine System acting through the University of Maine to authorize the name of the Lafayette and Rawcliffe 4-H Science and Engineering Learning Center.



**AGENDA ITEM SUMMARY**

- 1. **NAME OF ITEM:** Master Plan Acceptance, UMA
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**  
All Primary and Secondary Outcomes
- 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 Maine at Augusta initiated a master planning process in the spring of 2016 and completed this process with a final presentation to the Augusta and Bangor campus communities in the summer of 2017.

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. Six of seven such campus master plans are either completed or in progress, including the plan from UMA which is before the Board.

The planning process was initiated at UMA during the prior presidential administration and has since been led by President Rebecca Wyke and as submitted reflects President Wyke's participation. The Plan has been endorsed by the respective Campus Facilities Committees.

The Augusta campus Master Plan was last updated in 1998; the Bangor campus Master Plan was last updated in 2000. UMA is unique in that it operates two campuses and six off-campus Centers, and is entirely non-residential. Harriman and Associates worked with a campus Steering Committee to create a single Facilities Master Plan that proposes future development for both the Augusta and Bangor campuses. UMA's Off-Campus Centers operate in leased spaces and were not included in the Facilities Master Plan.

According to Sightlines 2017 report, UMA's overall density factor is the highest within the University of Maine System. This is in part due to the fact the institution is non-residential. UMA's NAV is 63%, which is the highest in the System and is at the interim benchmark – though not yet the long-term benchmark - which Trustees are seeking to achieve statewide.

The Master Plan provides a detailed evaluation of current campus spaces with recommendations for optimizing teaching, administrative, and support spaces throughout each campus using existing facilities to the extent possible, consistent with the UMA Strategic Plan and Board of Trustee directives. As these changes are implemented, UMA's NAV would improve.

In addition to addressing future development of academic and administrative facilities, the Augusta campus Master Plan provides guidance on potential future development of residence halls on the Augusta campus, should the institution transition from being non-residential to a residential campus. The Board last considered the issue of housing at UMA when its Finance Facilities and Technology Committee supported continued exploration of ideas at its meeting in April 2017.

The Bangor campus Master Plan identifies campus improvements that would help to transform the aesthetic of the former military base into a more traditional college campus by adding campus walks with improved landscaping and new wayfinding and associated signage.

The campus plan describes options that could be implemented on each campus to create a more welcoming campus environment while continuing to use the existing facilities more efficiently.

While the plan includes projects that would increase the campus gross square footage, these projects will only be undertaken commensurate with changes in enrollment and academic program offerings or other revenue generation.

Collectively, the Master Plan provides UMA with a guide for future development for the Augusta and Bangor campuses for the next twenty years. The projected cost to implement all recommendations in the Plan ranges between approximately \$72-\$92 million dollars.

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. RESOLUTION**

That the Board of Trustees approves the recommendation of the Finance, Facilities and Technology Committee and acknowledges the campus master plan from UMA 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.

Attachment:

[UMA Master Plan Final Presentation](#)



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## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Confirmation of Faculty & Student Representatives 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 nominations are being recommended by the Presidents:

Faculty Representative:

Heather Ball, UMM - May 2018 to May 2020  
Patti Miles, UM - reappointed for one year term - May 2018 to May 2019  
Lisa Leduc, UMPI – reappointed for two year term – May 2018 to May 2020  
Elizabeth Turesky, USM - reappointed for one year term - May 2018 to May 2019

Student Representatives:

Teresa Plummer, Graduate Student, USM – appointed for two year term - March 2018 to May 2020  
Isaac Michaud, UMF - term extended to November 2018  
Duane Belanger, UMFK - term extended for one year to May 2019  
Lukas Lagasse, UM – appointed for two year term - June 2018 to June 2020  
Alayna Caricofe, UMM – appointed for one year term - May 2018 to May 2019  
Evangelos Zarkadas, UMPI – appointed for two year term - May 2018 to May 2020

**6. TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees approves the appointments of the following Faculty and Student Representatives to the Board of Trustees:

Faculty Representative:

Heather Ball, UMM - May 2018 to May 2020

Patti Miles, UM - reappointed for one year term - May 2018 to May 2019

Lisa Leduc, UMPI – reappointed for two year term – May 2018 to May 2020

Elizabeth Turesky, USM - reappointed for one year term - May 2018 to May 2019

Student Representatives:

Teresa Plummer, Graduate Student, USM – appointed for two year term - March 2018 to May 2020

Isaac Michaud, UMF - term extended to November 2018

Duane Belanger, UMFK - term extended for one year to May 2019

Lukas Lagasse, UM – appointed for two year term - June 2018 to June 2020

Alayna Caricofe, UMM – appointed for one year term - May 2018 to May 2019

Evangelos Zarkadas, UMPI – appointed for one year term - May 2018 to May 2019

5/17/18





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## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Election of Board Officers
2. **INITIATED BY:** Trustee Gregory Johnson, Chair, Trustee Nominating Committee

3. **BOARD INFORMATION:** **BOARD ACTION:** X

4. **OUTCOME:** **BOARD POLICY:**  
Bylaws – Article II, Section 2.1

5. **BACKGROUND:**

The Board Chair appointed the following Trustees to the Trustee Nominating Committee:  
Gregory Johnson, Chair, Samuel Collins and Kelly Martin

The Committee will propose a slate of officers at the annual meeting in May.

6. **TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees approves the Board of Trustees slate of officers for 2018-2019, as presented.

05/10/18



### AGENDA ITEM SUMMARY

- 1. NAME OF ITEM:** Key Performance Indicators (KPI) and Strategic Resource Allocation Planning (SRAP) Update
- 2. INITIATED BY:** James H. Page, Chancellor
- 3. BOARD INFORMATION:** X                      **BOARD ACTION:**
- 4. OUTCOME:**                                      **BOARD POLICY:**  
All Primary & Secondary Outcomes
- 5. BACKGROUND:**

Chancellor James Page, Dr. Robert Neely, Vice Chancellor for Academic Affairs, and Mr. Ryan Low, Vice Chancellor for Finance and Administration & Treasurer, will provide an overview of the Key Performance Indicators (KPI) and a summary of the Strategic Resource Allocation Planning (SRAP) approved investments.

Link to the UMS Interactive Dashboard: <https://maine.webtech-tst.its.maine.edu/academics/ums-dashboard/>

Handouts:  
[KPI/SRAP Update](#)



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## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** MaineStreet Discussions
2. **INITIATED BY:** James Erwin, Chair
3. **BOARD INFORMATION:** X                      **BOARD ACTION:**
4. **OUTCOME:**                                      **BOARD POLICY:**  
Primary Outcomes:  
    Increase enrollment  
    Improve student success and completion
5. **BACKGROUND**

Dr. David Demers, Chief Information Officer, will present information on the current state of the MaineStreet (Peoplesoft) ERP environment along with an update on current upgrade efforts and anticipated impact. Future opportunities and directions will also be presented with particular emphasis on strategies to resolve data integrity and access issues, optimization of functionality and overall sustainability of the environment to support current and future University needs.

Presentation:

[UMS MaineStreet Discussion Presentation](#)

05/10/2018



**AGENDA ITEM SUMMARY**

- 1. **NAME OF ITEM:** Assessment of the UMaine Strategic Plan
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** X **BOARD ACTION:**
- 4. **OUTCOME:** All primary and secondary outcomes **BOARD POLICY:**
- 5. **BACKGROUND:**

University of the Maine President Susan Hunter will provide an assessment of the UMaine Strategic Plan.

As the Blue Sky Plan reached the five-year mark, President Hunter charged Provost Jeffrey Hecker with developing an approach to lead the university in a process of self-reflection and assessment of progress made during the implementation of the Blue Sky Plan. This reflection provides the opportunity to celebrate successes, undergo a realistic appraisal of where we have fallen short and identify lessons learned in the process.

Provost Hecker formed and chaired the Blue Sky Strategic Plan Assessment Steering Committee, with Michael Scott, president of the Faculty Senate, serving as co-chair. Five additional individuals were named to the committee, and each was charged with chairing a Pathway Team composed of faculty, staff, administrators and a UMaine Board of Visitors member.

The Steering Committee developed guiding principles for this work, including a commitment to an inclusive process of engaging the UMaine community, an efficiency by mining existing data. The assessment focused on the Blue Sky initiatives, since the context for specific strategies changed over the life of the plan.

In the spring 2017 semester, the Pathway Teams identified sources of relevant data and provided initial thoughts regarding Pathway progress on actions taken and relevant outcomes. Two graduate students, Paul Fink and Kassie Stevens, were hired to work over summer 2017 to aggregate data from existing sources, such as annual reports, and to identify gaps in the data.

In the fall 2017 semester, the Provost hosted six open forums. The goal of the forums was to share information gathered to date and collect additional input. At the initial forum, Provost Hecker and President Hunter provided an overview of the progress made and laid out the plan for the five Pathway Forums. In each Pathway Forum, the Pathway chair presented a summary of actions taken in support of the initiatives outlined in the Pathway, as well as relevant outcomes and impacts, and feedback was collected. A website was created with information related to each Pathway, a video of each forum for those unable to attend, and a portal for the UMaine community to contribute ideas and questions. The Pathway Teams reflected on the discussions at the forums and the feedback gathered through the website, and collected additional information as needed.

The Steering Committee synthesized the information gathered and developed a draft report. Working with the Pathway Teams, the final report was completed in March 2018.

Attachment:

[University of Maine Strategic Plan Review](#)

5-22-18



## AGENDA ITEM SUMMARY

- 1. **NAME OF ITEM:** Confirmation of Boards of Visitors' Appointments for 2018-2019
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY**  
University of Maine System Charter
- 5. **BACKGROUND:**

In accordance with the University of Maine System Charter, each Board of Visitors consists of up to 20 members recommended by campus Presidents and confirmed by the Board of Trustees. Membership should reflect the mission of the university and the region it serves. Boards of Visitor appointment recommendations from the Presidents are outlined in the attached biographical sketches distributed to the Board of Trustees.

Campuses may contact the potential candidate(s) to determine his/her interest prior to submitting the name(s) to the Clerk's Office. The list of proposed members may be larger than the number of seats the President intends to fill, understanding that this is the list from which they will draw to extend invitations.

- 6. **TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees confirms the Boards of Visitors' appointments for 2018-2019, as presented.

Attachments:

- [2018 BOV Master List of Bio's for Proposed Candidates](#)
- [2018 BOV Master List of All Members by Campus](#)

05/10/18



## AGENDA ITEM SUMMARY

- 1. **NAME OF ITEM:** Tenure at Time of Hire; UM
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**  
 Relevant Academic Programming Section 310
- 5. **BACKGROUND:**

Dr. Penny Rheingans has accepted an offer of employment from the University of Maine as the Director of the School of Computing and Information Science and Professor of Computer Science, with an initial appointment as Director for five years. Thus, President Susan J. Hunter has requested that Dr. Rheingans be awarded tenure effective August 1, 2018 to coincide with this appointment.

According to President Hunter, “Dr. Rheingans was selected through a competitive, national search. She is an experienced administrator, accomplished researcher, and effective teacher. In the area of external support, she has an excellent record, raising well over \$9 million through 25 individual grants since 1997, mostly from NSF grants including receipt of an NSF CAREER Award. She also has more than 80 peer-reviewed publications within that same time frame. Dr. Rheingans has been especially active as a leader in the field of computer visualization, serving on the executive committee of the NIH-NSF Visualization Research Channel Report and on editorial boards and program committees. She has also served on the Board of Directors of the Computing Research Association, an elected position of distinction and clearly a strong recognition of research excellence by her peers. Her work is cross-disciplinary, with collaborations with domain experts in such areas as environmental protection, land change science, physics, medicine, machine learning, computational fluid dynamics, cybersecurity, urban planning, and student success. She has taught a wide range of courses at both the undergraduate and graduate levels and received strong teaching evaluations. She has successfully supervised 6 Ph.D. students and 18 Master's students. In the area of service, Dr. Rheingans has served as the Director of the University of Maryland Baltimore County's Center for Women in Technology from 2009 to the present. She has made substantial contributions to increasing the diversity profile in computer science and engineering.”

Dr. Rheingans will come to the University of Maine from the University of Maryland – Baltimore County, Department of Computer Science and Electrical Engineering where she has served since 1998, and as a full-professor since 2009. Dr. Rheingans earned her undergraduate degree from Harvard University and her doctorate from the University of North Carolina, Chapel Hill.

This request is in accordance with Board of Trustees Policy and the UMS Administrative Procedures Manual for Section 310: "[at] the time of initial appointment, exceptionally qualified individuals may be awarded tenure at the rank of full professor, with the approval of the appointment by the Trustees."

That the Academic and Student Affairs Committee approved this recommendation to be forwarded for the Board of Trustees approval at the May 20-21, 2018 Board meeting.

The resolution has been clarified since the Academic and Student Affairs Committee meeting on 5/14/18.

**6. TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees approves tenure at the rank of Professor of Computer Science at the University of Maine to Dr. Penny Rheingans, with tenure to be effective August 1, 2018, in accordance with Board Policy.

Attachment:

[UM School of Computing & Information Science Tenure Candidate Background](#)





## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Tenure at Time of Hire, UM Business School
2. **INITIATED BY:** James H. Page, Chancellor
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**  
Relevant Academic Programming Section 310
5. **BACKGROUND:**

The University of Maine seeks to hire Dr. J. Michael Weber as the founding Dean of the Graduate School of Business, effective July 1, 2018. Thus, President Susan J. Hunter has requested that Dr. Weber be awarded tenure to coincide with this appointment.

As outlined by President Hunter and Provost Hecker, Dr. Weber has: approximately 20 years of teaching experience at the graduate MBA level; experience developing new programs; critical experience in executing AACSB accreditation; sixteen publications and two edited collections; and, two Outstanding Faculty Member awards. Further, he currently holds tenure in the Stetson School of Business and Economics at Mercer University as the Senior Associate Dean, and has served at the University of West Florida, University of Miami, Barry University, and Eastern New Mexico University.

This request is in accordance with Board of Trustees Policy and the UMS Administrative Procedures Manual for Section 310 for appointment of Senior Administrators contingent on:

“1. the nominee will have been accepted by an appropriate academic department and accorded faculty rank, at the time of appointment as academic dean;

2. the nomination will have been duly evaluated through the campus tenure processes.”

That the Academic and Student Affairs Committee approved this recommendation to be forwarded for the Board of Trustee approval at the May 21, 2018 Board meeting.

6. **TEXT OF PROPOSED RESOLUTION:**

The Board of Trustees approves tenure at the rank of Professor in the Maine Business School at the University of Maine to Dr. J. Michael Weber with tenure to be effective July 1, 2018, in accordance with Board Policy.

Attachments:

[Background Information for Dr. Weber](#)

[Faculty Evaluation Standards](#)

5-10-18



## AGENDA ITEM SUMMARY

- 1. **NAME OF ITEM:** Tenure at Time of Hire; USM
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**  
Relevant Academic Programming Section 310
- 5. **BACKGROUND:**

The University of Southern Maine (USM) has requested immediate tenure at time of hire at the rank of Associate Professor of Economics for Dr. Vaishali Mamgain. This recommendation has the full support of the academic administrative personnel structure at USM.

Provost Jeannine Uzzi indicates that “Dr. Mamgain first came to USM in 1997 as an assistant professor and earned tenure from this Board of Trustees in 2004. She continued to serve the University until 2014 when she resigned her faculty position to pursue a personal and professional goal: she was selected to participate in a three-year program that allowed her to focus exclusively on the field of contemplative pedagogy, both for her teaching and her research. Broadly based on the theories and practices of behavioral economics, Professor Mamgain has researched protocols to integrate these studies into the classroom. It is this focus that she has brought back to USM. She has joined her student-focused classroom approach, utilizing learning community approaches with the new pedagogy, creating unique experiences that yield courses that are challenging and build responsibility to the material.” Provost Uzzi writes further that “Professor Mamgain’s research into the migrant workforce for the state of Maine impacts communities and the state economy and speaks to issues of state and national import. She has taught courses on the political economy of food and also on urban economics. Her contributions in these interconnected areas have helped inform state and local policy.”

This request is in accordance with the Board of Trustees Policy and the UMS Administrative Procedures Manual for Section 310; however, section 310 is written for granting tenure to a seasoned professional at the rank of full professor; specifically,

*“At the time of initial appointment, exceptionally qualified individuals may be awarded tenure at the rank of full professor, with the approval of the appointment by the Trustees. In other cases, as the institutions deem appropriate, full professors may receive an initial appointment without tenure but, with Trustee approval at the time of their appointment,*

*may be given the opportunity to apply for tenure during the second year of their appointment.”*

USM has acknowledged that Dr. Mamgain is to be hired at the rank of Associate Professor, and indicates that the rank of associate professor is appropriate in this case for one who is “still developing their body of work and contributing to the University’s intellectual growth, as well as the growth of both the community and society.”

Additionally, Dr. Mamgain’s scholarly output is in accordance with USM’s criteria for tenure; specifically,

*Clearly related to teaching ability is creative scholarly achievement, whether published or unpublished research, creative work, or new courses. The stimulating teacher is one who stays abreast of the teacher’s field, masters new approaches to that field and contributes to the development of ideas in that field. The original scholar is more likely than the purely imitative one to be able to synthesize new trends in a discipline, integrate them with traditional theories, and present in a stimulating manner the result of the teacher’s own thinking to the students.*

That the Academic and Student Affairs Committee approved this recommendation to be forwarded for the Board of Trustees approval at the May 20-21, 2018 Board meeting.

**6. TEXT OF PROPOSED RESOLUTION:**

That the Board of approves tenure at the rank of Associate Professor of Economics at the University of Southern Maine to Dr. Vaishali Mamgain with tenure to be effective September 1, 2018, in accordance with Board Policy.

Attachment:

[USM Tenure Candidate Background Information](#)



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**AGENDA ITEM SUMMARY**

- 1. **NAME OF ITEM:** Appointment of Interim President, UMF
- 2. **INITIATED BY:** James H. Page, Chancellor
- 3. **BOARD INFORMATION:** X **BOARD ACTION:**
- 4. **OUTCOME:** **BOARD POLICY:**  
All Primary and Secondary Outcomes
- 5. **BACKGROUND:**

Dr. Kathryn A. Foster, President of the University of Maine at Farmington, will conclude her service with the University of Maine System on June 30, 2018. In order to provide campus leadership for the next year, Chancellor Page recommends the appointment of an Interim President.

Dr. Eric C. Brown, Provost and Vice President for Academic Affairs, is being recommended as Interim President effective July 1, 2018 for a year one appointment.

Dr. Brown was appointed as Provost and Vice President for Academic Affairs on May 1, 2018. Since December 2016 he served in that position on an interim bases overseeing all aspects of academic affairs while serving on President’s Council and the System Chief Academic Officers Council. Dr. Brown was elected in 2013 by a university-wide vote of Honors faculty to serve as Director for a three-year term, beginning in the fall of 2014. Dr. Brown has been a faculty member at UMF since 2003 serving as Assistance Professor of English, Associate Professor of English, and from 2012 to 2017 as Professor of English. Dr. Brown was also the UMS Trustee Professor from 2011 to 2012.

Dr. Brown has a BA in English and a BA in Zoology from the University of Maine, a Ph.D. in English from Louisiana State University and was a Postdoctoral Fellow in the Department of English and American Literature at Harvard University.

6. **TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees approves the appointment of Dr. Eric C. Brown as Interim President of the University of Maine at Farmington, effective July 1, 2018 for a one year appointment.

## University of Maine System Managed Investment Pool

# TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>MIP Composite</b>	<b>316,899,080</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.4</b>	<b>-0.2</b>	<b>6.5</b>	<b>9.7</b>	<b>9.7</b>	<b>5.1</b>	<b>5.7</b>	<b>5.9</b>	<b>5.5</b>
Allocation Index				-0.8	-0.3	7.5	10.7	10.2	5.8	6.3	6.1	5.3
Policy Index				-0.7	-0.1	7.9	11.5	10.9	6.4	6.7	6.3	5.8
<b>Total Domestic Large Cap</b>	<b>57,011,279</b>	<b>18.0</b>	<b>16.0</b>	<b>-2.5</b>	<b>-0.8</b>	<b>10.5</b>	<b>13.9</b>	<b>15.5</b>	<b>10.7</b>	<b>13.0</b>	<b>12.3</b>	<b>10.0</b>
S&P 500				-2.5	-0.8	10.6	14.0	15.6	10.8	13.3	12.7	9.5
SSgA S&P 500	57,011,279	18.0	16.0	-2.5	-0.8	10.5	13.9	15.5	10.7	13.2	12.6	9.5
S&P 500				-2.5	-0.8	10.6	14.0	15.6	10.8	13.3	12.7	9.5
<b>Total Domestic Small/Mid Cap</b>	<b>18,812,138</b>	<b>5.9</b>	<b>6.0</b>	<b>0.8</b>	<b>1.4</b>	<b>13.9</b>	<b>15.7</b>	<b>19.8</b>	<b>8.9</b>	<b>12.2</b>	<b>11.3</b>	<b>11.0</b>
Russell 2500				1.0	-0.2	10.0	12.3	16.8	8.2	11.5	10.9	10.3
Westfield Capital	9,501,593	3.0	3.0	1.0	4.3	19.2	23.5	22.7	9.2	12.6	11.7	11.5
Russell 2500 Growth				0.8	2.4	15.2	19.9	19.8	9.1	13.4	11.8	11.2
DFA	9,310,545	2.9	3.0	0.6	-2.2	7.6	6.9	15.2	7.3	10.6	10.0	--
Russell 2000 Value				1.2	-2.6	4.4	5.1	16.6	7.9	10.0	9.4	8.6
<b>Total International Equity (including emerging markets)</b>	<b>76,200,112</b>	<b>24.0</b>	<b>23.0</b>	<b>0.0</b>	<b>-0.3</b>	<b>9.2</b>	<b>16.0</b>	<b>12.9</b>	<b>6.1</b>	<b>5.2</b>	<b>5.0</b>	<b>3.1</b>
MSCI EAFE				-1.8	-1.5	8.2	14.8	13.2	5.6	6.5	5.3	2.7
Morgan Stanley	20,464,423	6.5	6.3	1.4	-1.6	5.6	13.7	11.3	4.9	5.3	5.6	3.4
Globeflex	21,144,839	6.7	6.3	-0.9	0.1	12.2	19.1	14.2	8.4	8.2	6.4	2.5
MSCI EAFE				-1.8	-1.5	8.2	14.8	13.2	5.6	6.5	5.3	2.7
Kabouter International Opportunities Offshore Fund II	12,558,913	4.0	3.5	0.4	1.1	--	--	--	--	--	--	--
MSCI EAFE Small Cap				-1.1	0.2	14.2	23.5	17.1	12.3	11.1	8.7	6.5
<b>Emerging Markets Equity</b>	<b>22,031,937</b>	<b>7.0</b>	<b>7.0</b>	<b>-0.7</b>	<b>-0.3</b>	<b>8.3</b>	<b>13.6</b>	<b>12.2</b>	<b>4.1</b>	<b>1.1</b>	<b>2.5</b>	<b>--</b>
MSCI Emerging Markets				-1.9	1.4	17.6	24.9	21.0	8.8	5.0	2.5	3.0
Aberdeen Emerging Mkts	10,924,262	3.4	3.5	-1.8	0.1	9.5	16.3	16.1	6.9	2.6	3.6	--
MSCI Emerging Markets				-1.9	1.4	17.6	24.9	21.0	8.8	5.0	2.5	3.0
Mondrian EM Small Cap	11,107,675	3.5	3.5	0.4	-0.6	6.9	10.6	8.0	1.3	--	--	--
MSCI Emerging Markets Small Cap				-1.3	0.2	15.6	18.6	16.5	7.2	4.6	2.5	4.4
<b>Total Fixed Income</b>	<b>57,774,596</b>	<b>18.2</b>	<b>18.0</b>	<b>0.7</b>	<b>-0.3</b>	<b>1.6</b>	<b>2.8</b>	<b>3.5</b>	<b>2.4</b>	<b>2.8</b>	<b>4.5</b>	<b>4.6</b>
BBgBarc US Aggregate TR				0.6	-1.5	-0.2	1.2	0.8	1.2	1.8	2.9	3.6
Commonfund	16,451,408	5.2	5.0	0.6	-0.7	0.9	2.7	2.5	2.0	2.6	3.9	4.3
BBgBarc US Aggregate TR				0.6	-1.5	-0.2	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	25,576,053	8.1	8.0	1.0	-0.9	1.1	0.6	1.0	--	--	--	--
BBgBarc US TIPS TR				1.1	-0.8	1.3	0.9	1.2	1.3	0.0	2.5	2.9
Guggenheim US Bank Loans	15,747,135	5.0	5.0	0.3	1.1	3.2	--	--	--	--	--	--
Credit Suisse Leveraged Loans				0.3	1.6	3.9	4.6	7.2	4.3	4.2	4.5	5.4



March 31, 2018

## University of Maine System Managed Investment Pool

# TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Total GAA</b>	<b>73,532,087</b>	<b>23.2</b>	<b>23.0</b>	<b>-0.2</b>	<b>-0.4</b>	<b>3.7</b>	<b>6.8</b>	<b>6.9</b>	<b>3.0</b>	<b>3.3</b>	<b>3.4</b>	<b>--</b>
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-1.0	-0.1	8.1	12.1	10.5	6.5	6.6	6.0	4.8
GMO Global Absolute Return	24,777,686	7.8	7.7	-0.6	0.8	6.1	9.3	8.7	4.2	4.1	5.3	5.0
Blended Index				0.3	-1.0	1.3	2.6	3.6	3.0	2.9	4.2	4.7
Wellington	24,757,459	7.8	7.7	-1.1	-0.8	5.7	10.3	11.4	5.9	6.2	3.9	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-1.0	-0.1	8.1	12.1	10.5	6.5	6.6	6.0	4.8
Newton Global Real Return	23,996,942	7.6	7.7	1.2	-1.3	-0.7	0.8	--	--	--	--	--
60% MSCI ACWI (Net) / 40% BBgBarc Global Agg				-0.9	0.0	7.8	11.7	9.9	6.2	6.2	5.7	4.6
<b>Total Hedge Funds</b>	<b>27,101,448</b>	<b>8.6</b>	<b>9.0</b>	<b>-0.7</b>	<b>0.6</b>	<b>4.7</b>	<b>4.9</b>	<b>6.1</b>	<b>1.7</b>	<b>2.4</b>	<b>1.5</b>	<b>2.0</b>
HFRI Fund of Funds Composite Index				-0.4	0.6	5.0	5.9	6.0	2.0	3.4	2.6	1.6
EntrustPermal	8,470,926	2.7	3.0	-1.6	-2.6	-0.4	0.8	3.7	-0.5	1.7	2.2	3.6
HFRI Fund of Funds Composite Index				-0.4	0.6	5.0	5.9	6.0	2.0	3.4	2.6	1.6
Lighthouse	18,630,523	5.9	6.0	-0.3	2.1	7.1	6.5	7.3	--	--	--	--
Credit Suisse Long Shrt Eqt USD				-0.1	1.0	7.4	10.7	7.3	4.0	6.3	4.9	4.5
<b>Total Real Assets</b>	<b>2,726,494</b>	<b>0.9</b>	<b>3.0</b>	<b>-0.2</b>	<b>-0.2</b>	<b>1.9</b>	<b>1.8</b>	<b>-1.6</b>	<b>0.2</b>	<b>2.8</b>	<b>3.9</b>	<b>--</b>
NCREIF Timberland Index				0.9	0.9	3.1	3.8	3.8	3.5	6.1	5.8	4.1
John Hancock Timber Fund	2,726,494	0.9	3.0	-0.2	-0.2	1.9	1.8	-1.6	0.2	2.8	4.0	-0.1
NCREIF Timberland Index				0.9	0.9	3.1	3.8	3.8	3.5	6.1	5.8	4.1
<b>Private Equity</b>	<b>2,115,274</b>	<b>0.7</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>9.6</b>	<b>14.3</b>	<b>13.1</b>	<b>10.5</b>	<b>--</b>	<b>--</b>	<b>--</b>
Landmark Equity Partners XV	2,115,274	0.7	2.0	0.0	0.0	9.6	14.3	13.1	10.5	--	--	--
Cambridge Associates US All PE (1 Qtr Lag)				5.3	5.3	13.2	17.6	15.4	12.0	13.6	13.3	9.8
<b>Total Cash</b>	<b>1,625,653</b>	<b>0.5</b>	<b>0.0</b>									
Distribution Account	1,625,653	0.5	0.0	0.1	0.3	0.7	0.8	0.4	0.3	0.2	0.2	0.4
91 Day T-Bills				0.1	0.4	0.9	1.2	0.8	0.5	0.3	0.3	0.3

## Notes:

Fiscal YTD begins 7/1

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

Returns are net of manager fees

John Hancock Timber market value estimated as of 03/31/18

Landmark market value estimated as of 03/31/18

Cash account includes \$1,042 currently being held in the MetWest account and \$1,107 being held in the TCW account

Kabouter includes \$1M that settled on 04/01

March 31, 2018

## University of Maine System Pension Plan

**TOTAL PLAN PERFORMANCE**

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Pension Composite</b>	<b>29,739,883</b>	<b>100.0</b>	<b>100.0</b>	<b>0.2</b>	<b>-0.6</b>	<b>3.6</b>	<b>6.1</b>	<b>6.5</b>	<b>3.7</b>	<b>4.6</b>	<b>4.9</b>	<b>4.3</b>
<i>Allocation Index</i>				-0.2	-0.1	6.0	8.7	7.8	5.2	5.9	5.9	5.0
<i>Policy Index</i>				-0.2	-0.2	5.7	8.5	7.9	5.3	6.1	6.2	5.6
<b>Total Domestic Large Cap</b>	<b>2,374,930</b>	<b>8.0</b>	<b>8.0</b>	<b>-2.5</b>	<b>-0.8</b>	<b>10.6</b>	<b>14.0</b>	<b>15.5</b>	<b>10.8</b>	<b>13.0</b>	<b>11.7</b>	<b>8.1</b>
<i>S&amp;P 500</i>				-2.5	-0.8	10.6	14.0	15.6	10.8	13.3	12.7	9.5
Vanguard S&P 500 Index	2,374,930	8.0	8.0	-2.5	-0.8	10.6	14.0	15.5	10.8	--	--	--
<i>S&amp;P 500</i>				-2.5	-0.8	10.6	14.0	15.6	10.8	13.3	12.7	9.5
<b>Total Small Cap Composite</b>	<b>1,213,388</b>	<b>4.1</b>	<b>4.0</b>	<b>1.3</b>	<b>-0.1</b>	<b>9.1</b>	<b>11.8</b>	<b>18.8</b>	<b>8.4</b>	<b>11.2</b>	<b>10.1</b>	<b>--</b>
<i>Russell 2000</i>				1.3	-0.1	9.1	11.8	18.8	8.4	11.5	10.4	9.8
SSgA R2000 Index Fund Non Lending	1,213,388	4.1	4.0	1.3	-0.1	9.1	11.8	18.8	8.4	11.3	10.2	--
<i>Russell 2000</i>				1.3	-0.1	9.1	11.8	18.8	8.4	11.5	10.4	9.8
<b>Total International Equity (including emerging markets)</b>	<b>3,029,220</b>	<b>10.2</b>	<b>10.0</b>	<b>1.1</b>	<b>-1.2</b>	<b>6.0</b>	<b>12.6</b>	<b>10.3</b>	<b>3.9</b>	<b>3.6</b>	<b>4.3</b>	<b>2.5</b>
<i>MSCI EAFE</i>				-1.8	-1.5	8.2	14.8	13.2	5.6	6.5	5.3	2.7
Morgan Stanley Int'l	2,129,783	7.2	7.0	1.4	-1.5	5.6	13.7	11.4	5.1	5.4	5.7	3.4
<i>MSCI EAFE</i>				-1.8	-1.5	8.2	14.8	13.2	5.6	6.5	5.3	2.7
<b>Emerging Markets Equity</b>	<b>899,437</b>	<b>3.0</b>	<b>3.0</b>	<b>0.5</b>	<b>-0.6</b>	<b>6.9</b>	<b>10.6</b>	<b>8.0</b>	<b>1.3</b>	<b>-0.4</b>	<b>--</b>	<b>--</b>
<i>MSCI Emerging Markets</i>				-1.9	1.4	17.6	24.9	21.0	8.8	5.0	2.5	3.0
Mondrian EM Small Cap	899,437	3.0	3.0	0.5	-0.6	6.9	10.6	8.0	1.3	--	--	--
<i>MSCI Emerging Markets Small Cap</i>				-1.3	0.2	15.6	18.6	16.5	7.2	4.6	2.5	4.4
<b>Total Fixed Income</b>	<b>9,373,615</b>	<b>31.5</b>	<b>32.0</b>	<b>0.7</b>	<b>-1.0</b>	<b>0.5</b>	<b>1.8</b>	<b>1.9</b>	<b>1.7</b>	<b>1.9</b>	<b>3.4</b>	<b>4.7</b>
<i>BBgBarc US Aggregate TR</i>				0.6	-1.5	-0.2	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Total Bond Market Index	5,841,045	19.6	20.0	0.6	-1.5	-0.4	1.1	0.8	1.1	--	--	--
<i>BBgBarc US Aggregate TR</i>				0.6	-1.5	-0.2	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	2,003,056	6.7	7.0	1.0	-0.9	1.1	--	--	--	--	--	--
<i>BBgBarc US TIPS TR</i>				1.1	-0.8	1.3	0.9	1.2	1.3	0.0	2.5	2.9
Guggenheim US Bank Loans	1,529,514	5.1	5.0	0.3	1.1	3.2	--	--	--	--	--	--
<i>Credit Suisse Leveraged Loans</i>				0.3	1.6	3.9	4.6	7.2	4.3	4.2	4.5	5.4



## University of Maine System Pension Plan

## TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Total GAA</b>	<b>8,363,345</b>	<b>28.1</b>	<b>27.5</b>	<b>0.1</b>	<b>-1.0</b>	<b>2.6</b>	<b>5.6</b>	<b>6.1</b>	<b>2.6</b>	<b>2.9</b>	<b>2.8</b>	<b>--</b>
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-1.0	-0.1	8.1	12.1	10.5	6.5	6.6	6.0	4.8
Wellington	4,257,515	14.3	13.8	-1.0	-0.7	5.7	10.4	11.5	6.0	6.3	4.0	--
65% MSCI ACWI (Net) / 35% BBgBarc Global Agg				-1.0	-0.1	8.1	12.1	10.5	6.5	6.6	6.0	4.8
Newton Global Real Return	4,105,830	13.8	13.8	1.2	-1.3	-0.7	0.9	--	--	--	--	--
60% MSCI ACWI (Net) / 40% CITI WGBI				-0.7	0.5	8.3	12.3	9.8	6.4	6.1	5.5	4.4
<b>Total Alternative Investments</b>	<b>2,352,178</b>	<b>7.9</b>	<b>7.5</b>	<b>-0.8</b>	<b>0.6</b>	<b>4.7</b>	<b>5.0</b>	<b>6.2</b>	<b>1.9</b>	<b>2.9</b>	<b>1.8</b>	<b>--</b>
HFRI Fund of Funds Composite Index				-0.4	0.6	5.0	5.9	6.0	2.0	3.4	2.6	1.6
EntrustPermal	755,926	2.5	2.5	-1.6	-2.6	-0.4	0.9	3.8	-0.4	1.8	2.2	3.6
HFRI Fund of Funds Composite Index				-0.4	0.6	5.0	5.9	6.0	2.0	3.4	2.6	1.6
Lighthouse	1,596,252	5.4	5.0	-0.3	2.1	7.1	6.5	7.3	--	--	--	--
Credit Suisse Long Shrt Eqd USD				-0.1	1.0	7.4	10.7	7.3	4.0	6.3	4.9	4.5
<b>Total Real Assets</b>	<b>2,533,813</b>	<b>8.5</b>	<b>8.0</b>									
Principal	2,533,813	8.5	8.0	0.6	1.9	5.8	8.0	8.5	9.7	11.0	11.7	4.3
NCREIF ODCE				2.2	2.2	6.3	8.1	8.2	10.0	11.4	11.8	5.1
<b>Total Cash</b>	<b>499,395</b>	<b>1.7</b>	<b>3.0</b>									
Distribution Account	499,395	1.7	3.0	0.1	0.3	0.7	0.8	0.4	0.3	0.2	0.1	0.3
91 Day T-Bills				0.1	0.4	0.9	1.2	0.8	0.5	0.3	0.3	0.3

Notes:

Fiscal YTD begins 7/1

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

Returns are net of manager fees

March 31, 2018



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## University of Maine System Operating Fund

# TOTAL PLAN PERFORMANCE

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
<b>Operating Funds Composite</b>	<b>296,011,327</b>	<b>100.0</b>	<b>100.0</b>	<b>0.1</b>	<b>0.0</b>	<b>2.1</b>	<b>2.9</b>	<b>3.5</b>	<b>2.0</b>	<b>1.9</b>	<b>2.3</b>	<b>2.5</b>
<i>Allocation Index</i>				0.0	0.1	2.4	3.4	3.4	2.3	2.3	2.4	--
<b>Liquidity Pool Composite</b>	<b>49,239,485</b>	<b>16.6</b>	<b>25.0</b>	<b>0.1</b>	<b>0.3</b>	<b>0.8</b>	<b>1.0</b>	<b>0.7</b>	<b>0.6</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>
State Pool	33,152,670	11.2		0.1	0.3	0.9	1.1	0.9	0.7	0.5	0.4	0.6
BOA General Fund	2,606,813	0.9		0.0	0.0	0.0	0.1	0.0	0.0	0.0	--	--
Federated Gov't Obligations	751,878	0.3		0.1	0.3	0.8	0.9	--	--	--	--	--
JP Morgan US Gov't Money Market Fund	12,728,124	4.3		0.1	0.3	0.7	0.9	--	--	--	--	--
<i>Citi 3mth Treasury Bill</i>				0.1	0.3	0.9	1.1	0.7	0.5	0.3	0.2	0.3
<b>Income Pool Composite</b>	<b>164,413,020</b>	<b>55.5</b>	<b>50.0</b>	<b>0.2</b>	<b>-0.2</b>	<b>0.7</b>	<b>1.2</b>	<b>2.1</b>	<b>1.6</b>	<b>1.6</b>	<b>2.1</b>	<b>3.4</b>
Income Research + Management	86,981,573	29.4	26.7	0.1	-0.3	-0.2	0.2	0.5	0.7	0.8	--	--
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>				0.2	-0.2	-0.1	0.2	0.5	0.7	0.8	1.0	1.6
BlackRock Strategic Income Opportunities	22,007,473	7.4	6.7	-0.4	0.4	2.8	3.8	4.7	--	--	--	--
<i>3-Month Libor Total Return USD</i>				0.2	0.5	1.2	1.5	1.2	0.9	0.7	0.6	0.7
Loomis Sayles Bank Loans	22,110,546	7.5	6.7	0.3	1.0	2.8	3.5	5.1	3.5	3.2	3.8	4.5
<i>Loomis Bank Loans Custom Index</i>				0.4	1.2	3.3	4.0	5.0	3.9	4.0	4.4	5.7
Vanguard Total Bond Market Instl' Fund	16,752,887	5.7	5.0	0.6	-1.5	-0.3	1.2	0.8	1.1	1.8	2.9	--
<i>BBgBarc US Aggregate TR</i>				0.6	-1.5	-0.2	1.2	0.8	1.2	1.8	2.9	3.6
Vanguard Inflation-Protected Securities	16,560,541	5.6	5.0	1.0	-0.9	1.1	0.6	--	--	--	--	--
<i>BBgBarc US TIPS TR</i>				1.1	-0.8	1.3	0.9	1.2	1.3	0.0	2.5	2.9
<b>Total Return Pool Composite</b>	<b>82,358,822</b>	<b>27.8</b>	<b>25.0</b>	<b>-0.1</b>	<b>0.0</b>	<b>6.0</b>	<b>8.2</b>	<b>9.3</b>	<b>4.8</b>	<b>4.5</b>	<b>4.8</b>	<b>4.9</b>
Lighthouse	14,401,780	4.9	5.0	-0.3	2.1	7.1	6.5	7.3	--	--	--	--
<i>Credit Suisse Long Shrt Eqd USD</i>				-0.1	1.0	7.4	10.7	7.3	4.0	6.3	4.9	4.5
Newton Global Real Return	21,788,142	7.4	6.3	1.2	-1.3	-0.7	0.9	--	--	--	--	--
<i>60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg</i>				-0.9	0.0	7.8	11.7	9.9	6.2	6.2	5.7	4.6
PIMCO All Asset	21,604,678	7.3	6.3	0.4	0.3	6.8	8.8	11.0	5.7	3.6	4.7	5.3
<i>Blended Index</i>				0.3	-1.0	1.3	2.6	3.6	3.0	2.9	4.2	4.7
Vanguard Total World Stock Index	24,564,222	8.3	7.5	-1.4	-0.5	10.6	15.4	15.7	8.6	9.7	--	--
<i>FTSE Global All Cap Index</i>				-1.9	-0.9	10.5	15.2	15.5	8.6	9.7	8.0	5.3

## 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.

March 31, 2018

### **Information Disclaimer**

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

### **Reporting Methodology**

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.



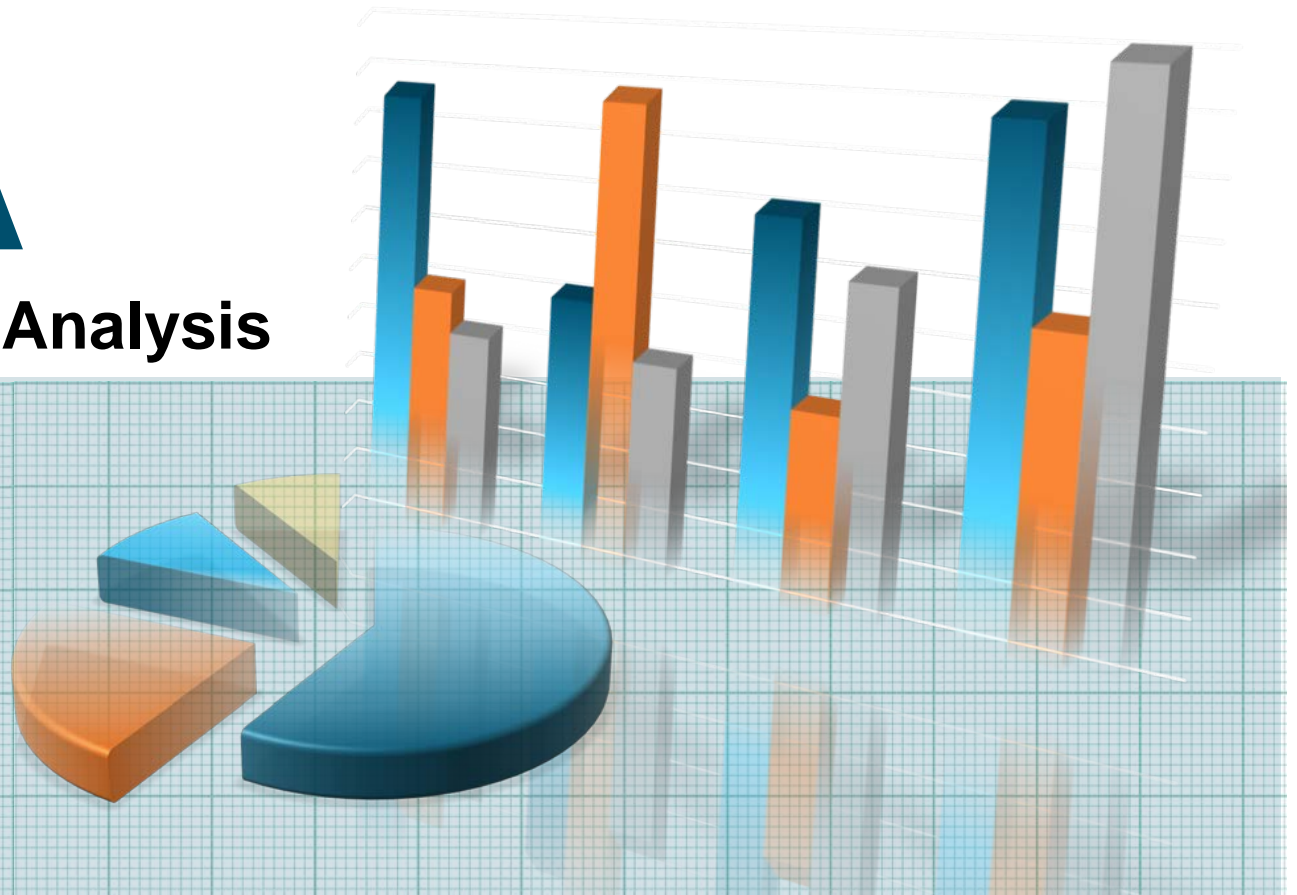


# MYFA

## Multi-Year Financial Analysis

**Ryan Low**

Vice Chancellor for Finance  
and Administration



**May 20, 2018**

## 8 Major Revenue & Expense Categories

### Categories

1. Enrollment
2. Tuition
3. Unified Fee
4. Appropriation
5. Compensation
6. Benefits-Internal-Regular
7. Non-Compensation Expense
8. Capital Expenditures



Maine's  
Public  
Universities

# Enrollment

UNIVERSITY OF MAINE SYSTEM

	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
<b>Consumer price index</b>	2.3%	2.5%	2.4%	2.4%	2.4%
Enrollment		0.3%	0.8%	0.7%	0.7%
In-State, Undergraduate Tuition Rate <sup>1</sup>	2.3%	2.5%	2.4%	2.4%	2.4%
Unified Fee Rate	2.3%	2.5%	2.4%	2.4%	2.4%
Appropriation (fixed)	0.0%	2.5%	2.4%	2.4%	2.4%
Compensation	2.0%	2.5%	2.4%	2.4%	2.4%
Benefits-Internal-Regular	53.4%	53.6%	54.1%	54.7%	55.3%
Non-Compensation Expense <sup>2</sup>		3.2%	2.8%	3.9%	2.8%
Capital Expenditures	4.0%	7.8%	9.8%	7.1%	6.2%
<b>Multi-year Projection</b>	<b>(\$4,137,826)</b>	<b>(\$7,108,772)</b>	<b>(\$10,969,624)</b>	<b>(\$12,173,815)</b>	<b>(\$13,866,919)</b>
Gap as a % of Annual Budget	0.8%	1.3%	1.9%	2.1%	2.3%



# Enrollment

UNIVERSITY OF MAINE SYSTEM

## Credit Hours FY18-FY22

	Budget FY18	Projection							
		FY19	%	FY20	%	FY21	%	FY22	%
<b>UM</b>	279,780	284,034	1.5%	289,673	2.0%	295,616	2.1%	301,882	2.1%
<b>UMA</b>	80,000	81,600	2.0%	<b>7.5% INCREASE</b>	89,164	3.0%	89,164	3.5%	
<b>UMF</b>	55,562	57,467	3.4%		61,123	2.2%	61,123	1.8%	
<b>UMFK</b>	30,442	30,514	0.2%		30,783	0.2%	30,783	0.2%	
<b>UMM</b>	15,000	15,375	2.5%		15,529	1.0%	15,684	1.0%	15,841
<b>UMPI</b>	26,328	26,541	0.8%	27,025	1.8%	27,341	1.2%	27,663	1.2%
<b>USM</b>	183,286	185,861	1.4%	188,574	1.5%	191,284	1.4%	194,020	1.4%
<b>TOTAL</b>	<b>670,398</b>	<b>681,392</b>	<b>1.6%</b>	<b>693,843</b>	<b>1.8%</b>	<b>706,820</b>	<b>1.9%</b>	<b>720,476</b>	<b>1.9%</b>

# Enrollment

UNIVERSITY OF MAINE SYSTEM

## Credit Hours FY19-FY23

	Budget FY19	Projection							
		FY20	%	FY21	%	FY22	%	FY23	%
<b>UM</b>	283,969	285,303	0.5%	287,666	0.8%	290,123	0.9%	292,459	0.8%
<b>UMA</b>	74,183	75,734	2.1%	<b>2.4% INCREASE</b>			2.1%	80,667	2.1%
<b>UMF</b>	56,958	56,391	-1.0%				-0.8%	54,935	-0.6%
<b>UMFK</b>	31,269	31,680	1.3%				0.9%	32,245	0.0%
<b>UMM</b>	15,000	15,055	0.4%				15,100	0.3%	15,145
<b>UMPI</b>	30,717	31,715	3.2%	32,764	3.3%	32,932	0.5%	33,102	0.5%
<b>USM</b>	183,680	181,704	-1.1%	182,420	0.4%	182,780	0.2%	183,736	0.5%
<b>TOTAL</b>	<b>675,776</b>	<b>677,582</b>	<b>0.3%</b>	<b>682,960</b>	<b>0.8%</b>	<b>687,482</b>	<b>0.7%</b>	<b>692,320</b>	<b>0.7%</b>





Maine's  
Public  
Universities

# Appropriation

UNIVERSITY OF MAINE SYSTEM

	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
<b>Consumer price index</b>	2.3%	2.5%	2.4%	2.4%	2.4%
Enrollment		0.3%	0.8%	0.7%	0.7%
In-State, Undergraduate Tuition Rate <sup>1</sup>	2.3%	2.5%	2.4%	2.4%	2.4%
Unified Fee Rate	2.3%	2.5%	2.4%	2.4%	2.4%
<b>Appropriation (fixed)</b>	0.0%	2.5%	2.4%	2.4%	2.4%
Compensation	2.0%	2.5%	2.4%	2.4%	2.4%
Benefits-Internal-Regular	53.4%	53.6%	54.1%	54.7%	55.3%
Non-Compensation Expense <sup>2</sup>		3.2%	2.8%	3.9%	2.8%
Capital Expenditures	4.0%	7.8%	9.8%	7.1%	6.2%
<b>Multi-year Projection</b>	(\$4,137,826)	(\$7,108,772)	(\$10,969,624)	(\$12,173,815)	(\$13,866,919)
Gap as a % of Annual Budget	0.8%	1.3%	1.9%	2.1%	2.3%



Maine's  
Public  
Universities

# Capital Expenditures

UNIVERSITY OF MAINE SYSTEM

	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
<b>Consumer price index</b>	<b>2.3%</b>	<b>2.5%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>
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<b>Multi-year Projection</b>	<b>(\$4,137,826)</b>	<b>(\$7,108,772)</b>	<b>(\$10,969,624)</b>	<b>(\$12,173,815)</b>	<b>(\$13,866,919)</b>
Gap as a % of Annual Budget	0.8%	1.3%	1.9%	2.1%	2.3%



# Multi-year Projection

UNIVERSITY OF MAINE SYSTEM

	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
<b>Consumer price index</b>	2.3%	2.5%	2.4%	2.4%	2.4%
Enrollment		0.3%	0.8%	0.7%	0.7%
In-State, Undergraduate Tuition Rate <sup>1</sup>	2.3%	2.5%	2.4%	2.4%	2.4%
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<b>Gap as a % of Annual Budget</b>	<b>0.8%</b>	<b>1.3%</b>	<b>1.9%</b>	<b>2.1%</b>	<b>2.3%</b>



# 2018 MYFA - by Campus

UNIVERSITY OF MAINE SYSTEM

	BUDGET FY19	PROJECTIONS**			
		FY20	FY21	FY22	FY23
<b>UM</b>	\$0	(\$895,493)	(\$2,374,489)	(\$4,415,583)	(\$6,561,221)
<b>UMA</b>	(2,951,013)	(2,889,959)	(2,654,298)	(2,532,625)	(2,168,993)
<b>UMF</b>	0	(1,187,309)	(2,065,663)	(2,547,380)	(2,829,463)
<b>UMFK</b>	6,633	(172,267)	(132,374)	(98,101)	(91,712)
<b>UMM</b>	0	(265,558)	(554,497)	(840,491)	(1,118,464)
<b>UMPI</b>	0	19,527	166,560	191,672	160,238
<b>USM</b>	(1,193,446)	(1,717,714)	(3,354,863)	(1,931,306)	(1,257,303)
<b>GOV</b>	0	(0)	(0)	(0)	(0)
<b>US</b>	0	0	0	0	0
<b>TOTAL</b>	<b>(\$4,137,826)</b>	<b>(\$7,108,772)</b>	<b>(\$10,969,624)</b>	<b>(\$12,173,815)</b>	<b>(\$13,866,919)</b>
Incremental Change		<b>(\$2,970,947)</b>	<b>(\$3,860,851)</b>	<b>(\$1,204,191)</b>	<b>(\$1,693,104)</b>

# Questions?





# FY2019

## PROPOSED UNIFIED OPERATING BUDGET, CAPITAL BUDGET & STUDENT CHARGES

Board of Trustees

May 20-21, 2018

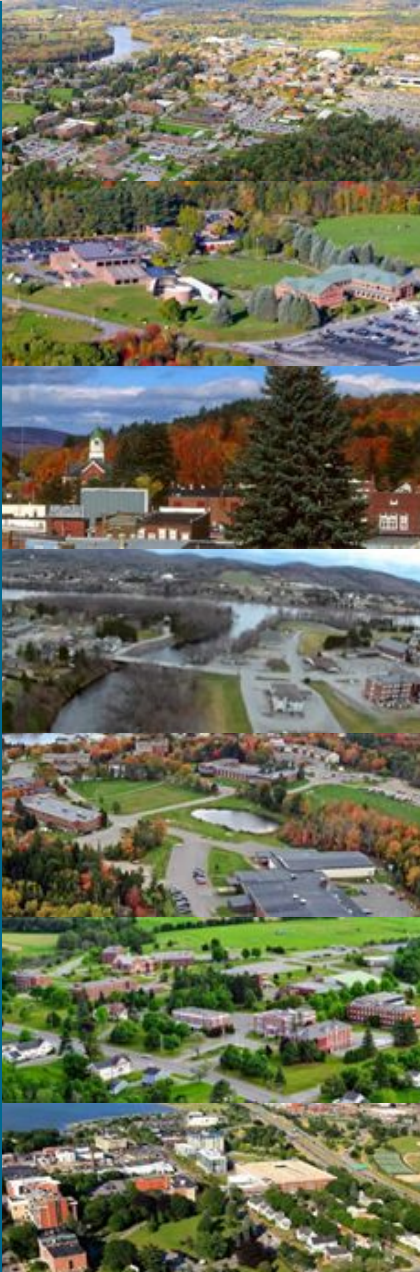


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7	Enrollment
9	Residence Hall Occupancy
9	FY19 Recommended In-State Tuition Rates
10	In-State Undergraduate Average Costs
11	Funding Depreciation
12	Capital Investment from Operations
13	MEIF
14	FY19 Budget Position Changes
15-17	FY19 Proposed Budget
18	Quasi-Independent State Entities
19	Appendix



# FY19 Budget Overview



- **Budget focus on Board of Trustees priority & secondary outcomes**
- **Enrollment Increase**
  - Early College projected credit hour increase of 2.9%
  - UMPI estimates 4,200 credit hours in the new CBE program
  - UM's budget reflects a 0.3% enrollment increase with continued growth in out of state enrollments
- **In-state, undergraduate tuition & Unified Fee increase at CPI at most campuses – 2.3%**
- **Utilization of reserve funds**
  - 2 campuses are using campus reserves to balance in FY19
  - University Services is utilizing reserves to reduce cost allocation to campuses
- **FY19 appropriation is budget flat per State's FY2018-2019 biennial budget.**





# FY19 Budget Overview

	E&G	Auxiliary	Total	Campus Reserves	Administrative Savings	Budget Stabilization	Total
UMaine	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
UMA	(2,864,084)	(86,929)	(2,951,013)	2,951,013	-	-	-
UMF	-	-	-	-	-	-	-
UMFK	212,476	(205,843)	6,633	-	-	-	6,633
UMM	-	-	-	-	-	-	-
UMPI	(273,066)	273,066	-	-	-	-	-
USM (Excl. Law)	-	-	-	-	-	-	-
Maine Law	(1,193,446)	-	(1,193,446)	693,446*	-	500,000	-
Governance	-	-	-	-	-	-	-
Univ. Svs	(525,433)	-	(525,433)	525,433	-	-	-
<b>**Total</b>	<b>\$(4,643,553)</b>	<b>\$ (19,706)</b>	<b>\$(4,663,259)</b>	<b>\$ 4,169,892</b>	<b>\$ 0</b>	<b>\$ 500,000</b>	<b>\$ 6,633</b>

\*Maine Law reserves have been exhausted – reflects USM reserve transfer

\*\*Does not include \$3.3 million in administrative savings set aside for strategic investment



# Budget Stabilization Fund

- The Budget Stabilization Fund was created to enable the UMS to smooth the financial impact of adverse markets, economic conditions, and address other financial challenges.
- The Budget Stabilization Fund was established in 2010 and has been built from net investment income that exceeded budget pursuant to the Board of Trustees investment policy.
- The treasurer will only authorize all or a portion of the transfer needed to offset a net unrestricted operating loss for each institution at the close of FY18 and FY19.

	Balance 7/1/17	\$ 11,452,838
	<b>Projected</b>	
<b>Utilization</b>	<b>FY18</b>	<b>FY19</b>
Law School	(275,320)	(500,000)
Investment gain/loss	TBD	-
<b>Subtotal</b>	<b>(\$ 275,320)</b>	<b>(\$ 500,000)</b>
	Projected Balance	\$ 10,677,518

*The Law School annually receives a transfer from USM for \$856,808 representing their portion of State Appropriation.*



# Budget Stabilization Fund

University of Southern Maine  
FY19 PROPOSED BUDGET  
Law School

	FY18 BASE	FY19 BASE	CHANGE	
Tuition Waivers/Scholarships	(1,300,000)	(1,900,000)	(600,000)	46.2%
Net Student Charges Revenue	4,986,781	4,468,080	(518,701)	-10.4%
State Appropriation *****	-	-	-	-%
<b>Total Revenue</b>	<b>4,986,781</b>	<b>4,468,080</b>	<b>(518,701)</b>	<b>-10.4%</b>

Expenses

Personnel	5,385,174	5,504,198	119,024	2.2%
Supplies & Services	278,890	236,290	(42,600)	-15.3%
Shared Ser				
Travel				
Membersh				
Maintenance & Alterations	7,750	3,250	(4,500)	-58.1%

*The Law School annually receives a transfer from USM for \$856,808 representing their portion of State Appropriation.*

**65800 OTHER EXPENSES** **749,973** **712,975** **\$ (36,998)**

**80000 APPROPRIATION TRANSFER FROM E&G** **(856,808)** **(856,808)** **\$ -**

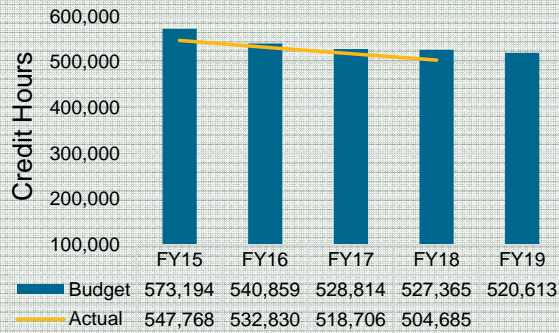
**Other Expenses & Transfers** **(106,835)** **(143,833)** **(36,998)** **34.6%**

Operating Increase (Decrease)	\$ (688,119)	\$ (1,193,446)	\$ (505,327)	73.4%
Transfer from/(to) Budget Stabilization	275,320	500,000	224,680	
<b>Net Change Subtotal</b>	<b>(412,799)</b>	<b>(693,446)</b>	<b>(280,647)</b>	
Other Strategic Transfers from/(to) Reserves	275,320	693,446	418,126	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ (137,479)</b>	<b>\$ -</b>	<b>\$ 137,479</b>	

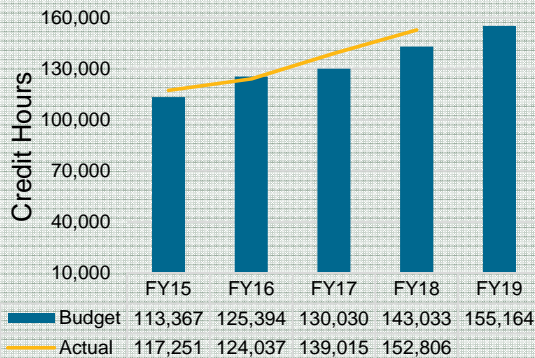


# Enrollment

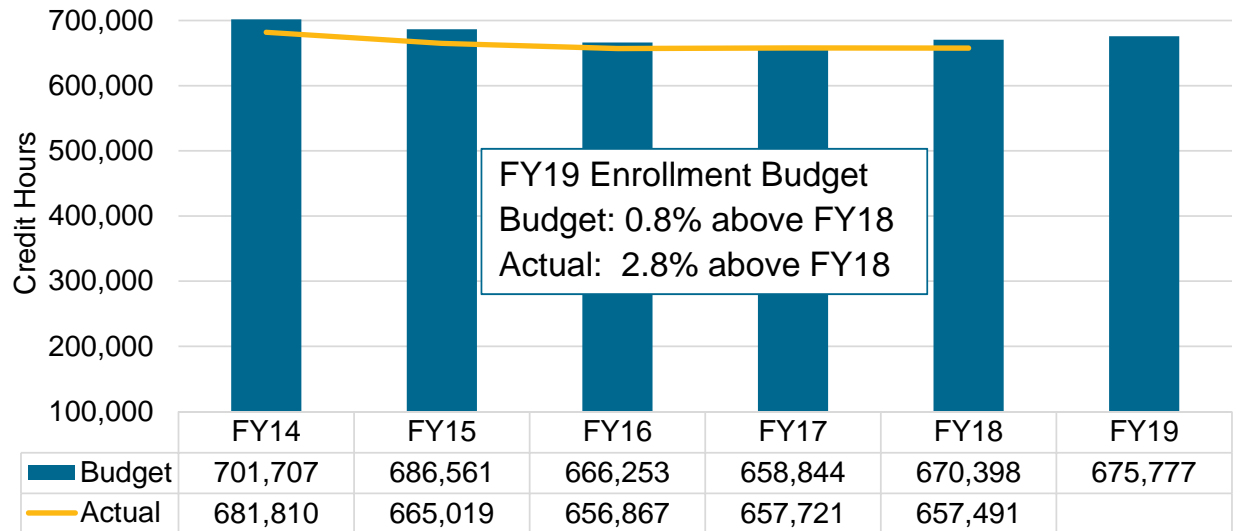
## In-State



## Out-of-State



## UMS Total Credit Hour Enrollment



Early College (included above)	Budget	16,477	18,098
	Actual	17,585	
CBE (included above)	Budget	-	4,176
	Actual	TBD	

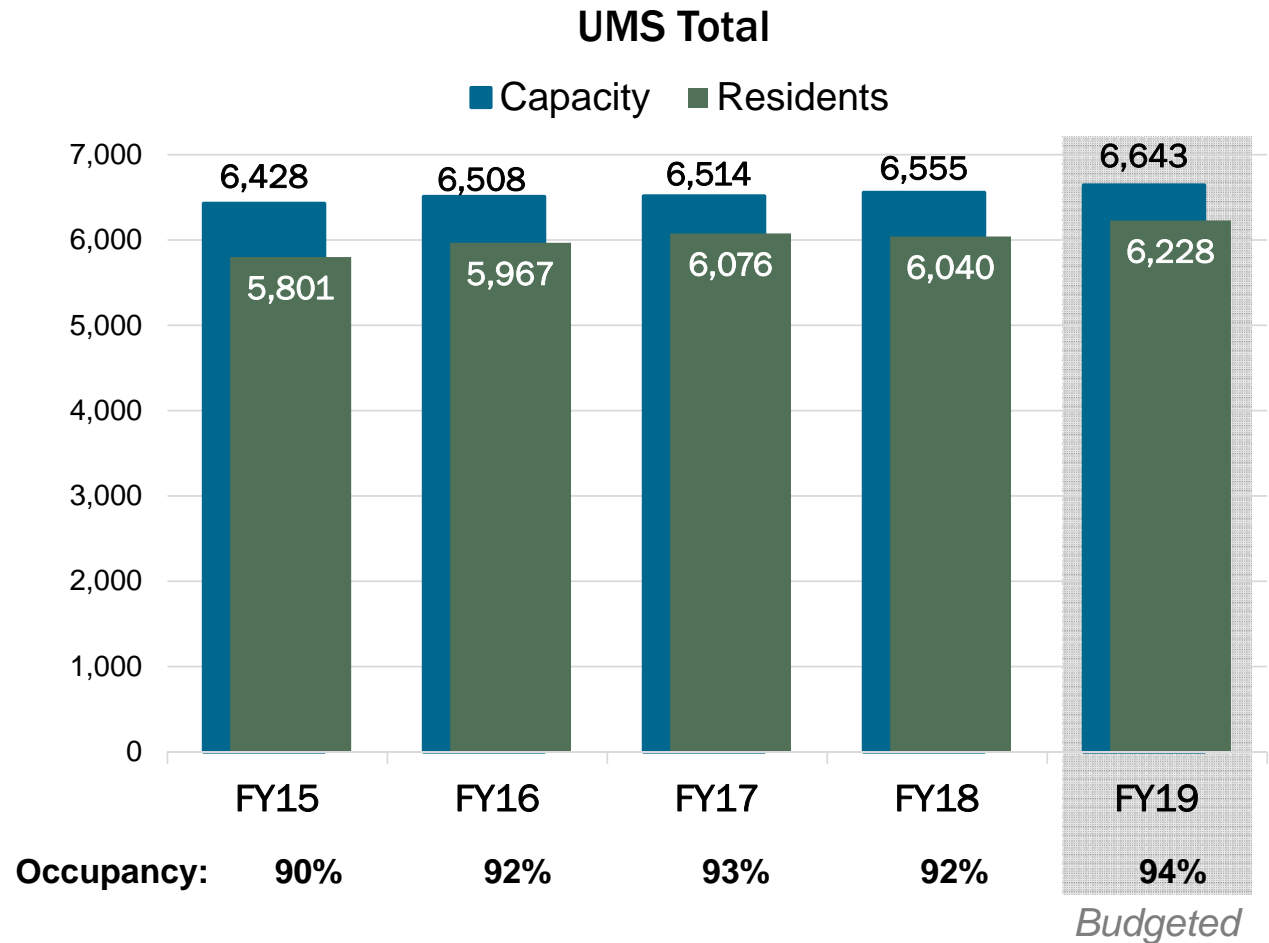
### Major factors impacting enrollment:

- FY19 credit hours are up 2.8% over FY18 actual credit hours.
- FY19 out-of-state budgeted represent 23% of the total credit hours.



# Residence Hall Occupancy

- UMS FY19 Occupancy Rate is 94% and ranges from 104% at USM to 70% at UMM.
- Residence Hall occupancy has increased slightly at 5 of the 6 campuses with residential operations.





# FY19 Recommended In-State Tuition Rates

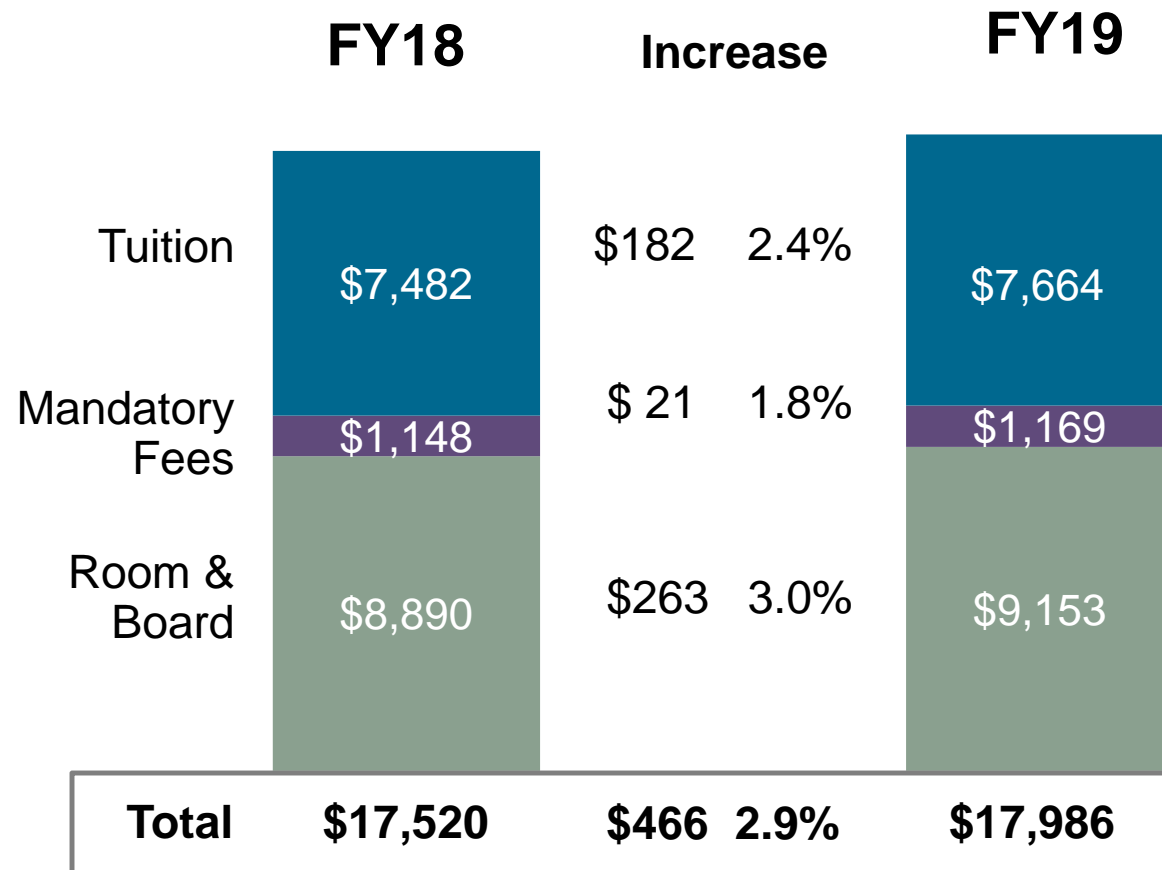
- In-state, undergraduate tuition increase based on CPI (2.3%).
- Additional tuition increases at USM due to partial implementation of the new Unified Budget Pricing Structure.
- UMF increasing graduate tuition rate to equal USM.

		FY18 Rate/CH	FY19 Proposed Rate/CH	FY 19 Proposed Increases	
				\$	%
Undergraduate	UMaine	\$286	\$293	\$7	2.4%
	UMA	\$228	\$233	\$5	2.2%
	UMF	\$268	\$274	\$6	2.2%
	UMFK	\$228	\$233	\$5	2.2%
	UMM	\$228	\$233	\$5	2.2%
	UMPI	\$228	\$233	\$5	2.2%
	USM	\$262	\$271	\$9	3.4%
Graduate	UMaine	\$429	\$439	\$10	2.3%
	UMF	\$389	\$407	\$18	4.6%
	USM	\$393	\$407	\$14	3.6%
Law	Law	\$743	\$743	\$0	0%



# In-State Undergraduate Average Costs

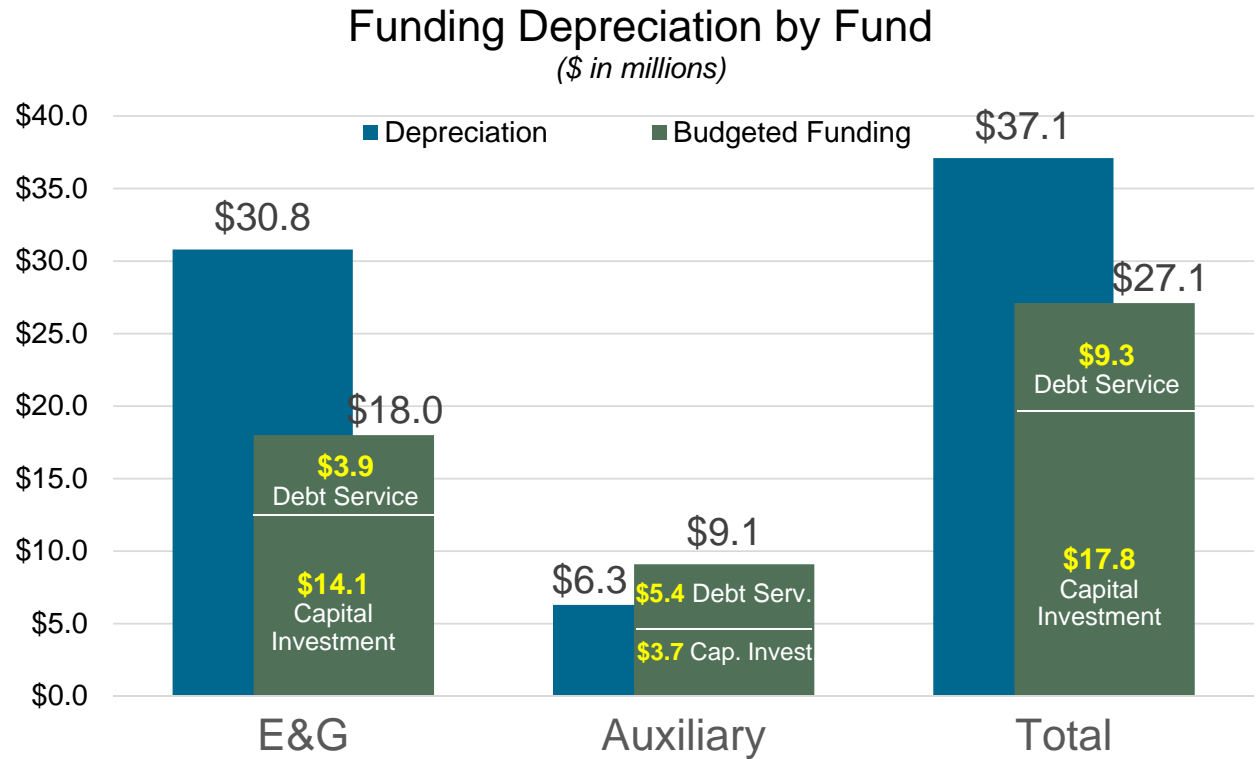
- Unified Fee increasing at 5 campuses; no increase at UMFK & UMPI.
- Room rates increasing at 4 campuses; Board rate increasing at 5 campuses.
- Average annual increase is less than \$500 for in-state, undergraduate students residing on campus.





# Funding Depreciation

- Depreciation expense increased by \$1.0M - from \$36.1M in FY18 to \$37.1M in FY19.
- E&G and Auxiliary budgeted capital investment = \$17.8M; an increase of \$1.7M (10%).
- Funding through Debt Service has decreased by \$1.3M; Capital Investments increased by \$1.7M over FY18
- 73% of the total depreciation expense is funded in the FY19 budget – down 1% from the FY18 budget.







# Capital Investments from Operations

	Facilities	Equipment & Vehicles	Projects to be determined during FY19	Capital Reserve Deposit (to be utilized in FY20 or after)	Total Investment
UMAINE	\$ 2,518,489	\$ 2,076,768	\$ 2,569,554	\$ 1,368,313	\$ 8,533,124
UMA	943,640	36,679	-	-	980,319
UMF	10,000	139,700	992,529	-	1,142,229
UMFK	200,000	20,000	-	-	220,000
UMM	6,000	500	-	-	6,500
UMPI	210,176	-	-	39,824	250,000
USM	1,558,500	264,556	-	-	1,823,056
US	-	442,300	-	4,387,337	4,829,637
<b>TOTAL</b>	<b>\$ 5,446,805</b>	<b>\$ 2,980,503</b>	<b>\$ 3,562,083</b>	<b>\$ 5,795,474</b>	<b>\$ 17,784,865</b>

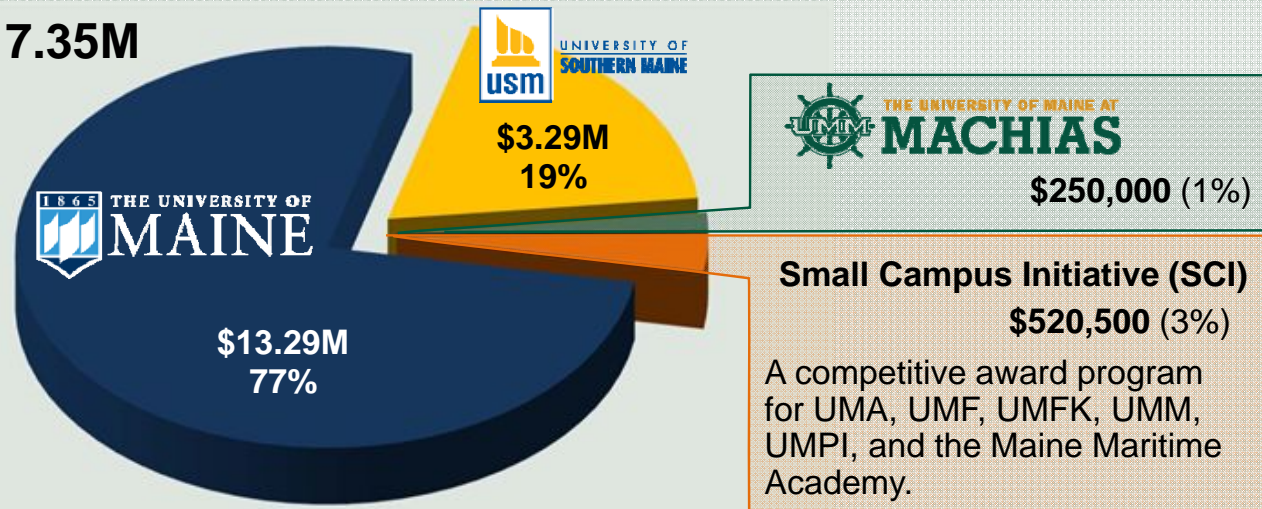
- FY19 budgeted transfers from E&G and Auxiliary to Capital Investments total \$17.8 million



# MEIF

	UMaine	USM	UMM	SCI	Total
Biotechnology	1,208,714	250,000			1,458,714
Aquaculture & Marine	2,959,909	453,043	250,000		3,662,952
Composite Materials	1,844,246	100,000			1,944,246
Environmental	1,338,169	294,817			1,632,986
Forestry & Agriculture	1,781,062	833,700			2,614,762
Information Technology	1,856,946	672,512			2,529,458
Precision Manufacturing	1,383,284	100,000			1,483,284
Cross Sector	916,864	586,234			1,503,098
Small Campus Initiative				520,500	520,500
<b>Total</b>	<b>13,289,194</b>	<b>3,290,306</b>	<b>250,000</b>	<b>520,500</b>	<b>17,350,000</b>

**\$17.35M**





# FY19 Budget Position Changes

	Faculty		Salaried		Hourly		Total
	Increases/ New Positions	Reductions/ Eliminations	Increases/ New Positions	Reductions/ Eliminations	Increases/ New Positions	Reductions/ Eliminations	
UMaine	5.0	-	5.0	-	4.8	-	14.8
UMA	-	-	-	-	-	-	-
UMF	1.5	(2.0)	1.0	(3.0)	1.4	(0.5)	(1.6)
UMFK	2.0	(1.0)	7.0	(1.5)	-	-	6.5
UMM	-	(1.0)	-	-	-	(0.5)	(1.5)
UMPI	-	-	-	-	-	-	-
USM	3.0	-	1.5	-	-	-	4.5
Gov.	-	-	2.5	(2.0)	-	-	0.5
Univ Svs	-	-	1.0	(2.0)	2.0	-	1.0
<b>Total</b>	<b>11.5</b>	<b>(4.0)</b>	<b>18.0</b>	<b>(8.5)</b>	<b>8.2</b>	<b>(1.0)</b>	<b>24.2</b>



# FY19 Proposed Budget: E&G

	FY18 Base	FY19 Proposed	\$ Change	% Change
<b>Revenue:</b> Tuition & Fee Revenue	\$ 297,511,943	\$ 314,176,615	\$ 16,664,672	5.6%
Tuition Waivers/Scholarships	(76,997,718)	(84,363,644)	(7,365,926)	9.6%
State Appropriation	188,920,534	188,920,534	-	0.0%
Sales/Services/Other	39,425,367	40,582,731	1,157,364	2.9%
<b>Total Revenue</b>	<b>448,860,126</b>	<b>459,316,236</b>	<b>10,456,110</b>	<b>2.3%</b>
<b>Expense:</b> Personnel Expense	334,771,422	342,268,517	7,416,716	2.2%
Fuel & Electricity	15,361,545	15,497,893	136,348	0.9%
Supplies & Services	30,117,279	31,198,603	1,081,324	3.6%
Travel	6,006,600	6,268,354	261,754	4.4%
Memberships, Contributions & Sponsorships	1,591,501	1,572,009	(19,492)	-1.2%
Maintenance & Alterations	10,856,132	11,747,248	891,116	8.2%
Interest Expense	1,929,130	1,725,624	(203,506)	-10.5%
Depreciation	30,728,899	30,787,221	58,322	0.2%
Other Expenses & Transfers	32,380,460	32,343,671	(36,789)	-0.1%
<b>Total Operating Expenses &amp; Transfers</b>	<b>463,742,968</b>	<b>473,409,140</b>	<b>9,666,172</b>	<b>2.1%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (14,882,842)</b>	<b>\$ (14,092,905)</b>	<b>\$ 789,937</b>	<b>-5.3%</b>
<b>Modified Cash Flow:</b> Add back Depreciation	30,728,899	30,787,221	58,322	0.2%
Less Capital Expenditures	(8,522,691)	(9,702,654)	(1,179,963)	13.8%
Less Capital Reserve Funding	(3,917,547)	(4,408,061)	(490,514)	12.5%
Less Debt Service Principal	<u>(5,405,171)</u>	<u>(3,925,414)</u>	<u>1,479,757</u>	-27.4%
<b>Net Change Before Other Adj &amp; Transfers</b>	<b>(1,999,352)</b>	<b>(1,341,813)</b>	<b>657,539</b>	
Transfer from/(to) Admin Savings Rsrv	(3,301,740)	(3,301,740)	-	
Transfer from/(to) Budget Stabilization	<u>275,320</u>	<u>500,000</u>	<u>224,680</u>	
<b>Net Change Subtotal</b>	<b>(5,025,772)</b>	<b>(4,143,553)</b>	<b>882,219</b>	
Other Strategic Transfers from/(to) Reserves	5,265,875	4,082,963	(1,182,912)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 240,103</b>	<b>\$ (60,590)</b>	<b>\$ (300,693)</b>	



# FY19 Proposed Budget: Auxiliary

	FY18 Base	FY19 Proposed	\$ Change	% Change
<b>Revenue:</b> Tuition & Fee Revenue	\$ 1,240,000	\$ 1,227,714	\$ (12,286)	-1.0%
Dining & Residence Revenue	64,255,855	64,722,671	466,816	0.7%
Tuition Waivers/Scholarships	(2,130,802)	(2,252,044)	(121,242)	5.7%
Sales/Services/Other	16,678,940	17,267,807	588,867	3.5%
<b>Total Revenue</b>	<b>80,043,993</b>	<b>80,966,148</b>	<b>922,155</b>	<b>1.2%</b>
<b>Expense:</b> Personnel Expense	22,098,429	22,431,259	332,830	1.5%
Fuel & Electricity	5,997,437	5,078,537	(918,900)	-15.3%
Supplies & Services	24,820,399	24,728,302	(92,097)	-0.4%
Travel	129,418	128,380	(1,038)	-0.8%
Memberships, Contributions & Sponsorships	27,695	20,772	(6,923)	-25.0%
Maintenance & Alterations	4,200,126	3,902,565	(297,561)	-7.1%
Interest Expense	3,941,796	3,696,059	(245,737)	-6.2%
Depreciation	5,400,401	6,255,906	855,505	15.8%
Other Expenses & Transfers	9,853,651	11,954,753	2,101,102	21.3%
<b>Total Operating Expenses &amp; Transfers</b>	<b>76,469,352</b>	<b>78,196,533</b>	<b>1,727,181</b>	<b>2.3%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 3,574,641</b>	<b>\$ 2,769,615</b>	<b>\$ (805,026)</b>	<b>-22.5%</b>
<b>Modified Cash Flow:</b> Add back Depreciation	5,400,401	6,255,906	855,505	15.8%
Less Capital Expenditures	(2,106,730)	(2,286,737)	(180,007)	8.5%
Less Capital Reserve Funding	(1,496,524)	(1,387,413)	109,111	-7.3%
Less Debt Service Principal	<u>(5,182,163)</u>	<u>(5,371,077)</u>	<u>(188,914)</u>	3.6%
Net Change Before Other Adj & Transfers	<b>189,625</b>	<b>(19,706)</b>	<b>(209,331)</b>	
Other Strategic Transfers from/(to) Reserves	45,961	86,929	40,968	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 235,586</b>	<b>\$ 67,223</b>	<b>\$ (168,363)</b>	



# FY19 Proposed Budget: E&G and Auxiliary

	FY18 Base	FY19 Proposed	\$ Change	% Change
<b>Revenue:</b> Tuition & Fee Revenue	\$ 298,751,943	\$ 315,404,329	\$ 16,652,386	5.6%
Dining & Residence Revenue	64,255,855	64,722,671	466,816	0.7%
Tuition Waivers/Scholarships	(79,128,520)	(86,615,688)	(7,487,168)	9.5%
State Appropriation	188,920,534	188,920,534	-	0.0%
Sales/Services/Auxiliary	56,104,307	57,850,538	1,746,231	3.1%
<b>Total Revenue</b>	<b>528,904,119</b>	<b>540,282,384</b>	<b>11,378,265</b>	<b>2.2%</b>
<b>Expense:</b> Personnel Expense	356,869,851	364,699,776	7,829,925	2.2%
Fuel & Electricity	21,358,982	20,576,430	(782,552)	-3.7%
Supplies & Services	54,937,678	55,926,905	989,227	1.8%
Travel	6,136,018	6,396,734	260,716	4.2%
Memberships, Contributions & Sponsorships	1,619,196	1,592,781	(26,415)	-1.6%
Maintenance & Alterations	15,056,258	15,649,813	593,555	3.9%
Interest Expense	5,870,926	5,421,683	(449,243)	-7.7%
Depreciation	36,129,300	37,043,127	913,827	2.5%
Other Expenses & Transfers:	42,234,111	44,298,424	2,064,313	4.9%
<b>Total Operating Expenses &amp; Transfers</b>	<b>540,212,320</b>	<b>551,605,673</b>	<b>11,393,353</b>	<b>2.1%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (11,308,201)</b>	<b>\$ (11,323,290)</b>	<b>\$ (15,089)</b>	<b>0.1%</b>
<b>Modified Cash Flow:</b> Add back Depreciation	36,129,300	37,043,127	913,827	2.5%
Less Capital Expenditures	(10,629,421)	(11,989,391)	(1,359,970)	12.8%
Less Capital Reserve Funding	(5,414,071)	(5,795,474)	(381,403)	7.0%
Less Debt Service Principal	<u>(10,587,334)</u>	<u>(9,296,491)</u>	<u>1,290,843</u>	-12.2%
<b>Net Change Before Other Adj &amp; Transfers</b>	<b>(1,809,727)</b>	<b>(1,361,519)</b>	<b>448,208</b>	
Transfer from/(to) Admin Savings Rsrv	(3,301,740)	(3,301,740)	-	
Transfer from/(to) Budget Stabilization	<u>275,320</u>	<u>500,000</u>	<u>224,680</u>	
<b>Net Change Subtotal</b>	<b>(4,836,147)</b>	<b>(4,163,259)</b>	<b>672,888</b>	
Other Strategic Transfers from/(to) Reserves	5,311,836	4,169,892	(1,141,944)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 475,689</b>	<b>\$ 6,633</b>	<b>\$ (469,056)</b>	



## Quasi-Independent State Entities Budget Requirement

- Public Law 2011, Chapter 616 mandates:
  - Board of Trustees approval of the annual budget for travel, meals, and entertainment costs.
  - Board of Trustees approval of the annual budget for contribution expenses – defined by this Public Law as membership dues & fees, gifts, donations, and sponsorships.
  - Periodic reporting of the actual travel and contribution costs by the UMS to the Board of Trustees.
  - Annual reporting to the Legislature by the UMS of contributions made to persons in the preceding year that were greater than \$1,000, and the total contributed to each.
  
- UMS “Use of University funds” policy generally prohibits charitable contributions; Sponsorships which advance the University’s mission are allowed. UMS “Travel & Expense” policy defines what constitutes allowable travel, meals, and entertainment expenses.

<b>FY19 Budget</b>		<b>(\$000's)</b>
<b>Fund</b>	<b>Travel, Meals, Entertainment</b>	<b>Memberships, Gifts, Donations, &amp; Sponsorships</b>
E&G/Auxiliary	\$ 6,396	\$ 1,593
Restricted/Other	4,773	566
<b>Total</b>	<b>\$11,169</b>	<b>\$ 2,159</b>

E&G/Auxiliary are included in the proposed operating budgets. Restricted/Other includes grants & contracts, MEIF, Coop. Ext, etc. and is not included in the operating budgets.



# Appendix

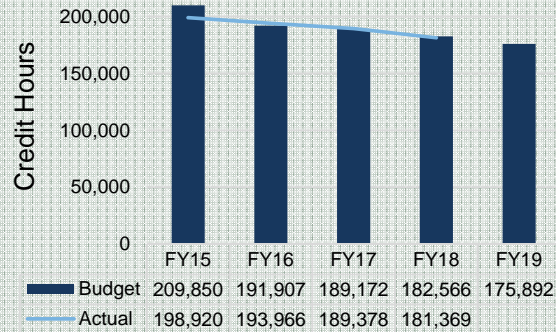
- Detailed Information by Campus for:
  - FY19 Enrollment & Residence Hall Occupancy
  - FY19 Capital Investments from Operating Budgets
  - FY19 Operating Budgets
  - FY19 Student Cost Report



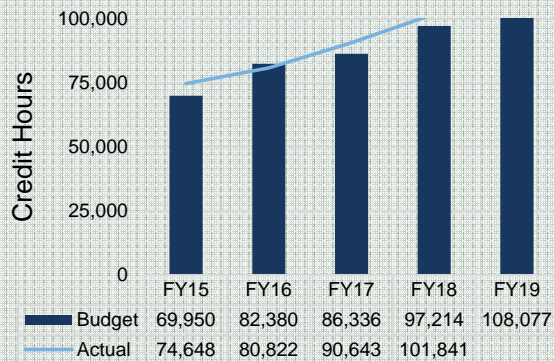


# Enrollment

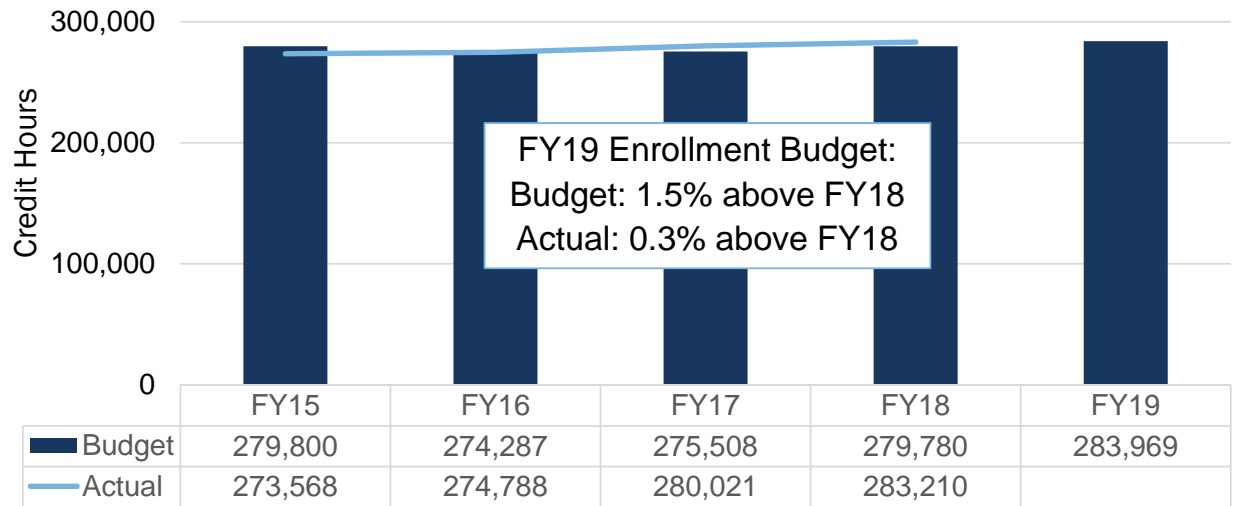
**In-State**



**Out-of-State**



**Total Credit Hour Enrollment**

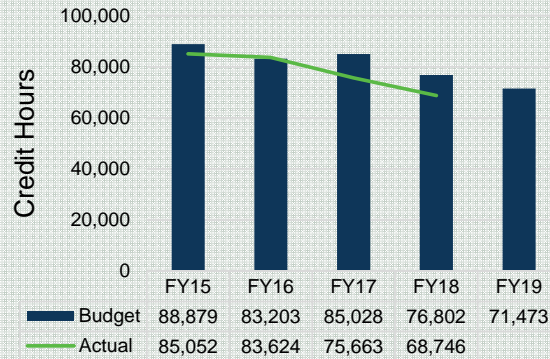


Early College (included above)	Budget	1,213	1,219
	Actual	1,045	

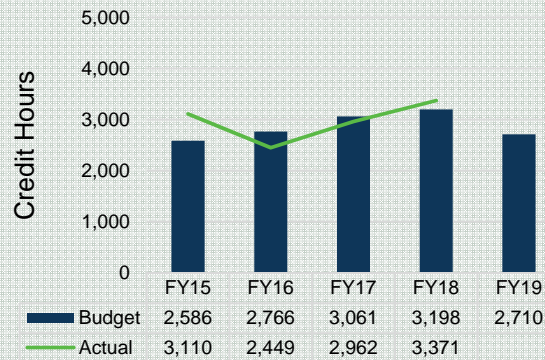


# Enrollment

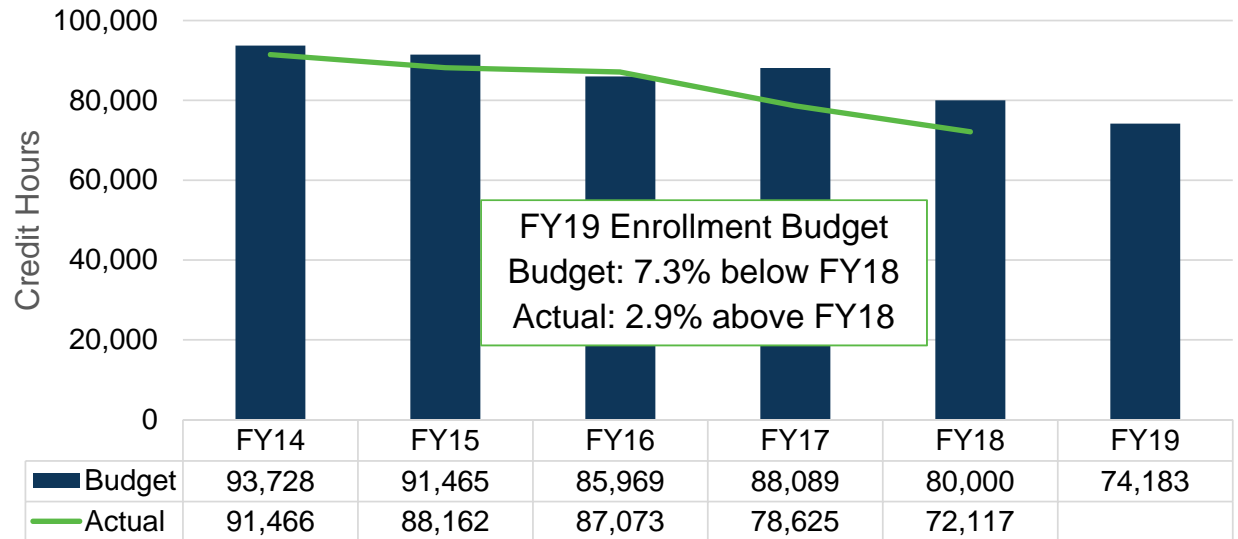
## In-State



## Out-of-State



## Total Credit Hour Enrollment

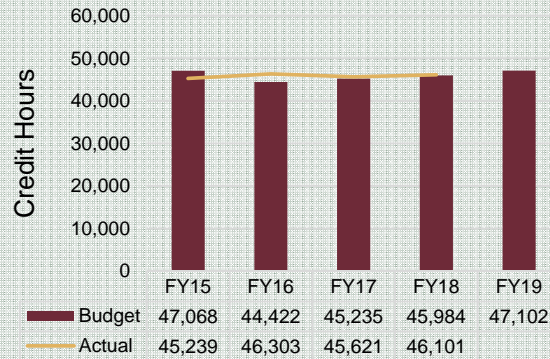


Early College (included above)	Budget	2,024	3,700
	Actual	3,340	

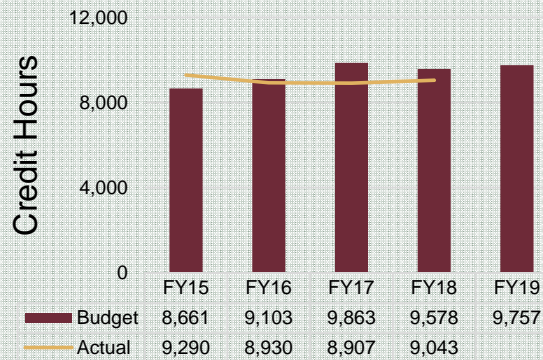


# Enrollment

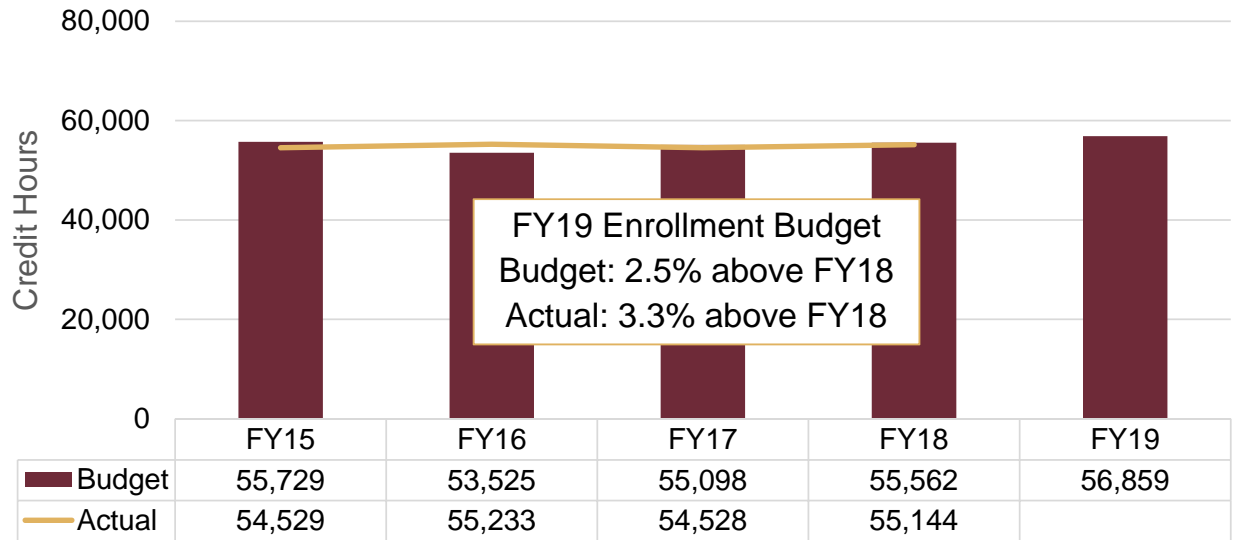
## In-State



## Out-of-State



## Total Credit Hour Enrollment

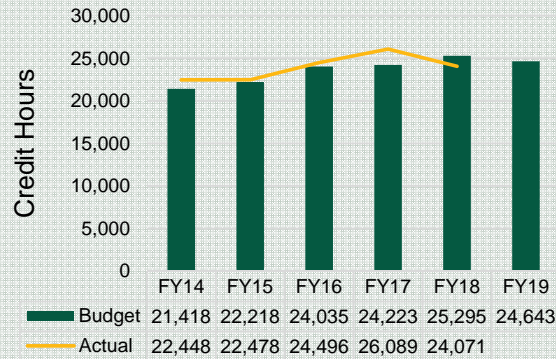


Early College (included above)	Budget	270	800
	Actual	240	

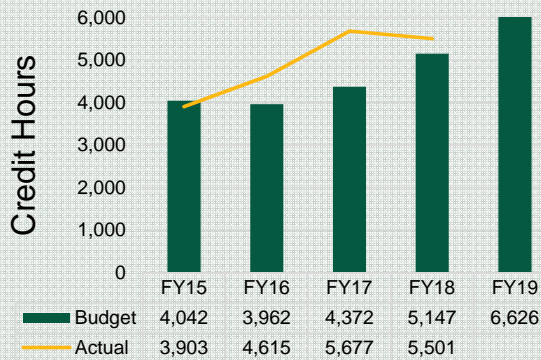


# Enrollment

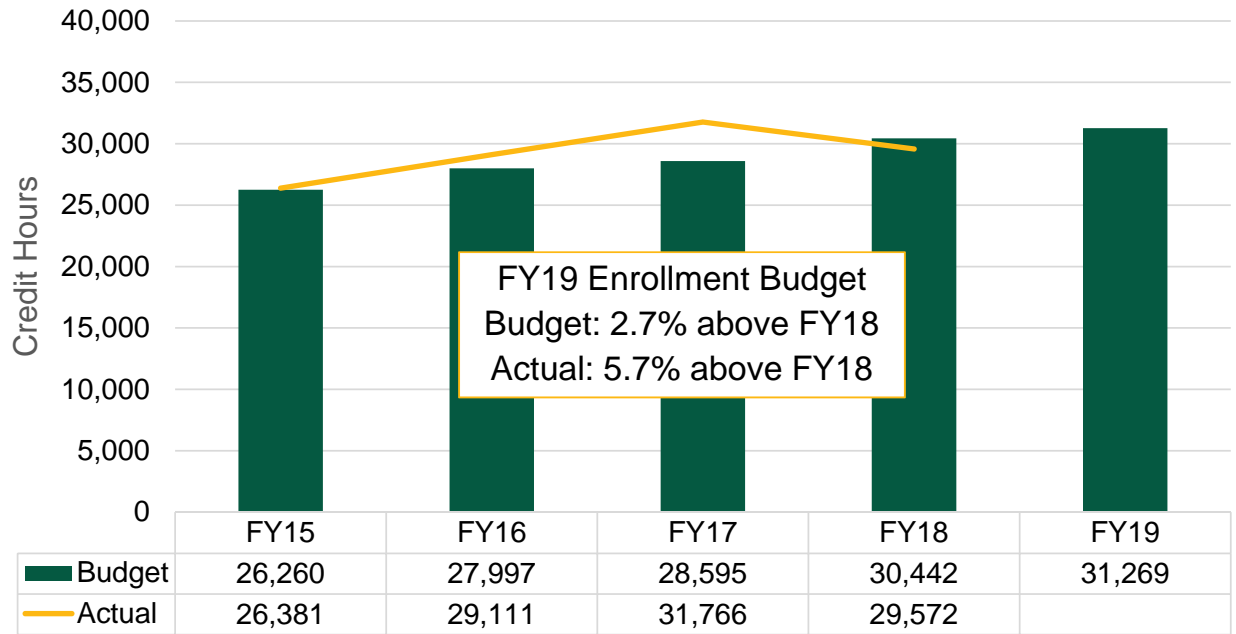
## In-State



## Out-of-State



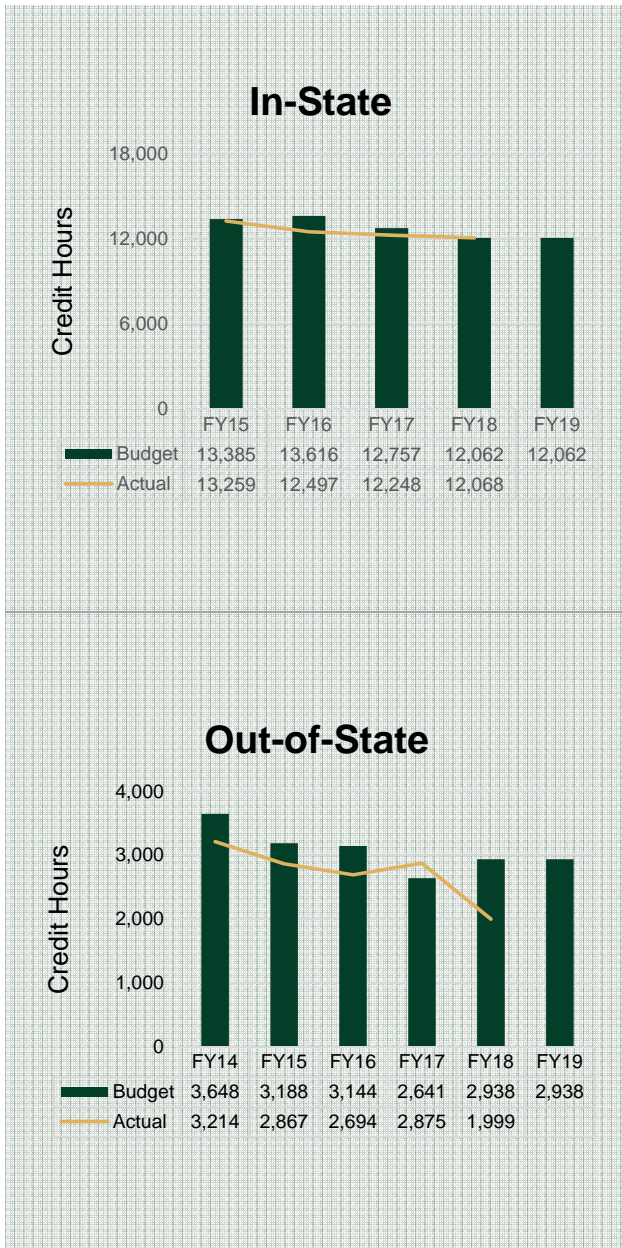
## Total Credit Hour Enrollment



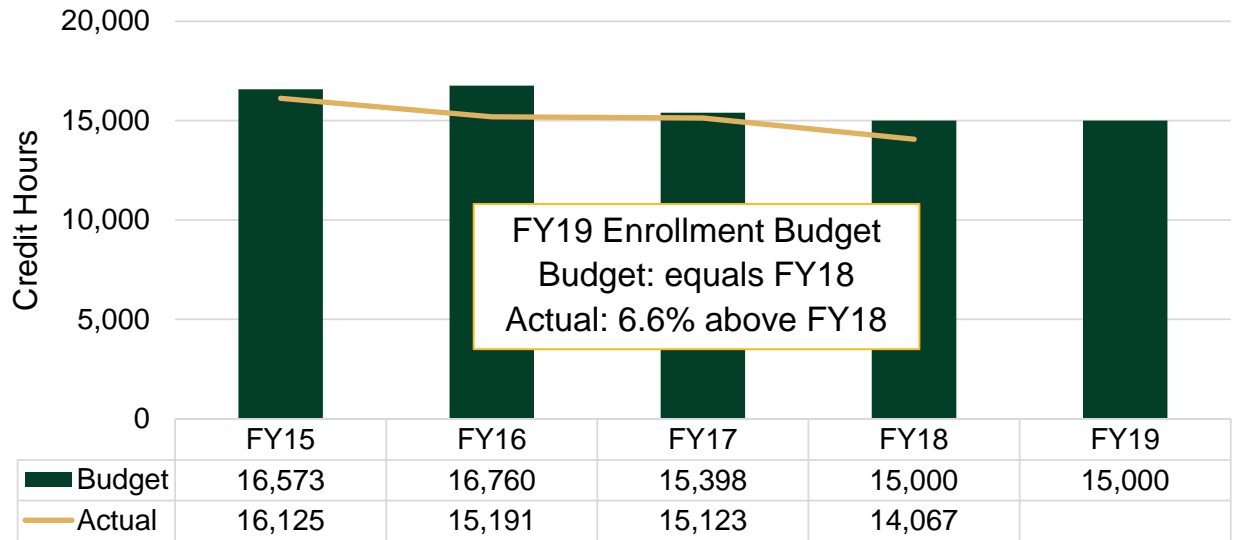
Early College (included above)	Budget	5,250	4,659
	Actual	4,410	



# Enrollment



## Total Credit Hour Enrollment

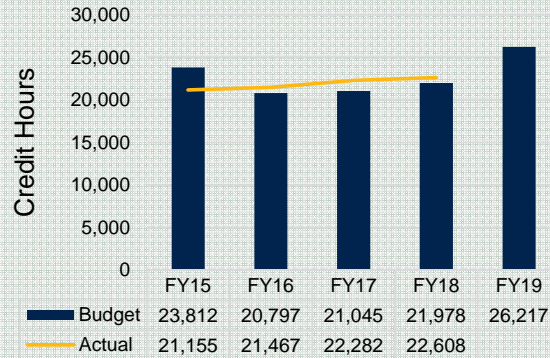


Early College (included above)	Budget	0	0
	Actual	509	

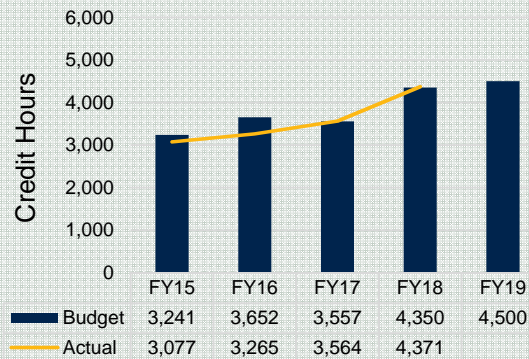


# Enrollment

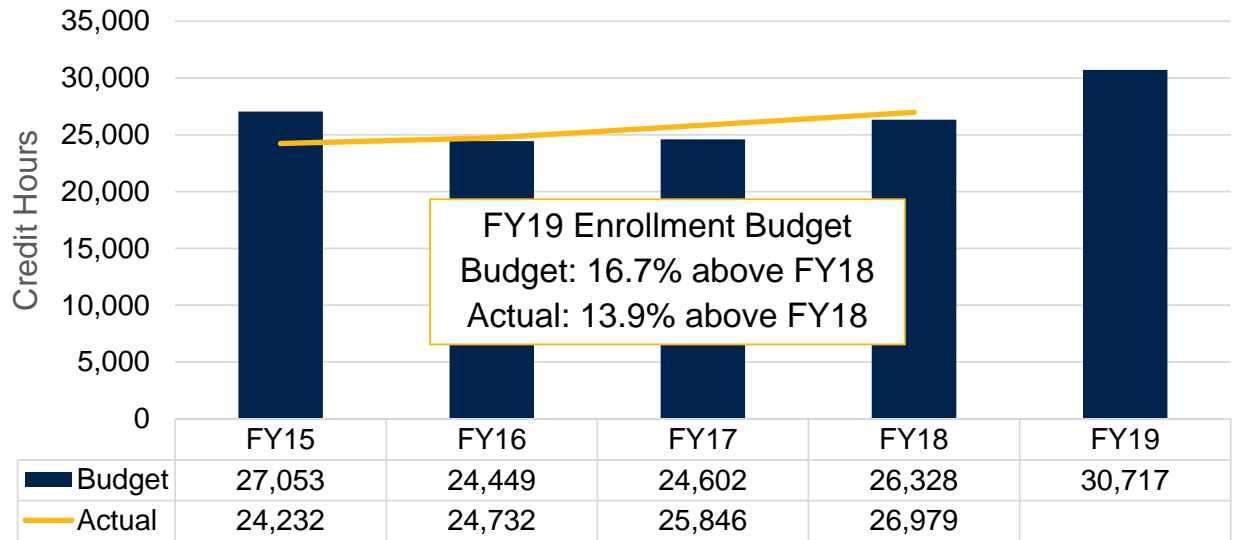
## In-State



## Out-of-State



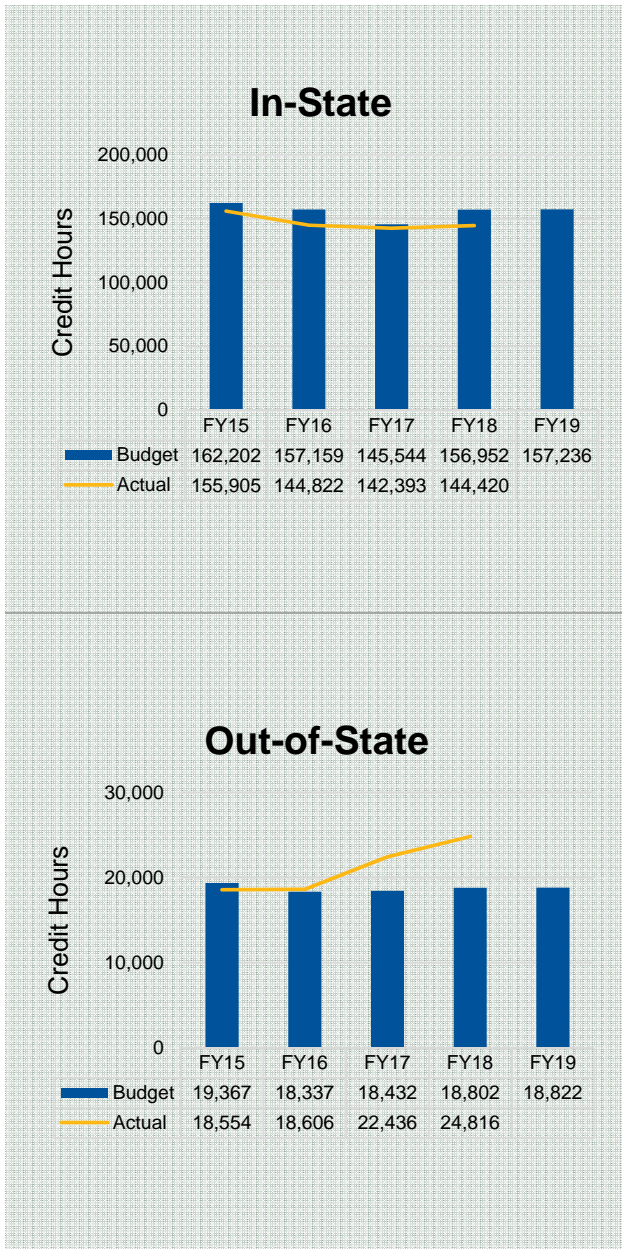
## Total Credit Hour Enrollment



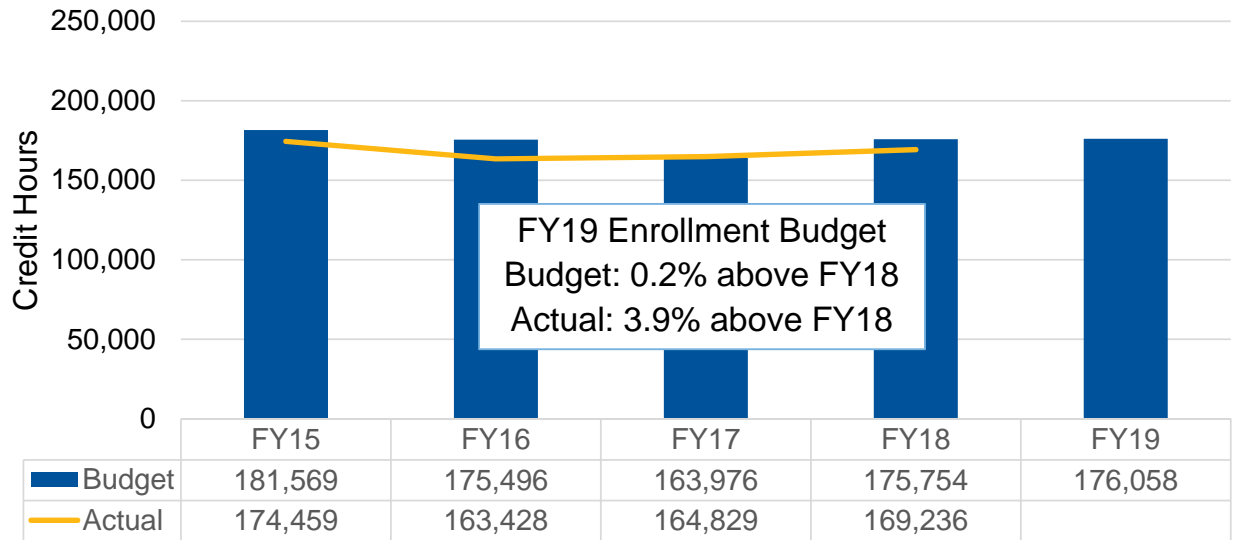
Early College (included above)	Budget	3,100	3,100
	Actual	4,851	
CBE (included above)	Budget	-	4,176
	Actual	TBD	25



# Enrollment



## Total Credit Hour Enrollment

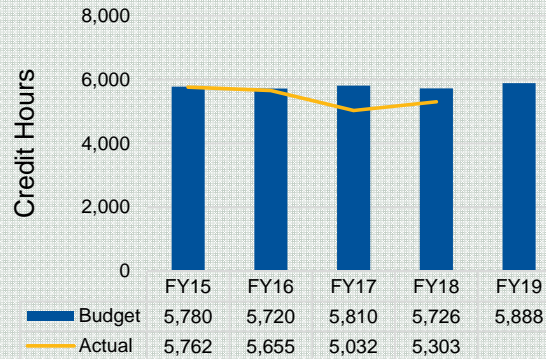


Early College (included above)	Budget	4,620	4,620
	Actual	3,190	

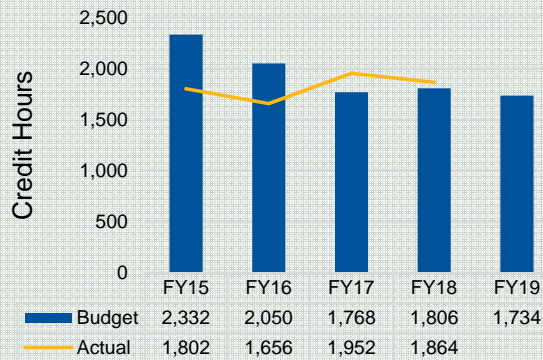


# Enrollment

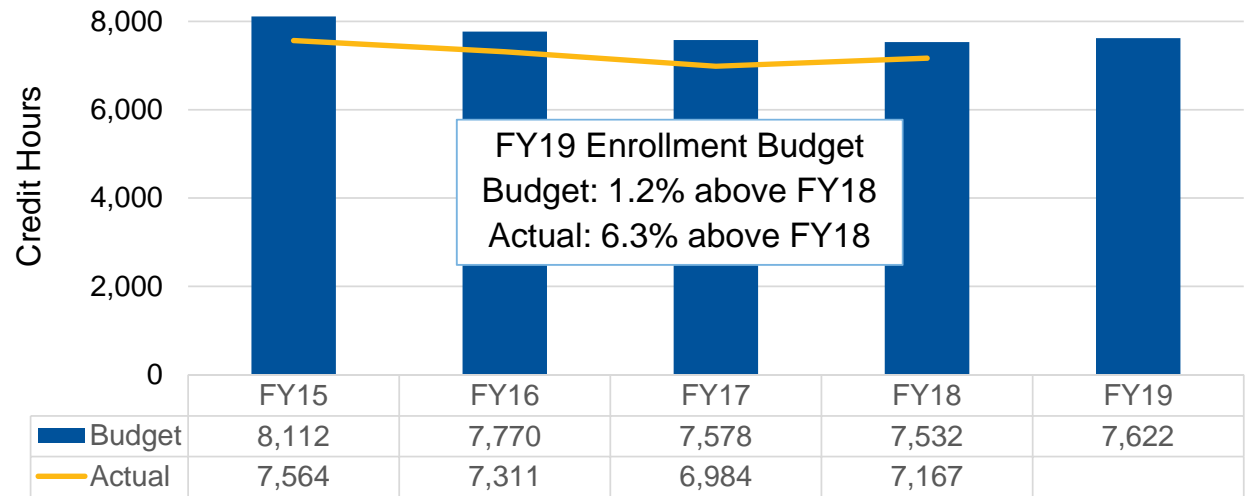
## In-State



## Out-of-State



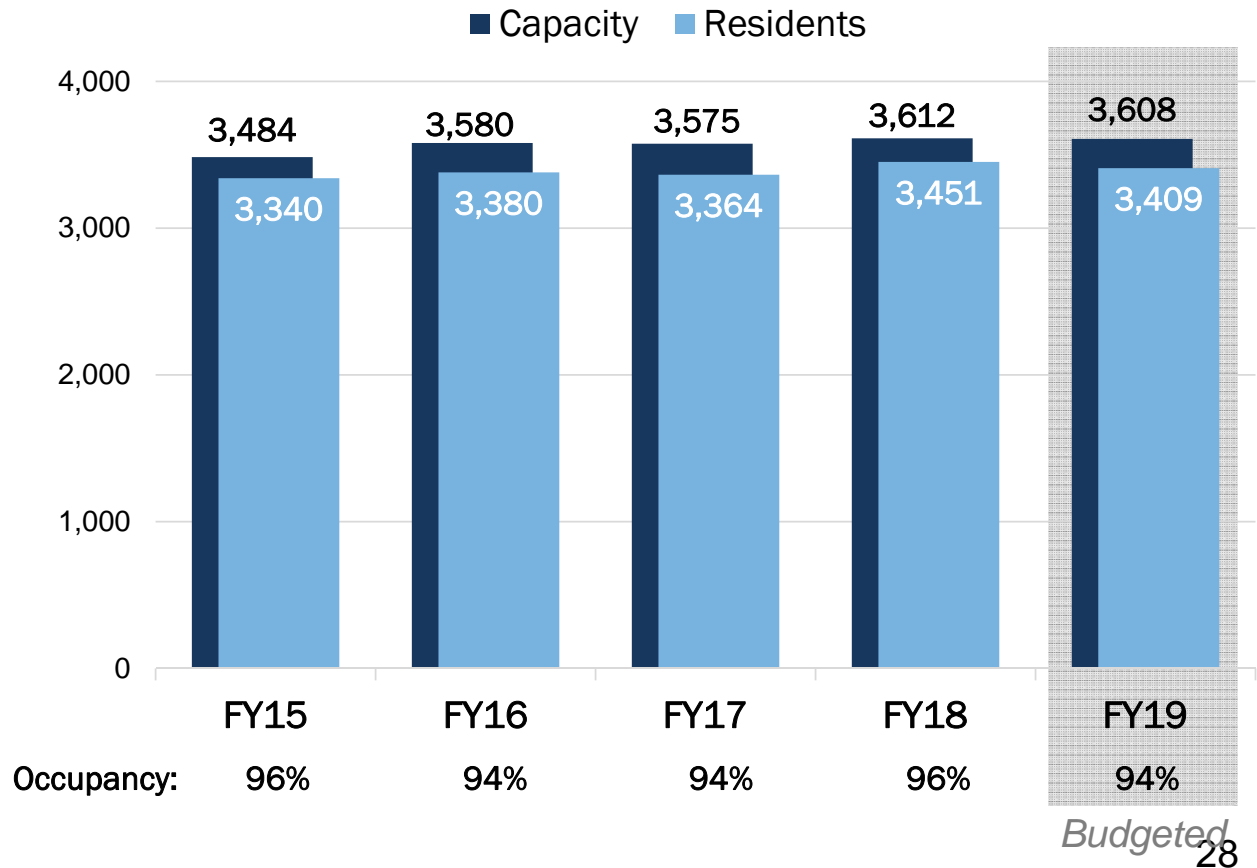
## Total Credit Hour Enrollment



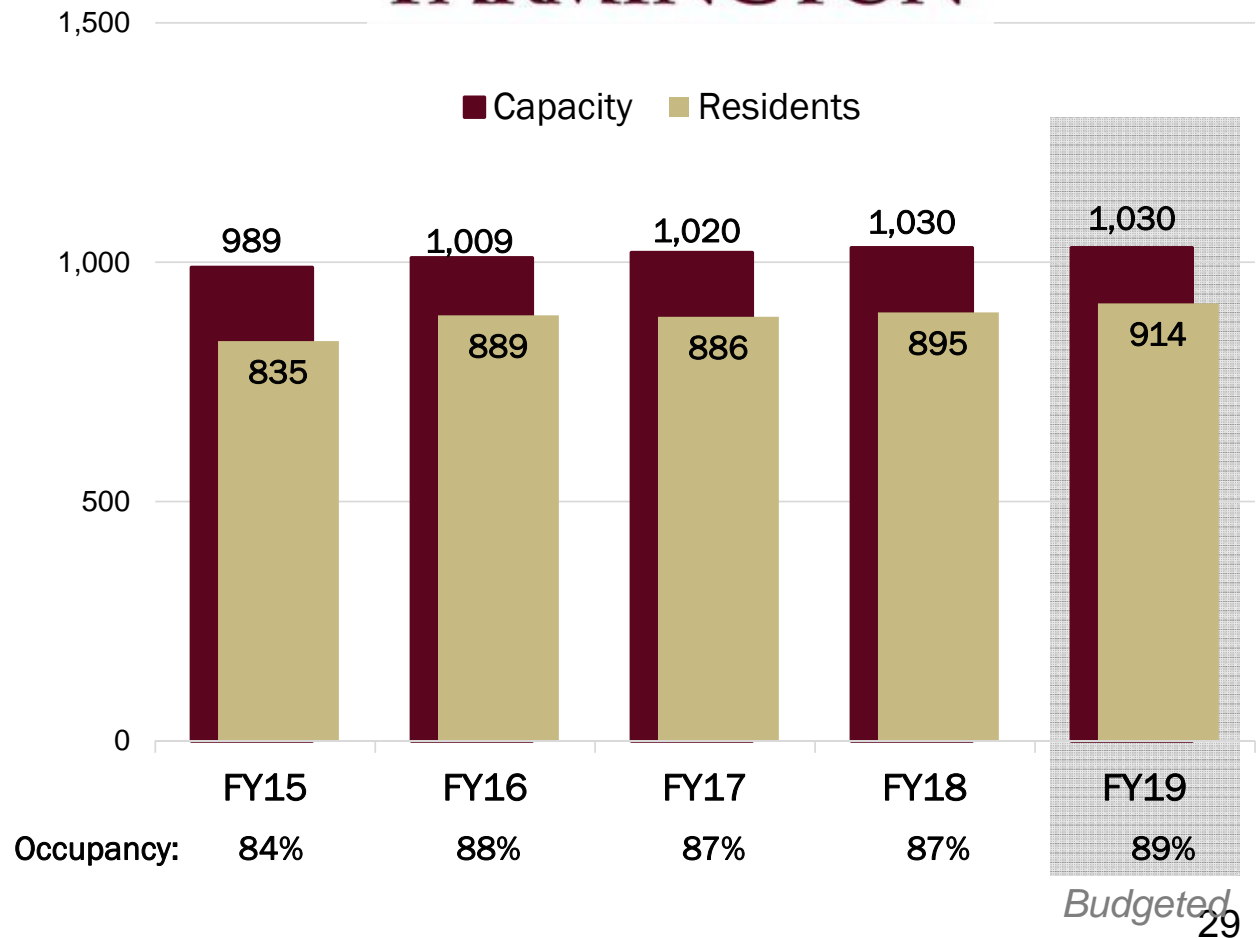




# Residence Hall Occupancy

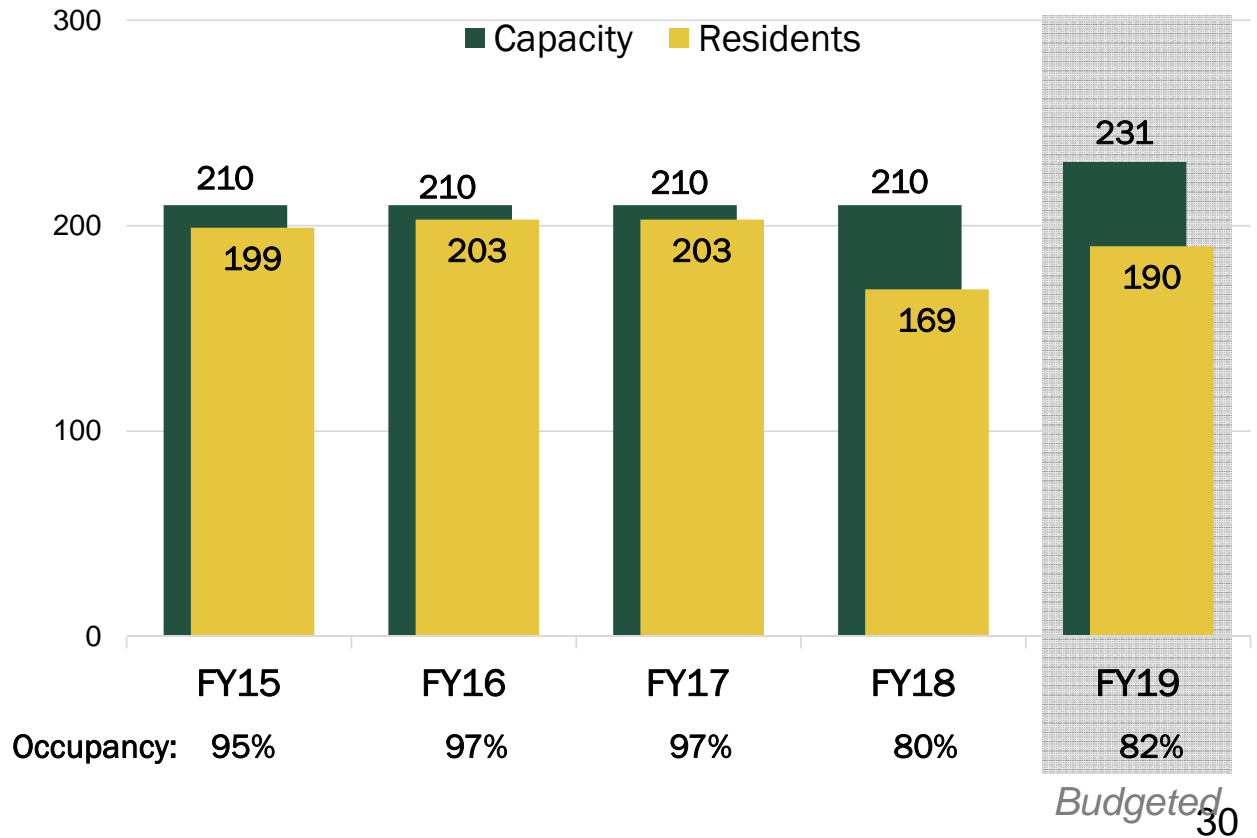


# Residence Hall Occupancy

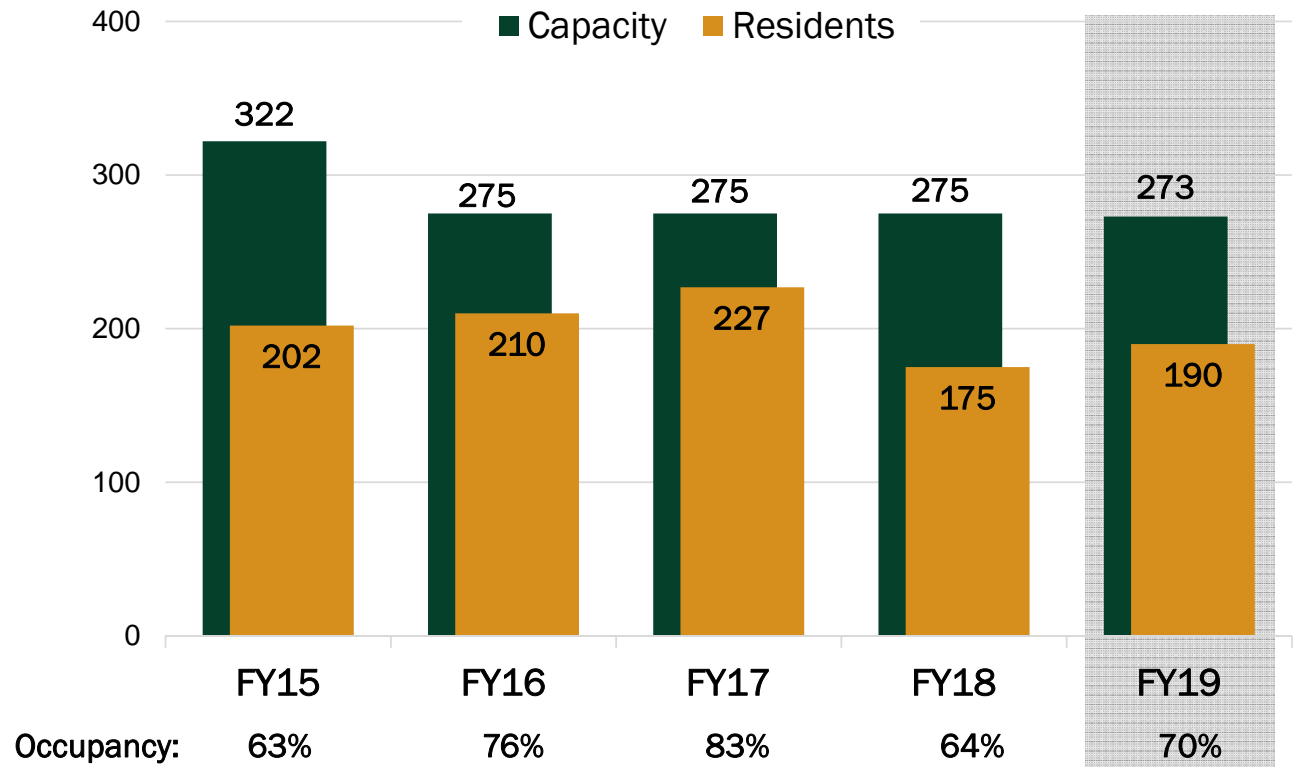




# Residence Hall Occupancy



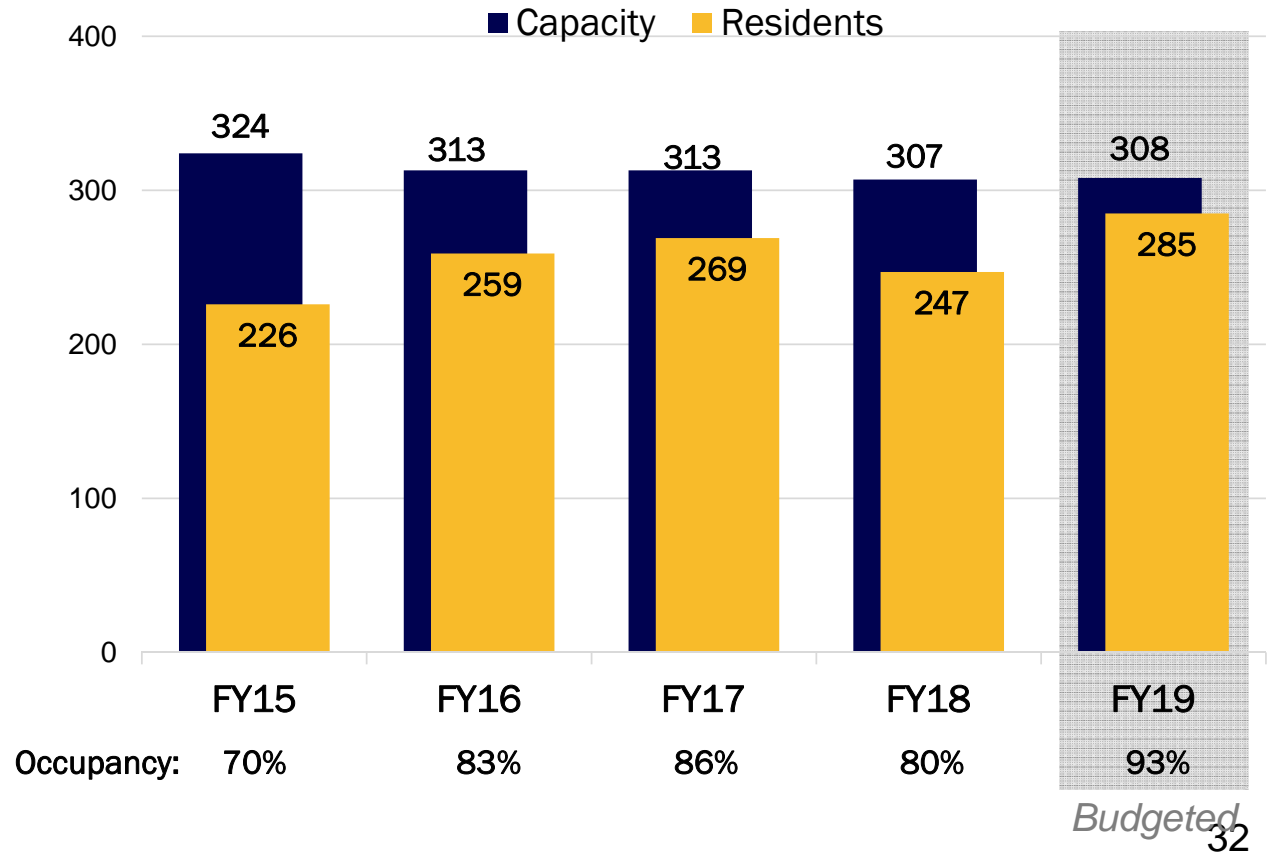
# Residence Hall Occupancy



*Budgeted* 31

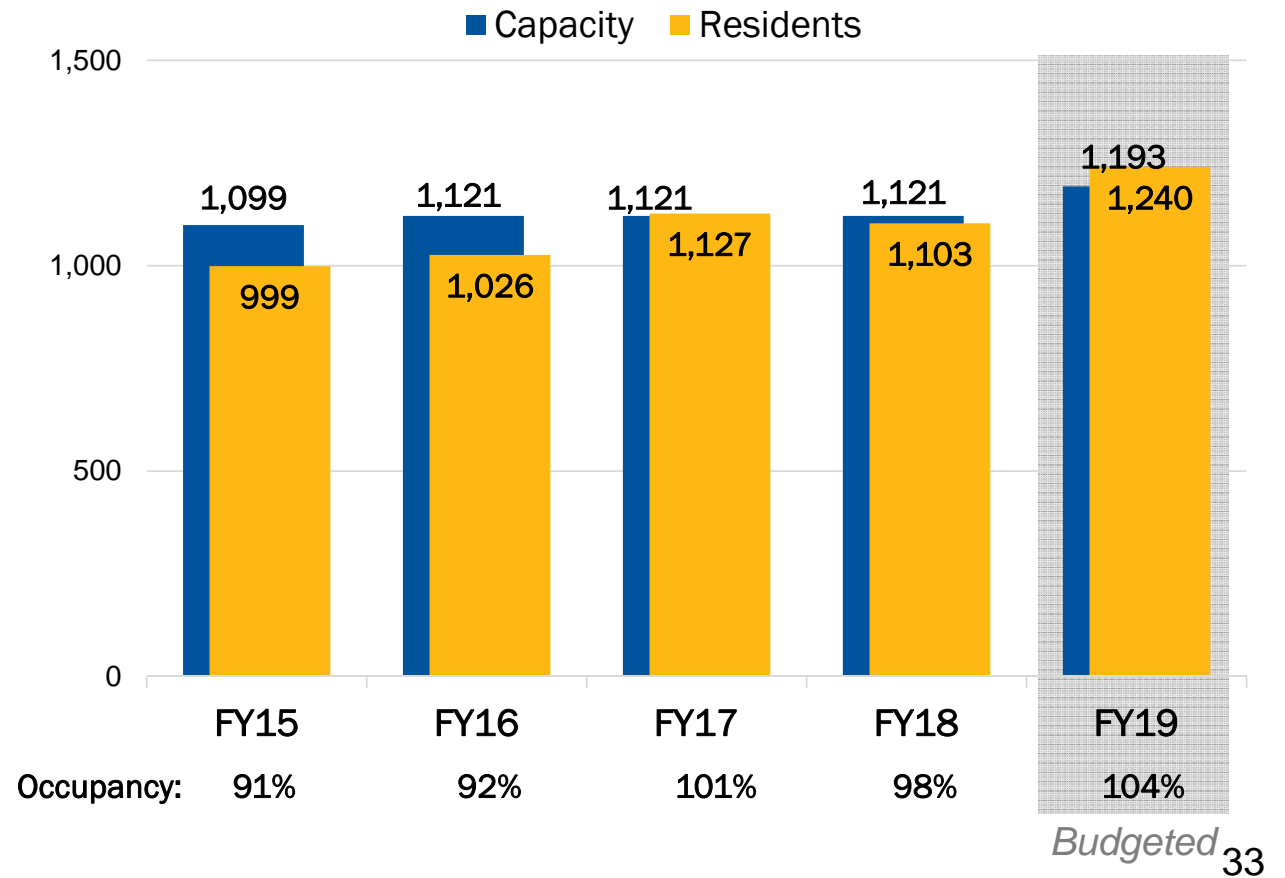
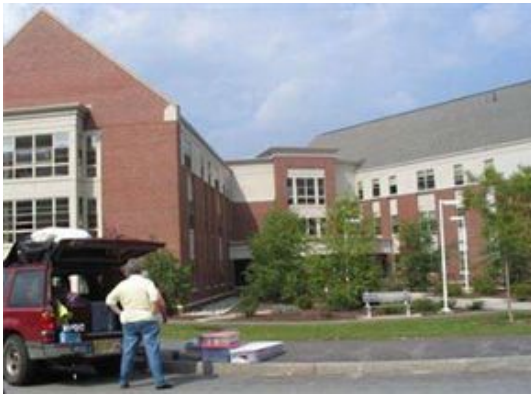


# Residence Hall Occupancy





# Residence Hall Occupancy



FY19 E&G and Auxiliary Operations - Capital Investments				
	PROJECT DESCRIPTION	FY19 Budget		
		E&G	AUXILIARY	TOTAL
<b>UMaine</b>				
COLLEGE AVE-491-B, PEST MGT	491B College Ave - 4H Science Center	\$ 125,000	\$ -	
VARIOUS PROJECTS	Annual Funded Depreciation	2,469,554	-	
TAUNTON BAY MARINE HATCHERY FKA EDA HATCHERY AND BUSINESS INCUBATOR BLDG FKA AQUACULTURE BLDG	CCAR-Hatchery Roof Replacement	450,000	-	
VARIOUS BUILDINGS	Classroom P&P projects	100,000	-	
HITCHNER HALL	Hitchner Lab 263 Renovation	50,000	-	
UMAINE CAMPUS	Paving Maintenance	150,000	-	
ANDROSCOGGIN HALL	Androscoggin Hall Renovation	-	270,000	
BALENTINE HALL	Balentine Renovations	-	104,989	
HILLTOP COMMONS	Hilltop Commons Flooring	-	75,000	
HILLTOP COMMONS	Hilltop Commons Roof	-	450,000	
KNOX HALL	Knox Hall Renovation	-	130,000	
WELLS COMMONS	Wells Commons Generator	-	525,000	
ALFOND ARENA	Alfond Arena FD	48,500	-	
MEMORIAL GYM COMPLEX	Memorial Gym FD	140,000	-	
VEHICLES		-	486,010	63,032
EQUIPMENT		-	1,167,000	360,726
CAPITAL RESERVE FUNDING		-	-	1,368,313
	<b>TOTAL</b>	<b>\$ 5,186,064</b>	<b>\$ 3,347,060</b>	<b>\$ 8,533,124</b>

FY19 E&G and Auxiliary Operations - Capital Investments				
	PROJECT DESCRIPTION	FY19 Budget		
		E&G	AUXILIARY	TOTAL
<b>UMA</b>				
ART/ARCHITECTURE BLDG	Art Building Brick Veneer and Panels	\$ 25,000	\$ -	
UMA CAMPUS	Augusta Campus Exterior Lighting	10,000	-	
UMA CAMPUS	Augusta Campus Replace interior LED lighting	10,000	-	
UMA CAMPUS	Bangor Campus Exterior Lighting Replacement	10,000	-	
UMA CAMPUS	Bangor campus interior lighting improvements	15,000	-	
RANDALL STUDENT TECH CTR	Bookstore space in RSC - Repurpose	213,640	-	
UMA CAMPUS	Classroom Equipment Upgrades	75,000	-	
FINE ARTS BLDG	Fine Arts Bldg Roof Replacement	100,000	-	
BD KATZ LIBRARY	Katz Classrooms - Ceiling Replacement	10,000	-	
BD KATZ LIBRARY	Katz Recording Studio Update	35,000	-	
UMA CAMPUS	Main Entrance Signs	20,000	-	
FITNESS CENTER	Repair Gymnasium Floor	20,000	-	
FITNESS CENTER	Replace Bleachers	100,000	-	
ROBINSON HALL	Replace Exterior Doors	60,000	-	
FITNESS CENTER	Replace Underground Utility Lines	65,000	-	
UMA CAMPUS	Sign & Wayfinding Initiative	100,000	-	
UMA CAMPUS	Videoconference Equipment Upgrades	35,000	-	
RANDALL STUDENT TECH CTR	Videoconference Technology Installation - RSTC	40,000	-	
EQUIPMENT		-	-	
	<b>TOTAL</b>	<b>\$ 980,319</b>	<b>\$ -</b>	<b>\$ 980,319</b>

FY19 E&G and Auxiliary Operations - Capital Investments				
	PROJECT DESCRIPTION	FY19 Budget		
		E&G	AUXILIARY	TOTAL
<b>UMF</b>				
PURINGTON HALL	Purington Hall ADA Code Review	\$ -	\$ 10,000	
VARIOUS PROJECTS	Annual Funded Depreciation	884,239	108,290	
EQUIPMENT		-	115,000	
VEHICLES		-	24,700	
	<b>TOTAL</b>	<b>\$ 884,239</b>	<b>\$ 257,990</b>	<b>\$ 1,142,229</b>



FY19 E&G and Auxiliary Operations - Capital Investments				
	PROJECT DESCRIPTION	FY19 Budget		
		E&G	AUXILIARY	TOTAL
<b>UMFK</b>				
NOWLAND HALL	Nowland Hall roof replacement	\$ 135,000	\$ -	
UMFK CAMPUS	Walkways	65,000	-	
VEHICLE	-	20,000	-	
<b>TOTAL</b>		<b>\$ 220,000</b>	<b>\$ -</b>	<b>\$ 220,000</b>

FY19 E&G and Auxiliary Operations - Capital Investments				
	PROJECT DESCRIPTION	FY19 Budget		
		E&G	AUXILIARY	TOTAL
<b>UMM</b>				
REYNOLDS HEALTH CENTER	Nursing Simulation Lab.	\$ 6,000	\$ -	
EQUIPMENT	-	500	-	
<b>TOTAL</b>		<b>\$ 6,500</b>	<b>\$ -</b>	<b>\$ 6,500</b>

FY19 E&G and Auxiliary Operations - Capital Investments				
	PROJECT DESCRIPTION	FY19 Budget		
		E&G	AUXILIARY	TOTAL
<b>UMPI</b>				
UMPI CAMPUS	Campus Access Control	\$ 40,976	\$ -	
UMPI CAMPUS	Exterior Lighting Upgrades	40,000	-	
UMPI CAMPUS	Paving Parking Upgrades	50,000	-	
UMPI CAMPUS	Exterior Lighting Upgrades	29,200	-	
EMERSON HALL	Emerson Bathroom Upgrades	-	50,000	
CAPITAL RESERVE FUNDING	-	20,724	19,100	
<b>TOTAL</b>		<b>\$ 180,900</b>	<b>\$ 69,100</b>	<b>\$ 250,000</b>

FY19 E&G and Auxiliary Operations - Capital Investments				
	PROJECT DESCRIPTION	FY19 Budget		
		E&G	AUXILIARY	TOTAL
<b>USM</b>				
BAILEY HALL	Bailey Hall Fire Alarm and Sprinkler	\$ 700,000	\$ -	
BAILEY HALL	Bailey Library Wing Roof Repl	320,000	-	
BROOKS STUDENT CTR	Brooks Fire Alarm Upgrade	45,000	-	
BROOKS STUDENT CTR	Brooks Generator, Transformer, Main Distribution Panel, Tra	348,500	-	
USM CAMPUS	Gorham Underground Util Rep	50,000	-	
PHILIPPI HALL	Philippi Fire Alarm Upgrade	45,000	-	
USM CAMPUS	Portland Underground Util Rep	50,000	-	
EQUIPMENT	-	264,556	-	
<b>TOTAL</b>		<b>\$ 1,823,056</b>	<b>\$ -</b>	<b>\$ 1,823,056</b>

FY19 E&G and Auxiliary Operations - Capital Investments				
	PROJECT DESCRIPTION	FY19 Budget		
		E&G	AUXILIARY	TOTAL
<b>US</b>				
EQUIPMENT	-	442,300	-	
CAPITAL RESERVE FUNDING	-	4,387,337	-	
<b>TOTAL</b>		<b>\$ 4,829,637</b>	<b>\$ -</b>	<b>\$ 4,829,637</b>

*Implementation of IT capital projects (excluding equipment) pending return on investment income*

**TOTAL**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<b>FY18 BASE</b>	<b>FY19 BASE</b>	<b>CHANGE</b>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 297,511,943	\$ 314,176,615	\$ 16,664,672	5.6%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(76,997,718)	(84,363,644)	(7,365,926)	9.6%
Net Student Charges Revenue	220,514,225	229,812,971	9,298,746	4.2%
State Appropriation	188,920,534	188,920,534	-	0.0%
Indirect Cost Recovery	12,110,006	12,669,320	559,314	4.6%
Investment Income/Gifts	4,852,207	5,464,275	612,068	12.6%
Sales/Services/Auxiliary	22,463,154	22,449,136	(14,018)	-0.1%
<b>Total Revenue</b>	<b>448,860,126</b>	<b>459,316,236</b>	<b>10,456,110</b>	<b>2.3%</b>
<b><u>Expenses</u></b>				
Personnel	334,771,422	342,268,517	7,497,095	2.2%
Fuel & Electricity	15,361,545	15,497,893	136,348	0.9%
Supplies & Services	30,319,468	31,378,058	1,058,590	3.5%
Shared Services	(202,189)	(179,455)	22,734	-11.2%
Travel	6,006,600	6,268,354	261,754	4.4%
Memberships, Contributions & Sponsorships	1,591,501	1,572,009	(19,492)	-1.2%
Maintenance & Alterations	10,856,132	11,747,248	891,116	8.2%
Interest	1,929,130	1,725,624	(203,506)	-10.5%
Depreciation	30,728,899	30,787,221	58,322	0.2%
Other Expenses & Transfers	32,380,460	32,343,671	(36,789)	-0.1%
<b>Total Operating Expenses &amp; Transfers</b>	<b>463,742,968</b>	<b>473,409,140</b>	<b>9,666,172</b>	<b>2.1%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (14,882,842)</b>	<b>\$ (14,092,905)</b>	<b>\$ 789,937</b>	<b>-5.3%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (14,882,842)	\$ (14,092,905)	\$ 789,937	-5.3%
Add Back Depreciation	30,728,899	30,787,221	58,322	0.2%
Less Capital Expenditures	(8,522,691)	(9,702,654)	(1,179,963)	13.8%
Less Capital Reserve Funding	(3,917,547)	(4,408,061)	(490,514)	12.5%
Less Debt Service Principal	(5,405,171)	(3,925,414)	1,479,757	-27.4%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(1,999,352)</b>	<b>(1,341,813)</b>	<b>657,539</b>	
Transfer from/(to) Administrative Savings Rsrv	(3,301,740)	(3,301,740)	-	
Transfer from/(to) Budget Stabilization	275,320	500,000	224,680	
<b>Net Change Subtotal</b>	<b>(5,025,772)</b>	<b>(4,143,553)</b>	<b>882,219</b>	
Other Strategic Transfers from/(to) Reserves	5,265,875	4,082,963	(1,182,912)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 240,103</b>	<b>\$ (60,590)</b>	<b>\$ (300,693)</b>	

**TOTAL**  
**FY19 PROPOSED BUDGET**  
**Unrestricted Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 1,240,000	\$ 1,227,714	\$ (12,286)	-1.0%
Dining & Residence Revenue	64,255,855	64,722,671	466,816	0.7%
Tuition Waivers/Scholarships	(2,130,802)	(2,252,044)	(121,242)	5.7%
Net Student Charges Revenue	63,365,053	63,698,341	333,288	0.5%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	16,678,940	17,267,807	588,867	3.5%
<b>Total Revenue</b>	<b>80,043,993</b>	<b>80,966,148</b>	<b>922,155</b>	<b>1.2%</b>
<b><u>Expenses</u></b>				
Personnel	22,098,429	22,431,259	332,830	1.5%
Fuel & Electricity	5,997,437	5,078,537	(918,900)	-15.3%
Supplies & Services	24,820,399	24,728,302	(92,097)	-0.4%
Shared Services	-	-	-	-%
Travel	129,418	128,380	(1,038)	-0.8%
Memberships, Contributions & Sponsorships	27,695	20,772	(6,923)	-25.0%
Maintenance & Alterations	4,200,126	3,902,565	(297,561)	-7.1%
Interest	3,941,796	3,696,059	(245,737)	-6.2%
Depreciation	5,400,401	6,255,906	855,505	15.8%
Other Expenses & Transfers	9,853,651	11,954,753	2,101,102	21.3%
<b>Total Operating Expenses &amp; Transfers</b>	<b>76,469,352</b>	<b>78,196,533</b>	<b>1,727,181</b>	<b>2.3%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 3,574,641</b>	<b>\$ 2,769,615</b>	<b>\$ (805,026)</b>	<b>-22.5%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 3,574,641	\$ 2,769,615	\$ (805,026)	-22.5%
Add Back Depreciation	5,400,401	6,255,906	855,505	15.8%
Less Capital Expenditures	(2,106,730)	(2,286,737)	(180,007)	8.5%
Less Capital Reserve Funding	(1,496,524)	(1,387,413)	109,111	-7.3%
Less Debt Service Principal	(5,182,163)	(5,371,077)	(188,914)	3.6%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>189,625</b>	<b>(19,706)</b>	<b>(209,331)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>189,625</b>	<b>(19,706)</b>	<b>(209,331)</b>	
Other Strategic Transfers from/(to) Reserves	45,961	86,929	40,968	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 235,586</b>	<b>\$ 67,223</b>	<b>\$ (168,363)</b>	

**TOTAL**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 298,751,943	\$ 315,404,329	\$ 16,652,386	5.6%
Dining & Residence Revenue	64,255,855	64,722,671	466,816	0.7%
Tuition Waivers/Scholarships	(79,128,520)	(86,615,688)	(7,487,168)	9.5%
Net Student Charges Revenue	283,879,278	293,511,312	9,632,034	3.4%
State Appropriation	188,920,534	188,920,534	-	0.0%
Indirect Cost Recovery	12,110,006	12,669,320	559,314	4.6%
Investment Income/Gifts	4,852,207	5,464,275	612,068	12.6%
Sales/Services/Auxiliary	39,142,094	39,716,943	574,849	1.5%
<b>Total Revenue</b>	<b>528,904,119</b>	<b>540,282,384</b>	<b>11,378,265</b>	<b>2.2%</b>
<b><u>Expenses</u></b>				
Personnel	356,869,851	364,699,776	7,829,925	2.2%
Fuel & Electricity	21,358,982	20,576,430	(782,552)	-3.7%
Supplies & Services	55,139,867	56,106,360	966,493	1.8%
Shared Services	(202,189)	(179,455)	22,734	-11.2%
Travel	6,136,018	6,396,734	260,716	4.2%
Memberships, Contributions & Sponsorships	1,619,196	1,592,781	(26,415)	-1.6%
Maintenance & Alterations	15,056,258	15,649,813	593,555	3.9%
Interest	5,870,926	5,421,683	(449,243)	-7.7%
Depreciation	36,129,300	37,043,127	913,827	2.5%
Other Expenses & Transfers	42,234,111	44,298,424	2,064,313	4.9%
<b>Total Operating Expenses &amp; Transfers</b>	<b>540,212,320</b>	<b>551,605,673</b>	<b>11,393,353</b>	<b>2.1%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (11,308,201)</b>	<b>\$ (11,323,290)</b>	<b>\$ (15,089)</b>	<b>0.1%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (11,308,201)	\$ (11,323,290)	\$ (15,089)	0.1%
Add Back Depreciation	36,129,300	37,043,127	913,827	2.5%
Less Capital Expenditures	(10,629,421)	(11,989,391)	(1,359,970)	12.8%
Less Capital Reserve Funding	(5,414,071)	(5,795,474)	(381,403)	7.0%
Less Debt Service Principal	(10,587,334)	(9,296,491)	1,290,843	-12.2%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(1,809,727)</b>	<b>(1,361,519)</b>	<b>448,208</b>	
Transfer from/(to) Administrative Savings Rsrv	(3,301,740)	(3,301,740)	-	
Transfer from/(to) Budget Stabilization	275,320	500,000	224,680	
<b>Net Change Subtotal</b>	<b>(4,836,147)</b>	<b>(4,163,259)</b>	<b>672,888</b>	
Other Strategic Transfers from/(to) Reserves	5,311,836	4,169,892	(1,141,944)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 475,689</b>	<b>\$ 6,633</b>	<b>\$ (469,056)</b>	

**GOVERNANCE**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ -	\$ -	\$ -	-%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	-	-	-	-%
Net Student Charges Revenue	-	-	-	-%
State Appropriation	4,288,136	4,585,436	297,300	6.9%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	-	-	-	-%
<b>Total Revenue</b>	<b>4,288,136</b>	<b>4,585,436</b>	<b>297,300</b>	<b>6.9%</b>
<b><u>Expenses</u></b>				
Personnel	4,253,393	4,099,188	(154,205)	-3.6%
Fuel & Electricity	3,200	3,200	-	0.0%
Supplies & Services	81,710	79,725	(1,985)	-2.4%
Shared Services	594,738	661,995	67,257	11.3%
Travel	126,250	128,049	1,799	1.4%
Memberships, Contributions & Sponsorships	22,025	22,255	230	1.0%
Maintenance & Alterations	2,000	2,000	-	0.0%
Interest	-	-	-	-%
Depreciation	-	-	-	-%
Other Expenses & Transfers	(99,766)	(410,976)	(311,210)	311.9%
<b>Total Operating Expenses &amp; Transfers</b>	<b>4,983,550</b>	<b>4,585,436</b>	<b>(398,114)</b>	<b>-8.0%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (695,414)</b>	<b>\$ -</b>	<b>\$ 695,414</b>	<b>-100.0%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (695,414)	\$ -	\$ 695,414	-100.0%
Add Back Depreciation	-	-	-	-%
Less Capital Expenditures	-	-	-	-%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	-	-	-	-%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(695,414)</b>	<b>-</b>	<b>695,414</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(695,414)</b>	<b>-</b>	<b>695,414</b>	
Other Strategic Transfers from/(to) Reserves	757,499	-	(757,499)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 62,085</b>	<b>\$ -</b>	<b>\$ (62,085)</b>	

**UNIVERSITY SERVICES**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ -	\$ -	\$ -	-%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	-	-	-	-%
Net Student Charges Revenue	-	-	-	-%
State Appropriation	3,801,740	3,801,740	-	0.0%
Indirect Cost Recovery	7,500	189,658	182,158	2428.8%
Investment Income/Gifts	3,859,317	4,424,337	565,020	14.6%
Sales/Services/Auxiliary	808,900	676,904	(131,996)	-16.3%
<b>Total Revenue</b>	<b>8,477,457</b>	<b>9,092,639</b>	<b>615,182</b>	<b>7.3%</b>
<b><u>Expenses</u></b>				
Personnel	34,312,494	34,892,338	579,844	1.7%
Fuel & Electricity	10,860	10,910	50	0.5%
Supplies & Services	3,749,787	4,012,099	262,312	7.0%
Shared Services	(44,220,841)	(45,558,917)	(1,338,076)	3.0%
Travel	381,316	399,067	17,751	4.7%
Memberships, Contributions & Sponsorships	450,960	390,301	(60,659)	-13.5%
Maintenance & Alterations	3,368,722	4,109,687	740,965	22.0%
Interest	30,200	35,702	5,502	18.2%
Depreciation	4,856,617	4,835,520	(21,097)	-0.4%
Other Expenses & Transfers	2,325,687	3,189,625	863,938	37.1%
<b>Total Operating Expenses &amp; Transfers</b>	<b>5,265,802</b>	<b>6,316,332</b>	<b>1,050,530</b>	<b>20.0%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 3,211,655</b>	<b>\$ 2,776,307</b>	<b>\$ (435,348)</b>	<b>-13.6%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 3,211,655	\$ 2,776,307	\$ (435,348)	-13.6%
Add Back Depreciation	4,856,617	4,835,520	(21,097)	-0.4%
Less Capital Expenditures	(1,033,300)	(442,300)	591,000	-57.2%
Less Capital Reserve Funding	(3,067,317)	(4,387,337)	(1,320,020)	43.0%
Less Debt Service Principal	(755,000)	(5,883)	749,117	-99.2%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>3,212,655</b>	<b>2,776,307</b>	<b>(436,348)</b>	
Transfer from/(to) Administrative Savings Rsrv	(3,301,740)	(3,301,740)	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(89,085)</b>	<b>(525,433)</b>	<b>(436,348)</b>	
Other Strategic Transfers from/(to) Reserves	27,000	525,433	498,433	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ (62,085)</b>	<b>\$ -</b>	<b>\$ 62,085</b>	

**University of Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 158,866,957	\$ 172,126,005	\$ 13,259,048	8.3%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(49,180,484)	(54,516,538)	(5,336,054)	10.8%
Net Student Charges Revenue	109,686,473	117,609,467	7,922,994	7.2%
State Appropriation	83,854,217	83,459,572	(394,645)	-0.5%
Indirect Cost Recovery	8,371,276	8,371,276	-	0.0%
Investment Income/Gifts	912,890	919,938	7,048	0.8%
Sales/Services/Auxiliary	14,761,765	16,025,902	1,264,137	8.6%
<b>Total Revenue</b>	<b>217,586,621</b>	<b>226,386,155</b>	<b>8,799,534</b>	<b>4.0%</b>
<b><u>Expenses</u></b>				
Personnel	139,454,485	145,789,516	6,335,031	4.5%
Fuel & Electricity	9,997,111	10,139,804	142,693	1.4%
Supplies & Services	15,100,807	16,474,228	1,373,421	9.1%
Shared Services	18,255,579	18,747,182	491,603	2.7%
Travel	2,576,762	2,810,175	233,413	9.1%
Memberships, Contributions & Sponsorships	419,136	421,099	1,963	0.5%
Maintenance & Alterations	4,500,067	4,542,256	42,189	0.9%
Interest	667,341	587,460	(79,881)	-12.0%
Depreciation	14,177,562	13,788,287	(389,275)	-2.7%
Other Expenses & Transfers	20,828,728	20,608,454	(220,274)	-1.1%
<b>Total Operating Expenses &amp; Transfers</b>	<b>225,977,578</b>	<b>233,908,461</b>	<b>7,930,883</b>	<b>3.5%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (8,390,957)</b>	<b>\$ (7,522,306)</b>	<b>\$ 868,651</b>	<b>-10.4%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (8,390,957)	\$ (7,522,306)	\$ 868,651	-10.4%
Add Back Depreciation	14,177,562	13,788,287	(389,275)	-2.7%
Less Capital Expenditures	(4,380,108)	(5,186,064)	(805,956)	18.4%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(1,406,497)	(1,079,917)	326,580	-23.2%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	



**University of Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ -	\$ -	\$ -	-%
Dining & Residence Revenue	39,159,100	39,188,740	29,640	0.1%
Tuition Waivers/Scholarships	(1,179,602)	(1,212,967)	(33,365)	2.8%
Net Student Charges Revenue	37,979,498	37,975,773	(3,725)	0.0%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	12,319,502	13,204,381	884,879	7.2%
<b>Total Revenue</b>	<b>50,299,000</b>	<b>51,180,154</b>	<b>881,154</b>	<b>1.8%</b>
<b><u>Expenses</u></b>				
Personnel	17,178,830	17,581,341	402,511	2.3%
Fuel & Electricity	3,685,274	3,731,834	46,560	1.3%
Supplies & Services	13,401,543	13,204,351	(197,192)	-1.5%
Shared Services	-	-	-	-%
Travel	104,268	102,455	(1,813)	-1.7%
Memberships, Contributions & Sponsorships	20,000	12,061	(7,939)	-39.7%
Maintenance & Alterations	3,053,403	3,225,576	172,173	5.6%
Interest	2,000,586	1,876,652	(123,934)	-6.2%
Depreciation	3,387,324	3,999,166	611,842	18.1%
Other Expenses & Transfers	5,277,189	5,495,924	218,735	4.1%
<b>Total Operating Expenses &amp; Transfers</b>	<b>48,108,417</b>	<b>49,229,360</b>	<b>1,120,943</b>	<b>2.3%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 2,190,583</b>	<b>\$ 1,950,794</b>	<b>\$ (239,789)</b>	<b>-10.9%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 2,190,583	\$ 1,950,794	\$ (239,789)	-10.9%
Add Back Depreciation	3,387,324	3,999,166	611,842	18.1%
Less Capital Expenditures	(1,688,152)	(1,978,747)	(290,595)	17.2%
Less Capital Reserve Funding	(1,354,055)	(1,368,313)	(14,258)	1.1%
Less Debt Service Principal	(2,535,700)	(2,602,900)	(67,200)	2.7%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**University of Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 158,866,957	\$ 172,126,005	\$ 13,259,048	8.3%
Dining & Residence Revenue	39,159,100	39,188,740	29,640	0.1%
Tuition Waivers/Scholarships	(50,360,086)	(55,729,505)	(5,369,419)	10.7%
Net Student Charges Revenue	147,665,971	155,585,240	7,919,269	5.4%
State Appropriation	83,854,217	83,459,572	(394,645)	-0.5%
Indirect Cost Recovery	8,371,276	8,371,276	-	0.0%
Investment Income/Gifts	912,890	919,938	7,048	0.8%
Sales/Services/Auxiliary	27,081,267	29,230,283	2,149,016	7.9%
<b>Total Revenue</b>	<b>267,885,621</b>	<b>277,566,309</b>	<b>9,680,688</b>	<b>3.6%</b>
<b><u>Expenses</u></b>				
Personnel	156,633,315	163,370,857	6,737,542	4.3%
Fuel & Electricity	13,682,385	13,871,638	189,253	1.4%
Supplies & Services	28,502,350	29,678,579	1,176,229	4.1%
Shared Services	18,255,579	18,747,182	491,603	2.7%
Travel	2,681,030	2,912,630	231,600	8.6%
Memberships, Contributions & Sponsorships	439,136	433,160	(5,976)	-1.4%
Maintenance & Alterations	7,553,470	7,767,832	214,362	2.8%
Interest	2,667,927	2,464,112	(203,815)	-7.6%
Depreciation	17,564,886	17,787,453	222,567	1.3%
Other Expenses & Transfers	26,105,917	26,104,378	(1,539)	0.0%
<b>Total Operating Expenses &amp; Transfers</b>	<b>274,085,995</b>	<b>283,137,821</b>	<b>9,051,826</b>	<b>3.3%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (6,200,374)</b>	<b>\$ (5,571,512)</b>	<b>\$ 628,862</b>	<b>-10.1%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (6,200,374)	\$ (5,571,512)	\$ 628,862	-10.1%
Add Back Depreciation	17,564,886	17,787,453	222,567	1.3%
Less Capital Expenditures	(6,068,260)	(7,164,811)	(1,096,551)	18.1%
Less Capital Reserve Funding	(1,354,055)	(1,368,313)	(14,258)	1.1%
Less Debt Service Principal	(3,942,197)	(3,682,817)	259,380	-6.6%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**University of Maine at Augusta**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 22,457,993	\$ 21,317,704	\$ (1,140,289)	-5.1%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(3,150,117)	(3,182,057)	(31,940)	1.0%
Net Student Charges Revenue	19,307,876	18,135,647	(1,172,229)	-6.1%
State Appropriation	17,193,899	17,415,314	221,415	1.3%
Indirect Cost Recovery	175,000	160,886	(14,114)	-8.1%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	435,750	380,456	(55,294)	-12.7%
<b>Total Revenue</b>	<b>37,112,525</b>	<b>36,092,303</b>	<b>(1,020,222)</b>	<b>-2.7%</b>
<b><u>Expenses</u></b>				
Personnel	26,196,976	26,628,310	431,334	1.6%
Fuel & Electricity	825,793	731,723	(94,070)	-11.4%
Supplies & Services	1,821,257	1,726,782	(94,475)	-5.2%
Shared Services	4,645,524	4,840,186	194,662	4.2%
Travel	270,407	309,323	38,916	14.4%
Memberships, Contributions & Sponsorships	81,259	80,316	(943)	-1.2%
Maintenance & Alterations	464,219	474,493	10,274	2.2%
Interest	37,508	30,221	(7,287)	-19.4%
Depreciation	1,608,500	1,730,680	122,180	7.6%
Other Expenses & Transfers	2,458,436	2,826,337	367,901	15.0%
<b>Total Operating Expenses &amp; Transfers</b>	<b>38,409,879</b>	<b>39,378,371</b>	<b>968,492</b>	<b>2.5%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (1,297,354)</b>	<b>\$ (3,286,069)</b>	<b>\$ (1,988,715)</b>	<b>153.3%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (1,297,354)	\$ (3,286,069)	\$ (1,988,715)	153.3%
Add Back Depreciation	1,608,500	1,730,680	122,180	7.6%
Less Capital Expenditures	(992,227)	(980,319)	11,908	-1.2%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(309,747)	(328,376)	(18,629)	6.0%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(990,828)</b>	<b>(2,864,084)</b>	<b>(1,873,256)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(990,828)</b>	<b>(2,864,084)</b>	<b>(1,873,256)</b>	
Other Strategic Transfers from/(to) Reserves	990,828	2,864,084	1,873,256	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ 0</b>	<b>\$ 0</b>	

**University of Maine at Augusta**  
**FY19 PROPOSED BUDGET**  
**Unrestricted Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ -	\$ -	\$ -	-%
Dining & Residence Revenue	-	7,637	7,637	-%
Tuition Waivers/Scholarships	-	-	-	-%
Net Student Charges Revenue	-	7,637	7,637	-%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	1,191,000	1,086,000	(105,000)	-8.8%
<b>Total Revenue</b>	<b>1,191,000</b>	<b>1,093,637</b>	<b>(97,363)</b>	<b>-8.2%</b>
<b><u>Expenses</u></b>				
Personnel	285,444	283,552	(1,892)	-0.7%
Fuel & Electricity	1,000	1,000	-	0.0%
Supplies & Services	810,400	750,450	(59,950)	-7.4%
Shared Services	-	-	-	-%
Travel	450	450	-	0.0%
Memberships, Contributions & Sponsorships	900	900	-	0.0%
Maintenance & Alterations	3,500	9,137	5,637	161.1%
Interest	1,882	1,468	(414)	-22.0%
Depreciation	29,670	17,662	(12,008)	-40.5%
Other Expenses & Transfers	123,040	122,705	(335)	-0.3%
<b>Total Operating Expenses &amp; Transfers</b>	<b>1,256,286</b>	<b>1,187,324</b>	<b>(68,962)</b>	<b>-5.5%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (65,286)</b>	<b>\$ (93,687)</b>	<b>\$ (28,401)</b>	<b>43.5%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (65,286)	\$ (93,687)	\$ (28,401)	43.5%
Add Back Depreciation	29,670	17,662	(12,008)	-40.5%
Less Capital Expenditures	-	-	-	-%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(10,345)	(10,904)	(559)	5.4%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(45,961)</b>	<b>(86,929)</b>	<b>(40,968)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(45,961)</b>	<b>(86,929)</b>	<b>(40,968)</b>	
Other Strategic Transfers from/(to) Reserves	45,961	86,929	40,968	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**University of Maine at Augusta**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 22,457,993	\$ 21,317,704	\$ (1,140,289)	-5.1%
Dining & Residence Revenue	-	7,637	7,637	-%
Tuition Waivers/Scholarships	(3,150,117)	(3,182,057)	(31,940)	1.0%
Net Student Charges Revenue	19,307,876	18,143,284	(1,164,592)	-6.0%
State Appropriation	17,193,899	17,415,314	221,415	1.3%
Indirect Cost Recovery	175,000	160,886	(14,114)	-8.1%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	1,626,750	1,466,456	(160,294)	-9.9%
<b>Total Revenue</b>	<b>38,303,525</b>	<b>37,185,940</b>	<b>(1,117,585)</b>	<b>-2.9%</b>
<b><u>Expenses</u></b>				
Personnel	26,482,420	26,911,862	429,442	1.6%
Fuel & Electricity	826,793	732,723	(94,070)	-11.4%
Supplies & Services	2,631,657	2,477,232	(154,425)	-5.9%
Shared Services	4,645,524	4,840,186	194,662	4.2%
Travel	270,857	309,773	38,916	14.4%
Memberships, Contributions & Sponsorships	82,159	81,216	(943)	-1.1%
Maintenance & Alterations	467,719	483,630	15,911	3.4%
Interest	39,390	31,689	(7,701)	-19.6%
Depreciation	1,638,170	1,748,342	110,172	6.7%
Other Expenses & Transfers	2,581,476	2,949,042	367,566	14.2%
<b>Total Operating Expenses &amp; Transfers</b>	<b>39,666,165</b>	<b>40,565,695</b>	<b>899,530</b>	<b>2.3%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (1,362,640)</b>	<b>\$ (3,379,756)</b>	<b>\$ (2,017,116)</b>	<b>148.0%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (1,362,640)	\$ (3,379,756)	\$ (2,017,116)	148.0%
Add Back Depreciation	1,638,170	1,748,342	110,172	6.7%
Less Capital Expenditures	(992,227)	(980,319)	11,908	-1.2%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(320,092)	(339,280)	(19,188)	6.0%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(1,036,789)</b>	<b>(2,951,013)</b>	<b>(1,914,224)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(1,036,789)</b>	<b>(2,951,013)</b>	<b>(1,914,224)</b>	
Other Strategic Transfers from/(to) Reserves	1,036,789	2,951,013	1,914,224	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ 0</b>	<b>\$ 0</b>	

**Univ of Maine at Farmington**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 20,764,144	\$ 21,401,214	\$ 637,070	3.1%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(3,488,511)	(4,141,336)	(652,825)	18.7%
Net Student Charges Revenue	17,275,633	17,259,878	(15,755)	-0.1%
State Appropriation	12,296,865	12,365,939	69,074	0.6%
Indirect Cost Recovery	200,000	200,000	-	0.0%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	654,310	700,310	46,000	7.0%
<b>Total Revenue</b>	<b>30,426,808</b>	<b>30,526,127</b>	<b>99,319</b>	<b>0.3%</b>
<b><u>Expenses</u></b>				
Personnel	23,687,237	24,033,555	346,318	1.5%
Fuel & Electricity	629,360	689,470	60,110	9.6%
Supplies & Services	1,586,322	1,263,278	(323,044)	-20.4%
Shared Services	3,337,924	3,671,846	333,922	10.0%
Travel	562,259	521,330	(40,929)	-7.3%
Memberships, Contributions & Sponsorships	94,665	94,059	(606)	-0.6%
Maintenance & Alterations	34,522	50,981	16,459	47.7%
Interest	213,952	197,746	(16,206)	-7.6%
Depreciation	1,827,065	1,835,415	8,350	0.5%
Other Expenses & Transfers	(891,879)	(1,221,318)	(329,439)	36.9%
<b>Total Operating Expenses &amp; Transfers</b>	<b>31,081,427</b>	<b>31,136,362</b>	<b>54,935</b>	<b>0.2%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (654,619)</b>	<b>\$ (610,235)</b>	<b>\$ 44,384</b>	<b>-6.8%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (654,619)	\$ (610,235)	\$ 44,384	-6.8%
Add Back Depreciation	1,827,065	1,835,415	8,350	0.5%
Less Capital Expenditures	-	(884,239)	(884,239)	-%
Less Capital Reserve Funding	(850,230)	-	850,230	-100.0%
Less Debt Service Principal	(322,216)	(340,941)	(18,725)	5.8%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**Univ of Maine at Farmington**  
**FY19 PROPOSED BUDGET**  
**Unrestricted Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ -	\$ -	\$ -	-%
Dining & Residence Revenue	8,998,503	9,037,262	38,759	0.4%
Tuition Waivers/Scholarships	(260,000)	(343,237)	(83,237)	32.0%
Net Student Charges Revenue	8,738,503	8,694,025	(44,478)	-0.5%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	266,155	278,000	11,845	4.5%
<b>Total Revenue</b>	<b>9,004,658</b>	<b>8,972,025</b>	<b>(32,633)</b>	<b>-0.4%</b>
<b><u>Expenses</u></b>				
Personnel	1,706,802	1,557,651	(149,151)	-8.7%
Fuel & Electricity	465,540	581,341	115,801	24.9%
Supplies & Services	3,168,472	3,186,685	18,213	0.6%
Shared Services	-	-	-	-%
Travel	12,125	4,275	(7,850)	-64.7%
Memberships, Contributions & Sponsorships	5,595	3,975	(1,620)	-29.0%
Maintenance & Alterations	57,587	47,457	(10,130)	-17.6%
Interest	448,810	416,531	(32,279)	-7.2%
Depreciation	461,347	588,187	126,840	27.5%
Other Expenses & Transfers	2,076,809	2,262,520	185,711	8.9%
<b>Total Operating Expenses &amp; Transfers</b>	<b>8,403,087</b>	<b>8,648,622</b>	<b>245,535</b>	<b>2.9%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 601,571</b>	<b>\$ 323,403</b>	<b>\$ (278,168)</b>	<b>-46.2%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 601,571	\$ 323,403	\$ (278,168)	-46.2%
Add Back Depreciation	461,347	588,187	126,840	27.5%
Less Capital Expenditures	(244,700)	(257,990)	(13,290)	5.4%
Less Capital Reserve Funding	(142,469)	-	142,469	-100.0%
Less Debt Service Principal	(627,914)	(653,600)	(25,686)	4.1%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>47,835</b>	<b>-</b>	<b>(47,835)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>47,835</b>	<b>-</b>	<b>(47,835)</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 47,835</b>	<b>\$ -</b>	<b>\$ (47,835)</b>	

**Univ of Maine at Farmington**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 20,764,144	\$ 21,401,214	\$ 637,070	3.1%
Dining & Residence Revenue	8,998,503	9,037,262	38,759	0.4%
Tuition Waivers/Scholarships	(3,748,511)	(4,484,573)	(736,062)	19.6%
Net Student Charges Revenue	26,014,136	25,953,903	(60,233)	-0.2%
State Appropriation	12,296,865	12,365,939	69,074	0.6%
Indirect Cost Recovery	200,000	200,000	-	0.0%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	920,465	978,310	57,845	6.3%
<b>Total Revenue</b>	<b>39,431,466</b>	<b>39,498,152</b>	<b>66,686</b>	<b>0.2%</b>
<b><u>Expenses</u></b>				
Personnel	25,394,039	25,591,206	197,167	0.8%
Fuel & Electricity	1,094,900	1,270,811	175,911	16.1%
Supplies & Services	4,754,794	4,449,963	(304,831)	-6.4%
Shared Services	3,337,924	3,671,846	333,922	10.0%
Travel	574,384	525,605	(48,779)	-8.5%
Memberships, Contributions & Sponsorships	100,260	98,034	(2,226)	-2.2%
Maintenance & Alterations	92,109	98,438	6,329	6.9%
Interest	662,762	614,277	(48,485)	-7.3%
Depreciation	2,288,412	2,423,602	135,190	5.9%
Other Expenses & Transfers	1,184,930	1,041,202	(143,728)	-12.1%
<b>Total Operating Expenses &amp; Transfers</b>	<b>39,484,514</b>	<b>39,784,984</b>	<b>300,470</b>	<b>0.8%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (53,048)</b>	<b>\$ (286,832)</b>	<b>\$ (233,784)</b>	<b>440.7%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (53,048)	\$ (286,832)	\$ (233,784)	440.7%
Add Back Depreciation	2,288,412	2,423,602	135,190	5.9%
Less Capital Expenditures	(244,700)	(1,142,229)	(897,529)	366.8%
Less Capital Reserve Funding	(992,699)	-	992,699	-100.0%
Less Debt Service Principal	(950,130)	(994,541)	(44,411)	4.7%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>47,835</b>	<b>-</b>	<b>(47,835)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>47,835</b>	<b>-</b>	<b>(47,835)</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 47,835</b>	<b>\$ -</b>	<b>\$ (47,835)</b>	



**Univ of Maine at Fort Kent**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 8,737,323	\$ 9,381,658	\$ 644,335	7.4%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(1,530,916)	(1,689,014)	(158,098)	10.3%
Net Student Charges Revenue	7,206,407	7,692,644	486,237	6.7%
State Appropriation	6,513,346	6,871,862	358,516	5.5%
Indirect Cost Recovery	36,230	32,500	(3,730)	-10.3%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	247,500	226,882	(20,618)	-8.3%
<b>Total Revenue</b>	<b>14,003,483</b>	<b>14,823,888</b>	<b>820,405</b>	<b>5.9%</b>
<b><u>Expenses</u></b>				
Personnel	8,983,370	9,736,608	753,238	8.4%
Fuel & Electricity	447,346	453,246	5,900	1.3%
Supplies & Services	516,305	557,901	41,596	8.1%
Shared Services	1,714,078	1,873,595	159,517	9.3%
Travel	345,310	419,750	74,440	21.6%
Memberships, Contributions & Sponsorships	60,550	102,270	41,720	68.9%
Maintenance & Alterations	243,640	247,850	4,210	1.7%
Interest	40,450	35,206	(5,244)	-13.0%
Depreciation	668,982	724,561	55,579	8.3%
Other Expenses & Transfers	600,817	619,498	18,681	3.1%
<b>Total Operating Expenses &amp; Transfers</b>	<b>13,620,848</b>	<b>14,770,485</b>	<b>1,149,637</b>	<b>8.4%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 382,635</b>	<b>\$ 53,403</b>	<b>\$ (329,232)</b>	<b>-86.0%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 382,635	\$ 53,403	\$ (329,232)	-86.0%
Add Back Depreciation	668,982	724,561	55,579	8.3%
Less Capital Expenditures	(220,000)	(220,000)	-	0.0%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(326,999)	(345,488)	(18,489)	5.7%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>504,618</b>	<b>212,476</b>	<b>(292,142)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>504,618</b>	<b>212,476</b>	<b>(292,142)</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 504,618</b>	<b>\$ 212,476</b>	<b>\$ (292,142)</b>	

**Univ of Maine at Fort Kent**  
**FY19 PROPOSED BUDGET**  
**Unrestricted Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ -	\$ -	\$ -	-%
Dining & Residence Revenue	1,609,420	1,463,200	(146,220)	-9.1%
Tuition Waivers/Scholarships	(60,000)	(60,000)	-	0.0%
Net Student Charges Revenue	1,549,420	1,403,200	(146,220)	-9.4%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	109,100	106,900	(2,200)	-2.0%
<b>Total Revenue</b>	<b>1,658,520</b>	<b>1,510,100</b>	<b>(148,420)</b>	<b>-8.9%</b>
<b><u>Expenses</u></b>				
Personnel	315,104	291,006	(24,098)	-7.6%
Fuel & Electricity	179,259	181,100	1,841	1.0%
Supplies & Services	812,817	700,690	(112,127)	-13.8%
Shared Services	-	-	-	-%
Travel	3,500	3,500	-	0.0%
Memberships, Contributions & Sponsorships	200	250	50	25.0%
Maintenance & Alterations	55,270	56,770	1,500	2.7%
Interest	218,324	207,200	(11,124)	-5.1%
Depreciation	217,798	216,543	(1,255)	-0.6%
Other Expenses & Transfers	60,902	65,427	4,525	7.4%
<b>Total Operating Expenses &amp; Transfers</b>	<b>1,863,174</b>	<b>1,722,486</b>	<b>(140,688)</b>	<b>-7.6%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (204,654)</b>	<b>\$ (212,386)</b>	<b>\$ (7,732)</b>	<b>3.8%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (204,654)	\$ (212,386)	\$ (7,732)	3.8%
Add Back Depreciation	217,798	216,543	(1,255)	-0.6%
Less Capital Expenditures	-	-	-	-%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(208,826)	(210,000)	(1,174)	0.6%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(195,682)</b>	<b>(205,843)</b>	<b>(10,161)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(195,682)</b>	<b>(205,843)</b>	<b>(10,161)</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ (195,682)</b>	<b>\$ (205,843)</b>	<b>\$ (10,161)</b>	

**Univ of Maine at Fort Kent**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 8,737,323	\$ 9,381,658	\$ 644,335	7.4%
Dining & Residence Revenue	1,609,420	1,463,200	(146,220)	-9.1%
Tuition Waivers/Scholarships	(1,590,916)	(1,749,014)	(158,098)	9.9%
Net Student Charges Revenue	8,755,827	9,095,844	340,017	3.9%
State Appropriation	6,513,346	6,871,862	358,516	5.5%
Indirect Cost Recovery	36,230	32,500	(3,730)	-10.3%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	356,600	333,782	(22,818)	-6.4%
<b>Total Revenue</b>	<b>15,662,003</b>	<b>16,333,988</b>	<b>671,985</b>	<b>4.3%</b>
<b><u>Expenses</u></b>				
Personnel	9,298,474	10,027,614	729,140	7.8%
Fuel & Electricity	626,605	634,346	7,741	1.2%
Supplies & Services	1,329,122	1,258,591	(70,531)	-5.3%
Shared Services	1,714,078	1,873,595	159,517	9.3%
Travel	348,810	423,250	74,440	21.3%
Memberships, Contributions & Sponsorships	60,750	102,520	41,770	68.8%
Maintenance & Alterations	298,910	304,620	5,710	1.9%
Interest	258,774	242,406	(16,368)	-6.3%
Depreciation	886,780	941,104	54,324	6.1%
Other Expenses & Transfers	661,719	684,925	23,206	3.5%
<b>Total Operating Expenses &amp; Transfers</b>	<b>15,484,022</b>	<b>16,492,971</b>	<b>1,008,949</b>	<b>6.5%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 177,981</b>	<b>\$ (158,983)</b>	<b>\$ (336,964)</b>	<b>-189.3%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 177,981	\$ (158,983)	\$ (336,964)	-189.3%
Add Back Depreciation	886,780	941,104	54,324	6.1%
Less Capital Expenditures	(220,000)	(220,000)	-	0.0%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(535,825)	(555,488)	(19,663)	3.7%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>308,936</b>	<b>6,633</b>	<b>(302,303)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>308,936</b>	<b>6,633</b>	<b>(302,303)</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 308,936</b>	<b>\$ 6,633</b>	<b>\$ (302,303)</b>	

**Univ of Maine at Machias**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 4,839,337	\$ 4,621,822	\$ (217,515)	-4.5%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(1,468,193)	(1,168,193)	300,000	-20.4%
Net Student Charges Revenue	3,371,144	3,453,629	82,485	2.4%
State Appropriation	5,252,559	5,200,375	(52,184)	-1.0%
Indirect Cost Recovery	60,000	60,000	-	0.0%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	251,780	298,667	46,887	18.6%
<b>Total Revenue</b>	<b>8,935,483</b>	<b>9,012,671</b>	<b>77,188</b>	<b>0.9%</b>
<b><u>Expenses</u></b>				
Personnel	5,801,316	5,713,591	(87,725)	-1.5%
Fuel & Electricity	341,000	364,200	23,200	6.8%
Supplies & Services	586,710	639,229	52,519	9.0%
Shared Services	1,242,149	1,182,440	(59,709)	-4.8%
Travel	225,875	245,642	19,767	8.8%
Memberships, Contributions & Sponsorships	40,725	41,360	635	1.6%
Maintenance & Alterations	113,628	142,804	29,176	25.7%
Interest	66,156	60,186	(5,970)	-9.0%
Depreciation	519,679	493,173	(26,506)	-5.1%
Other Expenses & Transfers	412,072	511,047	98,975	24.0%
<b>Total Operating Expenses &amp; Transfers</b>	<b>9,349,310</b>	<b>9,393,672</b>	<b>44,362</b>	<b>0.5%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (413,827)</b>	<b>\$ (381,001)</b>	<b>\$ 32,826</b>	<b>-7.9%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (413,827)	\$ (381,001)	\$ 32,826	-7.9%
Add Back Depreciation	519,679	493,173	(26,506)	-5.1%
Less Capital Expenditures	-	(6,500)	(6,500)	-%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(105,852)	(105,672)	180	-0.2%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**Univ of Maine at Machias**  
**FY19 PROPOSED BUDGET**  
**Unrestricted Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ -	\$ -	\$ -	-%
Dining & Residence Revenue	1,871,238	1,718,766	(152,472)	-8.1%
Tuition Waivers/Scholarships	(102,000)	(62,440)	39,560	-38.8%
Net Student Charges Revenue	1,769,238	1,656,326	(112,912)	-6.4%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	80,219	47,500	(32,719)	-40.8%
<b>Total Revenue</b>	<b>1,849,457</b>	<b>1,703,826</b>	<b>(145,631)</b>	<b>-7.9%</b>
<b><u>Expenses</u></b>				
Personnel	263,942	240,635	(23,307)	-8.8%
Fuel & Electricity	227,000	203,656	(23,344)	-10.3%
Supplies & Services	818,942	770,335	(48,607)	-5.9%
Shared Services	-	-	-	-%
Travel	2,100	700	(1,400)	-66.7%
Memberships, Contributions & Sponsorships	500	100	(400)	-80.0%
Maintenance & Alterations	124,500	98,475	(26,025)	-20.9%
Interest	98,778	92,975	(5,803)	-5.9%
Depreciation	200,831	255,919	55,088	27.4%
Other Expenses & Transfers	99,391	79,877	(19,514)	-19.6%
<b>Total Operating Expenses &amp; Transfers</b>	<b>1,835,984</b>	<b>1,742,672</b>	<b>(93,312)</b>	<b>-5.1%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 13,473</b>	<b>\$ (38,846)</b>	<b>\$ (52,319)</b>	<b>-388.3%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 13,473	\$ (38,846)	\$ (52,319)	-388.3%
Add Back Depreciation	200,831	255,919	55,088	27.4%
Less Capital Expenditures	(18,981)	-	18,981	-100.0%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(195,323)	(217,073)	(21,750)	11.1%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**Univ of Maine at Machias**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 4,839,337	\$ 4,621,822	\$ (217,515)	-4.5%
Dining & Residence Revenue	1,871,238	1,718,766	(152,472)	-8.1%
Tuition Waivers/Scholarships	(1,570,193)	(1,230,633)	339,560	-21.6%
Net Student Charges Revenue	5,140,382	5,109,955	(30,427)	-0.6%
State Appropriation	5,252,559	5,200,375	(52,184)	-1.0%
Indirect Cost Recovery	60,000	60,000	-	0.0%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	331,999	346,167	14,168	4.3%
<b>Total Revenue</b>	<b>10,784,940</b>	<b>10,716,497</b>	<b>(68,443)</b>	<b>-0.6%</b>
<b><u>Expenses</u></b>				
Personnel	6,065,258	5,954,226	(111,032)	-1.8%
Fuel & Electricity	568,000	567,856	(144)	0.0%
Supplies & Services	1,405,652	1,409,564	3,912	0.3%
Shared Services	1,242,149	1,182,440	(59,709)	-4.8%
Travel	227,975	246,342	18,367	8.1%
Memberships, Contributions & Sponsorships	41,225	41,460	235	0.6%
Maintenance & Alterations	238,128	241,279	3,151	1.3%
Interest	164,934	153,161	(11,773)	-7.1%
Depreciation	720,510	749,092	28,582	4.0%
Other Expenses & Transfers	511,463	590,924	79,461	15.5%
<b>Total Operating Expenses &amp; Transfers</b>	<b>11,185,294</b>	<b>11,136,344</b>	<b>(48,950)</b>	<b>-0.4%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (400,354)</b>	<b>\$ (419,847)</b>	<b>\$ (19,493)</b>	<b>4.9%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (400,354)	\$ (419,847)	\$ (19,493)	4.9%
Add Back Depreciation	720,510	749,092	28,582	4.0%
Less Capital Expenditures	(18,981)	(6,500)	12,481	-65.8%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(301,175)	(322,745)	(21,570)	7.2%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**Univ of Maine at Presque Isle**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 7,538,281	\$ 8,779,897	\$ 1,241,616	16.5%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(1,405,800)	(1,778,532)	(372,732)	26.5%
Net Student Charges Revenue	6,132,481	7,001,365	868,884	14.2%
State Appropriation	7,936,764	7,500,556	(436,208)	-5.5%
Indirect Cost Recovery	155,000	155,000	-	0.0%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	298,700	518,722	220,022	73.7%
<b>Total Revenue</b>	<b>14,522,945</b>	<b>15,175,643</b>	<b>652,698</b>	<b>4.5%</b>
<b><u>Expenses</u></b>				
Personnel	9,903,502	10,221,332	317,830	3.2%
Fuel & Electricity	557,050	557,375	325	0.1%
Supplies & Services	875,432	869,166	(6,266)	-0.7%
Shared Services	1,930,611	2,083,261	152,650	7.9%
Travel	331,998	366,255	34,257	10.3%
Memberships, Contributions & Sponsorships	56,191	56,515	324	0.6%
Maintenance & Alterations	289,882	315,734	25,852	8.9%
Interest	60,830	74,102	13,272	21.8%
Depreciation	835,290	877,030	41,740	5.0%
Other Expenses & Transfers	622,011	658,827	36,816	5.9%
<b>Total Operating Expenses &amp; Transfers</b>	<b>15,462,797</b>	<b>16,079,597</b>	<b>616,800</b>	<b>4.0%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (939,852)</b>	<b>\$ (903,954)</b>	<b>\$ 35,898</b>	<b>-3.8%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (939,852)	\$ (903,954)	\$ 35,898	-3.8%
Add Back Depreciation	835,290	877,030	41,740	5.0%
Less Capital Expenditures	(100,000)	(160,176)	(60,176)	60.2%
Less Capital Reserve Funding	-	(20,724)	(20,724)	-%
Less Debt Service Principal	(59,953)	(65,242)	(5,289)	8.8%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(264,515)</b>	<b>(273,066)</b>	<b>(8,551)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(264,515)</b>	<b>(273,066)</b>	<b>(8,551)</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ (264,515)</b>	<b>\$ (273,066)</b>	<b>\$ (8,551)</b>	

**Univ of Maine at Presque Isle**  
**FY19 PROPOSED BUDGET**  
**Unrestricted Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ -	\$ -	\$ -	-%
Dining & Residence Revenue	2,240,794	2,270,966	30,172	1.3%
Tuition Waivers/Scholarships	(216,000)	(227,600)	(11,600)	5.4%
Net Student Charges Revenue	2,024,794	2,043,366	18,572	0.9%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	146,700	111,075	(35,625)	-24.3%
<b>Total Revenue</b>	<b>2,171,494</b>	<b>2,154,441</b>	<b>(17,053)</b>	<b>-0.8%</b>
<b><u>Expenses</u></b>				
Personnel	216,169	204,843	(11,326)	-5.2%
Fuel & Electricity	403,000	333,000	(70,000)	-17.4%
Supplies & Services	729,145	850,842	121,697	16.7%
Shared Services	-	-	-	-%
Travel	375	1,900	1,525	406.7%
Memberships, Contributions & Sponsorships	-	386	386	-%
Maintenance & Alterations	305,000	291,500	(13,500)	-4.4%
Interest	-	4,720	4,720	-%
Depreciation	58,673	61,413	2,740	4.7%
Other Expenses & Transfers	121,243	125,084	3,841	3.2%
<b>Total Operating Expenses &amp; Transfers</b>	<b>1,833,605</b>	<b>1,873,688</b>	<b>40,083</b>	<b>2.2%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 337,889</b>	<b>\$ 280,753</b>	<b>\$ (57,136)</b>	<b>-16.9%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 337,889	\$ 280,753	\$ (57,136)	-16.9%
Add Back Depreciation	58,673	61,413	2,740	4.7%
Less Capital Expenditures	(132,047)	(50,000)	82,047	-62.1%
Less Capital Reserve Funding	-	(19,100)	(19,100)	-%
Less Debt Service Principal	-	-	-	-%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>264,515</b>	<b>273,066</b>	<b>8,551</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>264,515</b>	<b>273,066</b>	<b>8,551</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 264,515</b>	<b>\$ 273,066</b>	<b>\$ 8,551</b>	



**Univ of Maine at Presque Isle**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 7,538,281	\$ 8,779,897	\$ 1,241,616	16.5%
Dining & Residence Revenue	2,240,794	2,270,966	30,172	1.3%
Tuition Waivers/Scholarships	(1,621,800)	(2,006,132)	(384,332)	23.7%
Net Student Charges Revenue	8,157,275	9,044,731	887,456	10.9%
State Appropriation	7,936,764	7,500,556	(436,208)	-5.5%
Indirect Cost Recovery	155,000	155,000	-	0.0%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	445,400	629,797	184,397	41.4%
<b>Total Revenue</b>	<b>16,694,439</b>	<b>17,330,084</b>	<b>635,645</b>	<b>3.8%</b>
<b><u>Expenses</u></b>				
Personnel	10,119,671	10,426,175	306,504	3.0%
Fuel & Electricity	960,050	890,375	(69,675)	-7.3%
Supplies & Services	1,604,577	1,720,008	115,431	7.2%
Shared Services	1,930,611	2,083,261	152,650	7.9%
Travel	332,373	368,155	35,782	10.8%
Memberships, Contributions & Sponsorships	56,191	56,901	710	1.3%
Maintenance & Alterations	594,882	607,234	12,352	2.1%
Interest	60,830	78,822	17,992	29.6%
Depreciation	893,963	938,443	44,480	5.0%
Other Expenses & Transfers	743,254	783,911	40,657	5.5%
<b>Total Operating Expenses &amp; Transfers</b>	<b>17,296,402</b>	<b>17,953,285</b>	<b>656,883</b>	<b>3.8%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (601,963)</b>	<b>\$ (623,201)</b>	<b>\$ (21,238)</b>	<b>3.5%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (601,963)	\$ (623,201)	\$ (21,238)	3.5%
Add Back Depreciation	893,963	938,443	44,480	5.0%
Less Capital Expenditures	(232,047)	(210,176)	21,871	-9.4%
Less Capital Reserve Funding	-	(39,824)	(39,824)	-%
Less Debt Service Principal	(59,953)	(65,242)	(5,289)	8.8%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**University of Southern Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 74,307,908	\$ 76,548,315	\$ 2,240,407	3.0%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(16,773,697)	(17,887,974)	(1,114,277)	6.6%
Net Student Charges Revenue	57,534,211	58,660,341	1,126,130	2.0%
State Appropriation	47,783,008	47,719,740	(63,268)	-0.1%
Indirect Cost Recovery	3,105,000	3,500,000	395,000	12.7%
Investment Income/Gifts	80,000	120,000	40,000	50.0%
Sales/Services/Auxiliary	5,004,449	3,621,293	(1,383,156)	-27.6%
<b>Total Revenue</b>	<b>113,506,668</b>	<b>113,621,374</b>	<b>114,706</b>	<b>0.1%</b>
<b><u>Expenses</u></b>				
Personnel	82,178,649	81,154,079	(1,024,570)	-1.2%
Fuel & Electricity	2,549,825	2,547,965	(1,860)	-0.1%
Supplies & Services	6,001,138	5,755,650	(245,488)	-4.1%
Shared Services	12,298,049	12,318,957	20,908	0.2%
Travel	1,186,423	1,068,763	(117,660)	-9.9%
Memberships, Contributions & Sponsorships	365,990	363,834	(2,156)	-0.6%
Maintenance & Alterations	1,839,452	1,861,443	21,991	1.2%
Interest	812,693	705,001	(107,692)	-13.3%
Depreciation	6,235,204	6,502,555	267,351	4.3%
Other Expenses & Transfers	6,124,354	5,562,177	(562,177)	-9.2%
<b>Total Operating Expenses &amp; Transfers</b>	<b>119,591,777</b>	<b>117,840,424</b>	<b>(1,751,353)</b>	<b>-1.5%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (6,085,109)</b>	<b>\$ (4,219,050)</b>	<b>\$ 1,866,059</b>	<b>-30.7%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (6,085,109)	\$ (4,219,050)	\$ 1,866,059	-30.7%
Add Back Depreciation	6,235,204	6,502,555	267,351	4.3%
Less Capital Expenditures	(1,797,056)	(1,823,056)	(26,000)	1.4%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(2,118,907)	(1,653,895)	465,012	-21.9%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(3,765,868)</b>	<b>(1,193,446)</b>	<b>2,572,422</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	275,320	500,000	224,680	
<b>Net Change Subtotal</b>	<b>(3,490,548)</b>	<b>(693,446)</b>	<b>2,797,102</b>	
Other Strategic Transfers from/(to) Reserves	3,490,548	693,446	(2,797,102)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ -</b>	<b>\$ (0)</b>	<b>\$ (0)</b>	

**University of Southern Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**  
**Excludes Law School**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 68,021,127	\$ 70,180,235	\$ 2,159,108	3.2%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(15,473,697)	(15,987,974)	(514,277)	3.3%
Net Student Charges Revenue	52,547,430	54,192,261	1,644,831	3.1%
State Appropriation	47,783,008	47,719,740	(63,268)	-0.1%
Indirect Cost Recovery	3,105,000	3,500,000	395,000	12.7%
Investment Income/Gifts	80,000	120,000	40,000	50.0%
Sales/Services/Auxiliary	5,004,449	3,621,293	(1,383,156)	-27.6%
<b>Total Revenue</b>	<b>108,519,887</b>	<b>109,153,294</b>	<b>633,407</b>	<b>0.6%</b>
<b><u>Expenses</u></b>				
Personnel	76,793,475	75,649,881	(1,143,594)	-1.5%
Fuel & Electricity	2,549,825	2,547,965	(1,860)	-0.1%
Supplies & Services	5,722,248	5,519,360	(202,888)	-3.5%
Shared Services	12,298,049	12,318,957	20,908	0.2%
Travel	1,103,502	1,033,842	(69,660)	-6.3%
Memberships, Contributions & Sponsorships	338,990	337,134	(1,856)	-0.5%
Maintenance & Alterations	1,831,702	1,858,193	26,491	1.4%
Interest	812,693	705,001	(107,692)	-13.3%
Depreciation	6,235,204	6,502,555	267,351	4.3%
Other Expenses & Transfers	6,231,189	5,706,010	(525,179)	-8.4%
<b>Total Operating Expenses &amp; Transfers</b>	<b>113,916,877</b>	<b>112,178,898</b>	<b>(1,737,979)</b>	<b>-1.5%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (5,396,990)</b>	<b>\$ (3,025,604)</b>	<b>\$ 2,371,386</b>	<b>-43.9%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (5,396,990)	\$ (3,025,604)	\$ 2,371,386	-43.9%
Add Back Depreciation	6,235,204	6,502,555	267,351	4.3%
Less Capital Expenditures	(1,797,056)	(1,823,056)	(26,000)	1.4%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(2,118,907)	(1,653,895)	465,012	-21.9%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(3,077,749)</b>	<b>(0)</b>	<b>3,077,749</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(3,077,749)</b>	<b>(0)</b>	<b>3,077,749</b>	
Other Strategic Transfers from/(to) Reserves	3,215,228	-	(3,215,228)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 137,479</b>	<b>\$ (0)</b>	<b>\$ (137,479)</b>	

**University of Southern Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G**  
**LAW SCHOOL**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 6,286,781	\$ 6,368,080	\$ 81,299	1.3%
Dining & Residence Revenue	-	-	-	-%
Tuition Waivers/Scholarships	(1,300,000)	(1,900,000)	(600,000)	46.2%
Net Student Charges Revenue	4,986,781	4,468,080	(518,701)	-10.4%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	-	-	-	-%
<b>Total Revenue</b>	<b>4,986,781</b>	<b>4,468,080</b>	<b>(518,701)</b>	<b>-10.4%</b>
<b><u>Expenses</u></b>				
Personnel	5,385,174	5,504,198	119,024	2.2%
Fuel & Electricity	-	-	-	-%
Supplies & Services	278,890	236,290	(42,600)	-15.3%
Shared Services	-	-	-	-%
Travel	82,921	34,921	(48,000)	-57.9%
Memberships, Contributions & Sponsorships	27,000	26,700	(300)	-1.1%
Maintenance & Alterations	7,750	3,250	(4,500)	-58.1%
Interest	-	-	-	-%
Depreciation	-	-	-	-%
Other Expenses & Transfers	(106,835)	(143,833)	(36,998)	34.6%
<b>Total Operating Expenses &amp; Transfers</b>	<b>5,674,900</b>	<b>5,661,526</b>	<b>(13,374)</b>	<b>-0.2%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (688,119)</b>	<b>\$ (1,193,446)</b>	<b>\$ (505,327)</b>	<b>73.4%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (688,119)	\$ (1,193,446)	\$ (505,327)	73.4%
Add Back Depreciation	-	-	-	-%
Less Capital Expenditures	-	-	-	-%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	-	-	-	-%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(688,119)</b>	<b>(1,193,446)</b>	<b>(505,327)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	275,320	500,000	224,680	
<b>Net Change Subtotal</b>	<b>(412,799)</b>	<b>(693,446)</b>	<b>(280,647)</b>	
Other Strategic Transfers from/(to) Reserves	275,320	693,446	418,126	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ (137,479)</b>	<b>\$ -</b>	<b>\$ 137,479</b>	

**University of Southern Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted Auxiliary**

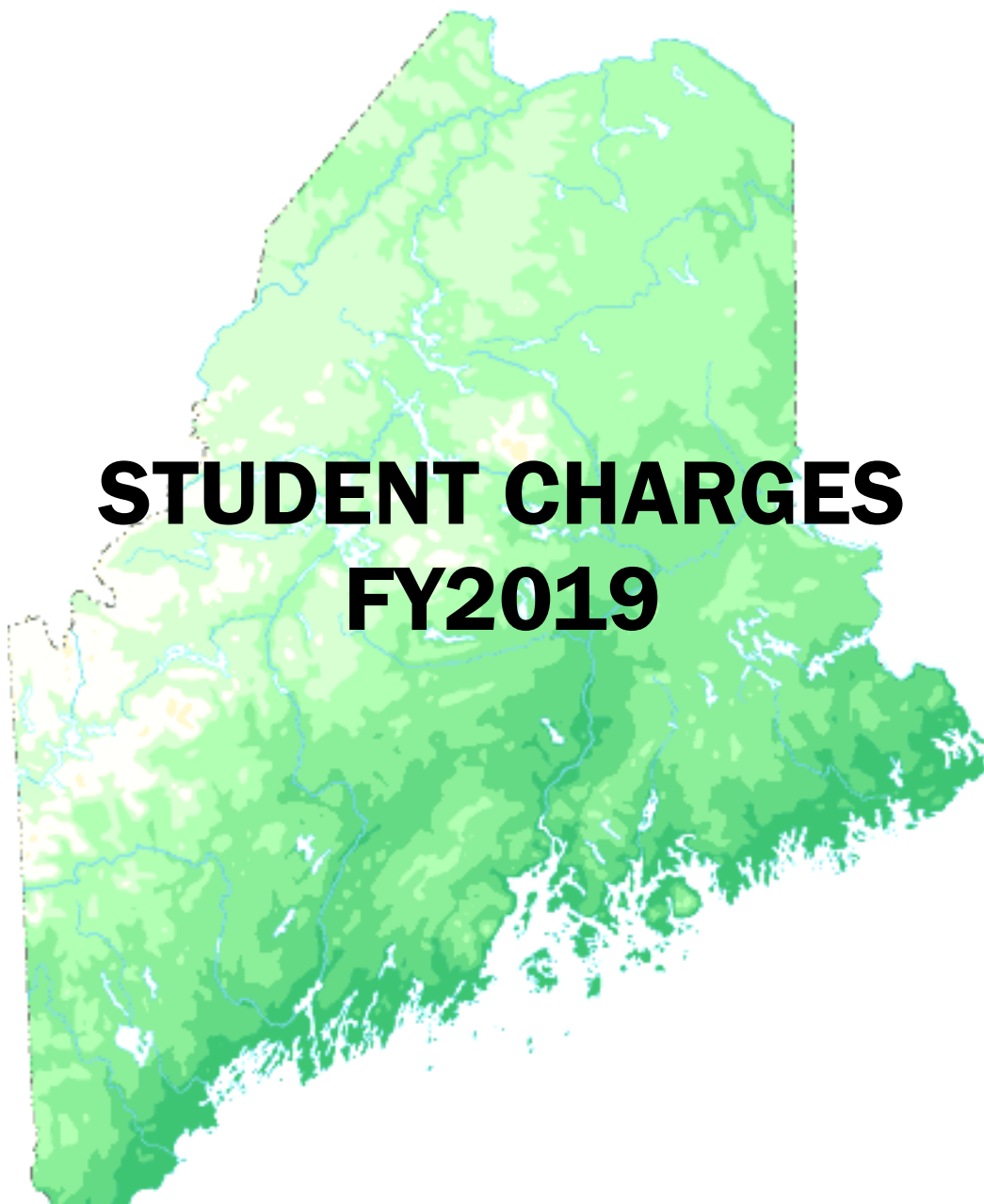
	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 1,240,000	\$ 1,227,714	\$ (12,286)	-1.0%
Dining & Residence Revenue	10,376,800	11,036,100	659,300	6.4%
Tuition Waivers/Scholarships	(313,200)	(345,800)	(32,600)	10.4%
Net Student Charges Revenue	11,303,600	11,918,014	614,414	5.4%
State Appropriation	-	-	-	-%
Indirect Cost Recovery	-	-	-	-%
Investment Income/Gifts	-	-	-	-%
Sales/Services/Auxiliary	2,566,264	2,433,951	(132,313)	-5.2%
<b>Total Revenue</b>	<b>13,869,864</b>	<b>14,351,965</b>	<b>482,101</b>	<b>3.5%</b>
<b><u>Expenses</u></b>				
Personnel	2,132,138	2,272,231	140,093	6.6%
Fuel & Electricity	1,036,364	46,606	(989,758)	-95.5%
Supplies & Services	5,079,080	5,264,949	185,869	3.7%
Shared Services	-	-	-	-%
Travel	6,600	15,100	8,500	128.8%
Memberships, Contributions & Sponsorships	500	3,100	2,600	520.0%
Maintenance & Alterations	600,866	173,650	(427,216)	-71.1%
Interest	1,173,416	1,096,513	(76,903)	-6.6%
Depreciation	1,044,758	1,117,016	72,258	6.9%
Other Expenses & Transfers	2,095,077	3,803,216	1,708,139	81.5%
<b>Total Operating Expenses &amp; Transfers</b>	<b>13,168,799</b>	<b>13,792,381</b>	<b>623,582</b>	<b>4.7%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ 701,065</b>	<b>\$ 559,584</b>	<b>\$ (141,481)</b>	<b>-20.2%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ 701,065	\$ 559,584	\$ (141,481)	-20.2%
Add Back Depreciation	1,044,758	1,117,016	72,258	6.9%
Less Capital Expenditures	(22,850)	-	22,850	-100.0%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(1,604,055)	(1,676,600)	(72,545)	4.5%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>118,918</b>	<b>-</b>	<b>(118,918)</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>118,918</b>	<b>-</b>	<b>(118,918)</b>	
Other Strategic Transfers from/(to) Reserves	-	-	-	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 118,918</b>	<b>\$ -</b>	<b>\$ (118,918)</b>	

**University of Southern Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**  
**Excludes Law School**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 69,261,127	\$ 71,407,949	\$ 2,146,822	3.1%
Dining & Residence Revenue	10,376,800	11,036,100	659,300	6.4%
Tuition Waivers/Scholarships	(15,786,897)	(16,333,774)	(546,877)	3.5%
Net Student Charges Revenue	63,851,030	66,110,275	2,259,245	3.5%
State Appropriation	47,783,008	47,719,740	(63,268)	-0.1%
Indirect Cost Recovery	3,105,000	3,500,000	395,000	12.7%
Investment Income/Gifts	80,000	120,000	40,000	50.0%
Sales/Services/Auxiliary	7,570,713	6,055,244	(1,515,469)	-20.0%
<b>Total Revenue</b>	<b>122,389,751</b>	<b>123,505,259</b>	<b>1,115,508</b>	<b>0.9%</b>
<b><u>Expenses</u></b>				
Personnel	78,925,613	77,922,112	(1,003,501)	-1.3%
Fuel & Electricity	3,586,189	2,594,571	(991,618)	-27.7%
Supplies & Services	10,801,328	10,784,309	(17,019)	-0.2%
Shared Services	12,298,049	12,318,957	20,908	0.2%
Travel	1,110,102	1,048,942	(61,160)	-5.5%
Memberships, Contributions & Sponsorships	339,490	340,234	744	0.2%
Maintenance & Alterations	2,432,568	2,031,843	(400,725)	-16.5%
Interest	1,986,109	1,801,514	(184,595)	-9.3%
Depreciation	7,279,962	7,619,571	339,609	4.7%
Other Expenses & Transfers	8,326,266	9,509,226	1,182,960	14.2%
<b>Total Operating Expenses &amp; Transfers</b>	<b>127,085,676</b>	<b>125,971,279</b>	<b>(1,114,397)</b>	<b>-0.9%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (4,695,925)</b>	<b>\$ (2,466,020)</b>	<b>\$ 2,229,905</b>	<b>-47.5%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (4,695,925)	\$ (2,466,020)	\$ 2,229,905	-47.5%
Add Back Depreciation	7,279,962	7,619,571	339,609	4.7%
Less Capital Expenditures	(1,819,906)	(1,823,056)	(3,150)	0.2%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(3,722,962)	(3,330,495)	392,467	-10.5%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(2,958,831)</b>	<b>(0)</b>	<b>2,958,831</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	-	-	-	
<b>Net Change Subtotal</b>	<b>(2,958,831)</b>	<b>(0)</b>	<b>2,958,831</b>	
Other Strategic Transfers from/(to) Reserves	3,215,228	-	(3,215,228)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 256,397</b>	<b>\$ (0)</b>	<b>\$ (256,397)</b>	

**University of Southern Maine**  
**FY19 PROPOSED BUDGET**  
**Unrestricted E&G and Auxiliary**

	<u>FY18 BASE</u>	<u>FY19 BASE</u>	<u>CHANGE</u>	
<b><u>Revenues</u></b>				
Tuition & Fee Revenue	\$ 75,547,908	\$ 77,776,029	\$ 2,228,121	2.9%
Dining & Residence Revenue	10,376,800	11,036,100	659,300	6.4%
Tuition Waivers/Scholarships	(17,086,897)	(18,233,774)	(1,146,877)	6.7%
Net Student Charges Revenue	68,837,811	70,578,355	1,740,544	2.5%
State Appropriation	47,783,008	47,719,740	(63,268)	-0.1%
Indirect Cost Recovery	3,105,000	3,500,000	395,000	12.7%
Investment Income/Gifts	80,000	120,000	40,000	50.0%
Sales/Services/Auxiliary	7,570,713	6,055,244	(1,515,469)	-20.0%
<b>Total Revenue</b>	<b>127,376,532</b>	<b>127,973,339</b>	<b>596,807</b>	<b>0.5%</b>
<b><u>Expenses</u></b>				
Personnel	84,310,787	83,426,310	(884,477)	-1.0%
Fuel & Electricity	3,586,189	2,594,571	(991,618)	-27.7%
Supplies & Services	11,080,218	11,020,599	(59,619)	-0.5%
Shared Services	12,298,049	12,318,957	20,908	0.2%
Travel	1,193,023	1,083,863	(109,160)	-9.1%
Memberships, Contributions & Sponsorships	366,490	366,934	444	0.1%
Maintenance & Alterations	2,440,318	2,035,093	(405,225)	-16.6%
Interest	1,986,109	1,801,514	(184,595)	-9.3%
Depreciation	7,279,962	7,619,571	339,609	4.7%
Other Expenses & Transfers	8,219,431	9,365,393	1,145,962	13.9%
<b>Total Operating Expenses &amp; Transfers</b>	<b>132,760,576</b>	<b>131,632,805</b>	<b>(1,127,771)</b>	<b>-0.8%</b>
<b>Operating Increase (Decrease)</b>	<b>\$ (5,384,044)</b>	<b>\$ (3,659,466)</b>	<b>\$ 1,724,578</b>	<b>-32.0%</b>
<b><u>Modified Cash Flow</u></b>				
Operating Increase (Decrease)	\$ (5,384,044)	\$ (3,659,466)	\$ 1,724,578	-32.0%
Add Back Depreciation	7,279,962	7,619,571	339,609	4.7%
Less Capital Expenditures	(1,819,906)	(1,823,056)	(3,150)	0.2%
Less Capital Reserve Funding	-	-	-	-%
Less Debt Service Principal	(3,722,962)	(3,330,495)	392,467	-10.5%
<b>Net Change Before Other Adjustments &amp; Transfers</b>	<b>(3,646,950)</b>	<b>(1,193,446)</b>	<b>2,453,504</b>	
Transfer from/(to) Administrative Savings Rsrv	-	-	-	
Transfer from/(to) Budget Stabilization	275,320	500,000	224,680	
<b>Net Change Subtotal</b>	<b>(3,371,630)</b>	<b>(693,446)</b>	<b>2,678,184</b>	
Other Strategic Transfers from/(to) Reserves	3,490,548	693,446	(2,797,102)	
<b>Net Change in Cash &amp; Reserve Transfers</b>	<b>\$ 118,918</b>	<b>\$ (0)</b>	<b>\$ (118,918)</b>	



# STUDENT CHARGES

## FY2019



**May 20-21, 2018**





UNIVERSITY OF MAINE SYSTEM  
**STUDENT CHARGES**  
FY19  
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**UNIVERSITY OF MAINE SYSTEM  
FY19 TOTAL STUDENT CHARGES**

	Annual Tuition	Mandatory Fees	Tuition & Mandatory Fees <sup>1</sup>	Room & Board <sup>2</sup>	Total
<b>I. Undergraduate</b>					
<b>In-State</b>					
UM	\$8,790	\$2,380	\$11,170	\$10,418	\$21,588
UMA	6,990	998	7,988	-	7,988
UMF	8,768	898	9,666	9,726	19,392
UMFK	6,990	1,125	8,115	8,120	16,235
UMM	6,990	850	7,840	8,795	16,635
UMPI	6,990	920	7,910	8,406	16,316
USM	8,130	1,010	9,140	9,450	18,590
Average	7,664	1,169	8,833	9,153	17,986
<b>Out-of-State</b>					
UM	\$28,590	\$2,380	\$30,970	\$10,418	\$41,388
UMA <sup>3</sup>	16,920	998	17,918	-	17,918
UMF	18,880	898	19,778	9,726	29,504
UMFK	11,190	1,125	12,315	8,120	20,435
UMM	14,250	850	15,100	8,795	23,895
UMPI	11,190	920	12,110	8,406	20,516
USM	21,390	1,010	22,400	9,450	31,850
Average	17,487	1,169	18,656	9,153	27,809
<b>NEBHE</b>					
UM	\$14,070	\$2,380	\$16,450	\$10,418	\$26,868
UMA	11,190	998	12,188	-	12,188
UMF	14,048	898	14,946	9,726	24,672
UMFK	11,190	1,125	12,315	8,120	20,435
UMM	11,190	850	12,040	8,795	20,835
UMPI	11,190	920	12,110	8,406	20,516
USM	13,020	1,010	14,030	9,450	23,480
Average	12,271	1,169	13,440	9,153	22,593
<b>Canadian</b>					
UM	\$14,070	\$2,380	\$16,450	\$10,418	\$26,868
UMA	11,190	998	12,188	-	12,188
UMF	14,048	898	14,946	9,726	24,672
UMFK	11,190	1,125	12,315	8,120	20,435
UMM	11,190	850	12,040	8,795	20,835
UMPI	11,190	920	12,110	8,406	20,516
USM	13,020	1,010	14,030	9,450	23,480
Average	12,271	1,169	13,440	9,153	22,593

<sup>1</sup>Annual tuition & mandatory fees are based on 15 credit hours per semester for two semesters for undergraduate and law students (except UMF based on 16 credit hours per semester beginning in FY07) and 9 credit hours per semester for two semesters for graduate students.

<sup>2</sup>Rates shown are based on the meal plan and room type with the greatest projected number of students. Several meal plans and room types are available. UMA has no residence or dining halls.

<sup>3</sup>UMA's out-of-state online annual tuition (at 125% of the in-state rate) is \$8,730; mandatory fees \$998.

**UNIVERSITY OF MAINE SYSTEM  
FY19 TOTAL STUDENT CHARGES**

	Annual Tuition	Mandatory Fees	Tuition & Mandatory Fees <sup>1</sup>	Room & Board <sup>2</sup>	Subtotal
<b>II. Graduate</b>					
<b>In-State</b>					
UM	\$7,902	\$1,204	\$9,106	\$10,418	\$19,524
UMF	7,326	350	7,676	9,726	17,402
USM	7,326	540	7,866	9,450	17,316
Average	7,518	698	8,216	9,865	18,081
<b>Out-of-State</b>					
UM	\$25,740	\$1,204	\$26,944	\$10,418	\$37,362
UMF	10,710	350	11,060	9,726	20,786
USM	19,800	540	20,340	9,450	29,790
Average	18,750	698	19,448	9,865	29,313
<b>NEBHE</b>					
UM	\$12,636	\$1,204	\$13,840	\$10,418	\$24,258
USM	11,718	540	12,258	9,450	21,708
Average	12,177	872	13,049	9,934	22,983
<b>Canadian</b>					
UM	\$12,636	\$1,204	\$13,840	\$10,418	\$24,258
USM	11,718	540	12,258	9,450	21,708
Average	12,177	872	13,049	9,934	22,983

**III. Law School**

<b>In-State</b>	\$22,290	\$1,000	\$23,290	\$9,450	\$32,740
<b>Out-of-State</b>	\$33,360	\$1,000	\$34,360	\$9,450	\$43,810
<b>NEBHE/Canadian</b>	\$30,420	\$1,000	\$31,420	\$9,450	\$40,870

<sup>1</sup>Annual tuition & mandatory fees are based on 15 credit hours per semester for two semesters for undergraduate and law students (except UMF based on 16 credit hours per semester beginning in FY07) and 9 credit hours per semester for two semesters for graduate students.

<sup>2</sup>Rates shown are based on the meal plan and room type with the greatest projected number of students. Several meal plans and room types are available. UMA has no residence or dining halls.

**UNIVERSITY OF MAINE SYSTEM  
FY19 TUITION RATES - PER CREDIT HOUR**

	<b>FY18 Rate</b>	<b>FY19 Rate</b>	<b>FY19 Increases</b>	
			<b>\$</b>	<b>%</b>
<b>In-State</b>				
Undergraduate				
UM	\$286	\$293	7	2.4
UMA	228	233	5	2.2
UMF	268	274	6	2.2
UMFK	228	233	5	2.2
UMM	228	233	5	2.2
UMPI	228	233	5	2.2
USM	262	271	9	3.4
Graduate				
UM	429	439	10	2.3
UMF	389	407	18	4.6
USM	393	407	14	3.6
Law	743	743	-	-
<b>Out-of-State</b>				
Undergraduate				
UM	932	953	21	2.3
UMA	551	564 <sup>1</sup>	13	2.4
UMF	567	590	23	4.1
UMFK	365	373	8	2.2
UMM	616	475	(141)	(22.9)
UMPI	365	373	8	2.2
USM	689	713	24	3.5
Graduate				
UM	1,397	1,430	33	2.4
UMF	572	595	23	4.0
USM	1,063	1,100	37	3.5
Law	1,112	1,112	-	-

<sup>1</sup>The majority of UMA Out-of-State Undergraduate students are enrolled in Online programs = \$125% of in-state rate or \$291.

**UNIVERSITY OF MAINE SYSTEM  
FY19 TUITION RATES - PER CREDIT HOUR**

	<b>FY18 Rate</b>	<b>FY19 Rate</b>	<b>FY19 Increases</b>	
			<b>\$</b>	<b>%</b>
<b>NEBHE</b>				
Undergraduate				
UM	\$458	\$469	11	2.4
UMA	365	373	8	2.2
UMF	429	439	10	2.3
UMFK	365	373	8	2.2
UMM	365	373	8	2.2
UMPI	365	373	8	2.2
USM	419	434	15	3.6
Graduate				
UM	686	702	16	2.3
USM	629	651	22	3.5
Law	1,014	1,014	-	-
<b>Canadian</b>				
Undergraduate				
UM	458	469	11	2.4
UMA	365	373	8	2.2
UMF	429	439	10	2.3
UMFK	365	373	8	2.2
UMM	372	373	1	0.3
UMPI	365	373	8	2.2
USM	419	434	15	3.6
Graduate				
UM	686	702	16	2.3
USM	629	651	22	3.5
Law	1,014	1,014	-	-

NOTE: In FY18, NEBHE rates are 160% the in-state rate. NEBHE rate can be up to 175% the in-state rate.

**UNIVERSITY OF MAINE SYSTEM  
ANNUAL TUITION RATES**

<b>UNDERGRADUATE</b>	<b>In-State</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY18 to FY19</b>	
							<b>Annual Increase</b>	
							<b>\$</b>	<b>%</b>
	UM	\$8,370	\$8,370	\$8,370	\$8,580	\$8,790	210	2.4
	UMA	6,510	6,510	6,510	6,840	6,990	150	2.2
	UMF	8,352	8,352	8,352	8,576	8,768	192	2.2
	UMFK	6,600	6,600	6,600	6,840	6,990	150	2.2
	UMM	6,660	6,660	6,660	6,840	6,990	150	2.2
	UMPI	6,600	6,600	6,600	6,840	6,990	150	2.2
	USM	7,590	7,590	7,590	7,860	8,130	270	3.4
	<b>Average</b>	<b>7,240</b>	<b>7,240</b>	<b>7,240</b>	<b>7,482</b>	<b>7,664</b>	<b>182</b>	<b>2.4</b>
	<b>Out-of-State</b>							
	UM	\$26,250	\$26,640	\$27,240	\$27,960	\$28,590	630	2.3
	UMA	15,750	15,750	16,110	16,530	16,920	390	2.4
	UMF	17,440	17,440	17,440	18,144	18,880	736	4.1
	UMFK	9,900	9,900	10,230	10,950	11,190	240	2.2
	UMM	18,480	18,480	18,480	18,480	14,250	(4,230)	(22.9)
	UMPI	9,900	9,900	10,230	10,950	11,190	240	2.2
	USM	19,950	19,950	19,950	20,670	21,390	720	3.5
	<b>Average</b>	<b>16,810</b>	<b>16,866</b>	<b>17,097</b>	<b>17,669</b>	<b>17,487</b>	<b>(182)</b>	<b>(1.0)</b>
	<b>NEBHE</b>							
	UM	\$12,570	\$12,570	\$12,960	\$13,740	\$14,070	330	2.4
	UMA	9,750	9,750	10,080	10,950	11,190	240	2.2
	UMF	12,544	12,544	12,960	13,728	14,048	320	2.3
	UMFK	9,900	9,900	10,230	10,950	11,190	240	2.2
	UMM	9,990	9,990	10,320	10,950	11,190	240	2.2
	UMPI	9,900	9,900	10,230	10,950	11,190	240	2.2
	USM	11,400	11,400	11,760	12,570	13,020	450	3.6
	<b>Average</b>	<b>10,865</b>	<b>10,865</b>	<b>11,220</b>	<b>11,977</b>	<b>12,271</b>	<b>294</b>	<b>2.5</b>
	<b>Canadian</b>							
	UM	\$12,570	\$12,570	\$12,960	\$13,740	\$14,070	330	2.4
	UMA	9,750	9,750	10,080	10,950	11,190	240	2.2
	UMF	12,544	12,544	12,960	13,728	14,048	320	2.3
	UMFK	9,900	9,900	10,230	10,950	11,190	240	2.2
	UMM	10,530	10,530	10,530	11,160	11,190	30	0.3
	UMPI	9,900	9,900	10,230	10,950	11,190	240	2.2
	USM	11,400	11,400	11,760	12,570	13,020	450	3.6
	<b>Average</b>	<b>10,942</b>	<b>10,942</b>	<b>11,250</b>	<b>12,007</b>	<b>12,271</b>	<b>264</b>	<b>2.2</b>

NOTE: Based on 15 credit hours per semester for two semesters for undergraduate and law students (except UMF based on 16 credit hours per semester beginning in FY07 & UMFK based on "Block" rate for 12-18 credit hours per semester in FY13 - FY17) and 9 credit hours per semester for two semesters for graduate students.

**UNIVERSITY OF MAINE SYSTEM  
ANNUAL TUITION RATES**

	FY15	FY16	FY17	FY18	FY19	FY18 to FY19	
						Annual Increase	
						\$	%
<b>GRADUATE</b>							
<b><u>In-State</u></b>							
UM	\$7,524	\$7,524	\$7,524	\$7,722	\$7,902	180	2.3
UMF	6,822	6,822	6,822	7,002	7,326	324	4.6
USM	6,840	6,840	6,840	7,074	7,326	252	3.6
<b>Average</b>	<b>7,062</b>	<b>7,062</b>	<b>7,062</b>	<b>7,266</b>	<b>7,518</b>	<b>252</b>	<b>3.5</b>
<b><u>Out-of-State</u></b>							
UM	\$23,580	\$23,940	\$24,498	\$25,146	\$25,740	594	2.4
UMF	9,900	9,900	9,900	10,296	10,710	414	4.0
USM	18,468	18,468	18,468	19,134	19,800	666	3.5
<b>Average</b>	<b>17,316</b>	<b>17,436</b>	<b>17,622</b>	<b>18,192</b>	<b>18,750</b>	<b>558</b>	<b>3.1</b>
<b><u>NEBHE</u></b>							
UM	\$11,286	\$11,286	\$11,664	\$12,348	\$12,636	288	2.3
USM	10,260	10,260	10,602	11,322	11,718	396	3.5
<b>Average</b>	<b>10,773</b>	<b>10,773</b>	<b>11,133</b>	<b>11,835</b>	<b>12,177</b>	<b>342</b>	<b>2.9</b>
<b><u>Canadian</u></b>							
UM	\$11,286	\$11,286	\$11,664	\$12,348	\$12,636	288	2.3
USM	10,260	10,260	10,602	11,322	11,718	396	3.5
<b>Average</b>	<b>10,773</b>	<b>10,773</b>	<b>11,133</b>	<b>11,835</b>	<b>12,177</b>	<b>342</b>	<b>2.9</b>
<b>LAW</b>							
<b><u>In-State</u></b>	\$22,290	\$22,290	\$22,290	\$22,290	\$22,290	-	-
<b><u>Out-of-State</u></b>	33,360	33,360	33,360	33,360	33,360	-	-
<b><u>NEBHE/Canadian</u></b>	30,420	30,420	30,420	30,420	30,420	-	-

NOTE: Based on 15 credit hours per semester for two semesters for undergraduate and law students (except UMF based on 16 credit hours per semester beginning in FY07 & UMF based on "Block" rate for 12-18 credit hours per semester in FY13 - FY17) and 9 credit hours per semester for two semesters for graduate students.

UNIVERSITY OF MAINE SYSTEM  
ANNUAL MANDATORY FEES<sup>1</sup>

University	Fee	Credit Hours	FY18	FY19	\$ Increase
<b>UM</b>	Graduate Student Activity Fee	1 or More Credit Hours	\$80.00	\$90.00	10.00
	Undergraduate Student Activity Fee	6 or More Credit Hours	106.00	106.00	-
	Communications Fee	6 or More Credit Hours	30.00	30.00	-
	Recreation Center Fee	0 to 5 Credit Hours	162.00	170.00	8.00
		6 or More Credit Hours	270.00	284.00	14.00
	Unified Fee	0 to 5 Credit Hours	256.00	262.00	6.00
		6 to 11 Credit Hours	782.00	800.00	18.00
12 to 15 Credit Hours		1,916.00	1,960.00	44.00	
	16 or More Credit Hours	1,966.00	2,012.00	46.00	
<b>UMA</b>	Student Activity Fee	Per Credit Hour, up to 14	\$2.25	\$2.25	-
		15 or More Credit Hours	67.50	67.50	-
	Unified Fee	Per Credit Hour	30.00	31.00	1.00
	Unified Fee - University College	Per Credit Hour	13.00	13.00	-
<b>UMF</b>	Undergraduate Student Activity Fee	1 to 5 1/2 Credit Hours	\$80.00	\$80.00	-
		6 to 11 1/2 Credit Hours	120.00	120.00	-
		12 or More Credit Hours	160.00	160.00	-
	Student Health & Wellness Fee	4 or More Credit Hours	50.00	50.00	-
	Unified Fee	6 or less Credit Hours	172.00	176.00	4.00
		7 to 11 Credit Hours	342.00	350.00	8.00
		12 or More Credit Hours	672.00	688.00	16.00
<b>UMFK</b>	Student Activity Fee	Per Credit Hour	\$7.50	\$7.50	-
	Unified Fee	Per Credit Hour	30.00	30.00	-
<b>UMM</b>	Student Activity Fee	Per Credit Hour, up to 11	\$11.00	\$11.00	-
		12 or More Credit Hours	240.00	240.00	-
	Unified Fee	Flat Fee + Per Credit Hour	596.00	610.00	14.00
<b>UMPI</b>	Student Activity Fee	6 or less Credit Hours	\$85.00	\$85.00	-
		7 or More Credit Hours	170.00	170.00	-
	Unified Fee - Campus	Per Credit Hour	25.00	25.00	-
	Unified Fee - Outreach	Per Credit Hour	20.00	20.00	-
<b>USM</b>	Undergraduate Student Activity Fee	1 to 5 Credit Hours	\$38.00	\$38.00	-
		6 to 11 Credit Hours	74.00	74.00	-
		12 or More Credit Hours	110.00	110.00	-
	Law Student Activity Fee	6 or More Credit Hours	100.00	100.00	-
	Unified Fee	Per Credit Hour	29.00	30.00	1.00

<sup>1</sup>Annual unless listed as per credit hour.



UNIVERSITY OF MAINE SYSTEM  
ANNUAL MANDATORY FEES

						FY19 Increases		
<u>Undergraduate</u>						\$	%	
		FY15	FY16	FY17	FY18	FY19		
UM	Communications	\$30	\$30	\$30	\$30	\$30		
	Recreation Center Fee	248	252	270	270	284		
	Unified Fee	1,868	1,868	1,868	1,916	1,960		
	Student Activity	90	90	90	106	106		
	<b>Total</b>	<b>\$2,236</b>	<b>\$2,240</b>	<b>\$2,258</b>	<b>\$2,322</b>	<b>\$2,380</b>	<b>58</b>	<b>2.5</b>
UMA	Unified Fee	\$870	\$870	\$870	\$900	\$930		
	Student Activity	68	68	68	68	68		
	<b>Total</b>	<b>\$938</b>	<b>\$938</b>	<b>\$938</b>	<b>\$968</b>	<b>\$998</b>	<b>30</b>	<b>3.1</b>
UMF	Student Health & Fitness Fee	\$50	\$50	\$50	\$50	\$50		
	Unified Fee	655	655	655	672	688		
	Student Activity	160	160	160	160	160		
	<b>Total</b>	<b>\$865</b>	<b>\$865</b>	<b>\$865</b>	<b>\$882</b>	<b>\$898</b>	<b>16</b>	<b>1.8</b>
UMFK	Unified Fee	\$750	\$750	\$750	\$900	\$900		
	Student Activity	225	225	225	225	225		
	<b>Total</b>	<b>\$975</b>	<b>\$975</b>	<b>\$975</b>	<b>\$1,125</b>	<b>\$1,125</b>	<b>-</b>	<b>-</b>
UMM	Unified Fee	\$580	\$580	\$580	\$596	\$610		
	Student Activity	240	240	240	240	240		
	<b>Total</b>	<b>\$820</b>	<b>\$820</b>	<b>\$820</b>	<b>\$836</b>	<b>\$850</b>	<b>14</b>	<b>1.7</b>
UMPI	Unified Fee	\$540	\$540	\$540	\$750	\$750		
	Student Activity	160	160	160	170	170		
	<b>Total</b>	<b>\$700</b>	<b>\$700</b>	<b>\$700</b>	<b>\$920</b>	<b>\$920</b>	<b>-</b>	<b>-</b>
USM	Unified Fee	\$840	\$840	\$840	\$870	\$900		
	Student Activity	110	110	110	110	110		
	<b>Total</b>	<b>\$950</b>	<b>\$950</b>	<b>\$950</b>	<b>\$980</b>	<b>\$1,010</b>	<b>30</b>	<b>3.1</b>
<b>Average</b>		<b>\$1,069</b>	<b>\$1,070</b>	<b>\$1,072</b>	<b>\$1,148</b>	<b>\$1,169</b>	<b>21</b>	<b>1.8</b>
<u>Graduate</u>								
UM	Communications	\$30	\$30	\$30	\$30	\$30		
	Recreation Center Fee	248	252	270	270	284		
	Unified Fee	762	762	762	782	800		
	Student Activity	80	80	80	80	90		
	<b>Total</b>	<b>\$1,120</b>	<b>\$1,124</b>	<b>\$1,142</b>	<b>\$1,162</b>	<b>\$1,204</b>	<b>42</b>	<b>3.6</b>
UMF	Unified Fee	\$333	\$333	\$333	\$342	\$350	8	2.3
USM	Unified Fee	\$504	\$504	\$504	\$522	\$540	18	3.4
<b>Average</b>		<b>\$652</b>	<b>\$654</b>	<b>\$660</b>	<b>\$675</b>	<b>\$698</b>	<b>23</b>	<b>3.4</b>
<u>Law</u>								
USM	Unified Fee	\$840	\$840	\$840	\$870	\$900		
	Student Activity	100	100	100	100	100		
<b>Average</b>		<b>\$940</b>	<b>\$940</b>	<b>\$940</b>	<b>\$970</b>	<b>\$1,000</b>	<b>30</b>	<b>3.1</b>

NOTE: Based on 15 credit hours per semester for two semesters for undergraduate and law students (except UMF based on 16 credit hours per semester beginning in FY07 & UMFK based on "Block" rate for 12-18 credit hours per semester in FY13 - FY17) and 9 credit hours per semester for two semesters for graduate students.

**UNIVERSITY OF MAINE SYSTEM**  
**ANNUAL TUITION AND MANDATORY FEES**

<b>UNDERGRADUATE</b>	<b>FY18</b>	<b>FY19</b>	<b>FY19 Increases</b>	
			<b>\$</b>	<b>%</b>
<b><u>In-State</u></b>	<b><u>Rate</u></b>	<b><u>Rate</u></b>		
UM	\$10,902	\$11,170	268	2.5
UMA	7,808	7,988	180	2.3
UMF	9,458	9,666	208	2.2
UMFK	7,965	8,115	150	1.9
UMM	7,676	7,840	164	2.1
UMPI	7,760	7,910	150	1.9
USM	8,840	9,140	300	3.4
<b>Average</b>	<b>8,630</b>	<b>8,833</b>	<b>203</b>	<b>2.4</b>
<b><u>Out-of-State</u></b>				
UM	\$30,282	\$30,970	688	2.3
UMA	17,498	17,918	420	2.4
UMF	19,026	19,778	752	4.0
UMFK	12,075	12,315	240	2.0
UMM	19,316	15,100	(4,216)	(21.8)
UMPI	11,870	12,110	240	2.0
USM	21,650	22,400	750	3.5
<b>Average</b>	<b>18,817</b>	<b>18,656</b>	<b>(161)</b>	<b>(0.9)</b>
<b><u>NEBHE</u></b>				
UM	\$16,062	\$16,450	388	2.4
UMA	11,918	12,188	270	2.3
UMF	14,610	14,946	336	2.3
UMFK	12,075	12,315	240	2.0
UMM	11,786	12,040	254	2.2
UMPI	11,870	12,110	240	2.0
USM	13,550	14,030	480	3.5
<b>Average</b>	<b>13,124</b>	<b>13,440</b>	<b>316</b>	<b>2.4</b>
<b><u>Canadian</u></b>				
UM	\$16,062	\$16,450	388	2.4
UMA	11,918	12,188	270	2.3
UMF	14,610	14,946	336	2.3
UMFK	12,075	12,315	240	2.0
UMM	11,996	12,040	44	0.4
UMPI	11,870	12,110	240	2.0
USM	13,550	14,030	480	3.5
<b>Average</b>	<b>13,154</b>	<b>13,440</b>	<b>286</b>	<b>2.2</b>

**UNIVERSITY OF MAINE SYSTEM**  
**ANNUAL TUITION AND MANDATORY FEES**

<b>GRADUATE</b>	<b>FY18</b>	<b>FY19</b>	<b>FY19 Increases</b>	
			<b>\$</b>	<b>%</b>
<b><u>In-State</u></b>	<b><u>Rate</u></b>	<b><u>Rate</u></b>		
UM	\$8,884	\$9,106	222	2.5
UMF	7,344	7,676	332	4.5
USM	7,596	7,866	270	3.6
<b>Average</b>	<b>7,941</b>	<b>8,216</b>	<b>275</b>	<b>3.5</b>
<b><u>Out-of-State</u></b>				
UM	\$26,308	\$26,944	636	2.4
UMF	10,638	11,060	422	4.0
USM	19,656	20,340	684	3.5
<b>Average</b>	<b>18,867</b>	<b>19,448</b>	<b>581</b>	<b>3.1</b>
<b><u>NEBHE</u></b>				
UM	\$13,510	\$13,840	330	2.4
USM	11,844	12,258	414	3.5
<b>Average</b>	<b>12,677</b>	<b>13,049</b>	<b>372</b>	<b>2.9</b>
<b><u>Canadian</u></b>				
UM	\$13,510	\$13,840	330	2.4
USM	11,844	12,258	414	3.5
<b>Average</b>	<b>12,677</b>	<b>13,049</b>	<b>372</b>	<b>2.9</b>
<b>LAW</b>				
<b>In-State</b>	\$23,260	\$23,290	30	0.1
<b>Out-of-State</b>	34,330	34,360	30	0.1
<b>NEBHE/Canadian</b>	31,390	31,420	30	0.1

**UNIVERSITY OF MAINE SYSTEM  
ANNUAL ROOM & BOARD CHARGES<sup>1</sup>**

	<b>ROOM CHARGES</b>					<b>FY19 Increases</b>	
	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>\$</b>	<b>%</b>
UM	\$4,858	\$5,004	\$5,154	\$5,270	\$5,396	126	2.4
UMF	4,750	4,750	4,892	5,038	5,280	242	4.8
UMFK	4,150	4,250	4,250	4,250	4,250	-	-
UMM	4,160	4,326	4,326	4,326	4,460	134	3.1
UMPI	4,400	4,488	4,588 <sup>2</sup>	4,708	4,850	142	3.0
USM	4,700	4,900	5,000	5,000	5,000	-	-
<b>Average</b>	<b>4,503</b>	<b>4,620</b>	<b>4,702 <sup>2</sup></b>	<b>4,765</b>	<b>4,873</b>	<b>108</b>	<b>2.3</b>

	<b>BOARD CHARGES</b>						
	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>		
UM	\$4,438	\$4,571	\$4,710	\$4,875	\$5,022	147	3.0
UMF	4,220	4,220	4,220	4,296	4,446	150	3.5
UMFK	3,570	3,660	3,660	3,660	3,870	210	5.7
UMM	4,018	4,160	4,160	4,160	4,335	175	4.2
UMPI	3,456	3,356 <sup>2</sup>	3,356	3,556 <sup>2</sup>	3,556	-	-
USM	4,450	4,500	4,200	4,200	4,450	250	6.0
<b>Average</b>	<b>4,025</b>	<b>4,078 <sup>2</sup></b>	<b>4,051</b>	<b>4,125</b>	<b>4,280</b>	<b>155</b>	<b>3.8</b>

	<b>TOTAL ROOM &amp; BOARD CHARGES</b>						
	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>		
UM	\$9,296	\$9,575	\$9,864	\$10,145	\$10,418	273	2.7
UMF	8,970	8,970	9,112	9,334	9,726	392	4.2
UMFK	7,720	7,910	7,910	7,910	8,120	210	2.7
UMM	8,178	8,486	8,486	8,486	8,795	309	3.6
UMPI	7,856	7,844	7,944	8,264	8,406	142	1.7
USM	9,150	9,400	9,200	9,200	9,450	250	2.7
<b>Average</b>	<b>8,528</b>	<b>8,698</b>	<b>8,753</b>	<b>8,890</b>	<b>9,153</b>	<b>263</b>	<b>3.0</b>

<sup>1</sup>Rates shown are based on the meal plan and room type with the greatest projected number of students. Several meal plans and room types are available. UMA has no residence or dining halls.

<sup>2</sup>UMPI's FY16 board rate, FY17 room rate and FY18 board rate restated.

**UNIVERSITY OF MAINE SYSTEM**  
**ANNUAL COMPREHENSIVE STUDENT CHARGES**  
**(Includes Tuition, Mandatory Fees, Room and Board)**

<b>UNDERGRADUATE</b>	<b>FY18</b>	<b>FY19</b>	<b>FY19 Increases</b>	
	<b>Rate</b>	<b>Rate</b>	<b>\$</b>	<b>%</b>
<b><u>In-State</u></b>				
UM	\$21,047	\$21,588	541	2.6
UMA	7,808	7,988	180	2.3
UMF	18,792	19,392	600	3.2
UMFK	15,875	16,235	360	2.3
UMM	16,162	16,635	473	2.9
UMPI	16,024	16,316	292	1.8
USM	18,040	18,590	550	3.0
<b>Average</b>	<b>17,520</b>	<b>17,986</b>	<b>466</b>	<b>2.7</b>
<b><u>Out-of-State</u></b>				
UM	\$40,427	\$41,388	961	2.4
UMA	17,498	17,918	420	2.4
UMF	28,360	29,504	1,144	4.0
UMFK	19,985	20,435	450	2.3
UMM	27,802	23,895	(3,907)	(14.1)
UMPI	20,134	20,516	382	1.9
USM	30,850	31,850	1,000	3.2
<b>Average</b>	<b>27,707</b>	<b>27,809</b>	<b>102</b>	<b>0.4</b>
<b><u>NEBHE</u></b>				
UM	\$26,207	\$26,868	661	2.5
UMA	11,918	12,188	270	2.3
UMF	23,944	24,672	728	3.0
UMFK	19,985	20,435	450	2.3
UMM	20,272	20,835	563	2.8
UMPI	20,134	20,516	382	1.9
USM	22,750	23,480	730	3.2
<b>Average</b>	<b>22,015</b>	<b>22,593</b>	<b>578</b>	<b>2.6</b>
<b><u>Canadian</u></b>				
UM	\$26,207	\$26,868	661	2.5
UMA	11,918	12,188	270	2.3
UMF	23,944	24,672	728	3.0
UMFK	19,985	20,435	450	2.3
UMM	20,482	20,835	353	1.7
UMPI	20,134	20,516	382	1.9
USM	22,750	23,480	730	3.2
<b>Average</b>	<b>22,045</b>	<b>22,593</b>	<b>548</b>	<b>2.5</b>

NOTE: Tuition and Fees based on 15 credit hours per semester for two semesters for undergraduate and law students (except UMF based on 16 credit hours per semester beginning in FY07 & UMFK based on "Block" rates for 12-18 hours per semester in FY13 - FY17) and 9 credit hours per semester for two semesters for graduate students. Room and board rates are based on the meal plan and room type with the greatest projected number of students. Several meal plans and room types are available. UMA has no residence or dining halls.

The majority of UMA Out-of-State Undergraduate students are enrolled in Online programs = \$125% of in-state rate or \$291 in FY18.

UMPI's FY18 board rate restated.

**UNIVERSITY OF MAINE SYSTEM  
ANNUAL COMPREHENSIVE STUDENT CHARGES  
(Includes Tuition, Mandatory Fees, Room and Board)**

<b>GRADUATE</b>	<b>FY18</b>	<b>FY19</b>	<b>FY19 Increases</b>	
			<b>\$</b>	<b>%</b>
<b><u>In-State</u></b>	<b><u>Rate</u></b>	<b><u>Rate</u></b>		
UM	\$19,029	\$19,524	495	2.6
UMF	16,678	17,402	724	4.3
USM	16,796	17,316	520	3.1
<b>Average</b>	<b>17,501</b>	<b>18,081</b>	<b>580</b>	<b>3.3</b>
<b><u>Out-of-State</u></b>				
UM	\$36,453	\$37,362	909	2.5
UMF	19,972	20,786	814	4.1
USM	28,856	29,790	934	3.2
<b>Average</b>	<b>28,427</b>	<b>29,313</b>	<b>886</b>	<b>3.1</b>
<b><u>NEBHE</u></b>				
UM	\$23,655	\$24,258	603	2.5
USM	21,044	21,708	664	3.2
<b>Average</b>	<b>22,350</b>	<b>22,983</b>	<b>633</b>	<b>2.8</b>
<b><u>Canadian</u></b>				
UM	\$23,655	\$24,258	603	2.5
USM	21,044	21,708	664	3.2
<b>Average</b>	<b>22,350</b>	<b>22,983</b>	<b>633</b>	<b>2.8</b>
<b>LAW</b>				
<b>In-State</b>	\$32,460	\$32,740	280	0.9
<b>Out-of-State</b>	43,530	43,810	280	0.6
<b>NEBHE/Canadian</b>	40,590	40,870	280	0.7

NOTE: Tuition and Fees based on 15 credit hours per semester for two semesters for undergraduate and law students (except UMF based on 16 credit hours per semester beginning in FY07 & UMF based on "Block" rates for 12-18 hours per semester in FY13 - FY17) and 9 credit hours per semester for two semesters for graduate students. Room and board rates are based on the meal plan and room type with the greatest projected number of students. Several meal plans and room types are available. UMA has no residence or dining halls.

The majority of UMA Out-of-State Undergraduate students are enrolled in Online programs = \$125% of in-state rate or \$285 in FY18.

UMPI's FY18 board rate restated.

## UNIVERSITY OF MAINE SYSTEM STUDENT FEES

### OVERVIEW

The procedures for establishing student fees throughout the University of Maine System are contained in the Board of Trustees Policy Manual in Section 703 and 704 as follows:

The **BOARD OF TRUSTEES** will establish those fees that are analogous to tuition, i.e., those that must be paid by all students as a condition of attendance. In addition, changes to the amount of the Student Activity Fee shall be requested by the recognized student governing body at each University and authorized after (a) a referendum approved by the student body, (b) approval of the President and, (c) approval of the Chancellor for presentation and approval by the Board of Trustees. Board approved fees include the Student Activity Fee, the Communications Fee, the Unified Fee, the Recreation Fee and the Student Health & Wellness Fee.

The **CHANCELLOR** will establish those fees impacting services and operations within the System. These include maximum levels for financial service fees (non-negotiable check fees) and fees principally affecting prospective students, such as application fees.

The **UNIVERSITY PRESIDENTS** are responsible to the maximum extent possible for establishing most university-specific fees, which include:

- all course fees
- all deposits
- all fees for optional university services and activities

Fee changes planned for the fall semester should ordinarily be adopted no later than May; those to become effective in the spring semester should be adopted by November 15. Universities should establish procedures for timely review of and comment on fee changes. The Chancellor should be informed in advance of the formal adoption of any fee changes.

Adjustments to Student Activity Fees will be considered by the Board at its May meeting in order to allow sufficient time for student governments to conduct spring referendums on any changes recommended to the fees.

**UNIVERSITY OF MAINE SYSTEM  
NARRATIVE DESCRIPTION OF EACH MANDATORY FEE**

<u>Name</u>	<u>University Charging Fee</u>
<p><u>Student Activity Fee</u> This is a student approved mandatory fee that is administered by the students for educational, cultural, social, and recreational purposes. Changes to this fee require the approval of the student body, University President, Chancellor, and Board of Trustees.</p>	ALL
<p><u>Communications Fee</u> A student approved mandatory fee that is administered by the students to support WMEB-FM, the Maine Channel, “The Maine Campus”, and ASAP, a media and internet technologies laboratory.</p>	UM
<p><u>Unified Fee</u> This fee is used to cover fixed costs of providing educational services that may not be directly related to the number of credit hours for which a student is enrolled. This fee supports activities such as student services, the operation of facilities such as student and fitness centers, and student-utilized, instruction-related technologies.</p>	ALL
<p><u>Recreation Center Fee</u> This fee is assessed to pay for the construction of the Center and provides students with access to the state-of-the-art facility, including a leisure pool and sauna. Many aerobic classes and other programs and services are also provided for no additional fee.</p>	UM
<p><u>Student Health &amp; Wellness Fee</u> This fee is charged to students registered for 4 or more credit hours of classes held at UMF. It covers all health center office visits, counseling and fees associated with Mainely Outdoors.</p>	UMF



**UNIVERSITY OF MAINE SYSTEM**  
**FY2018 E&G and AUXILIARY FORECAST #3**  
**As of 4/30/2018**

The FY18 forecasted operating results are \$5.3 million – an improvement of \$0.3 million since the previous forecast. The forecast-to-budget variance is a positive \$6.3 million.

<b>E &amp;G and AUXILIARY</b>						
<b>Institution</b>	<b>Forecast</b>	<b>Operations</b>		<b>Transfers From/(To)</b>		<b>Net</b>
		<b>Budget</b>	<b>Variance</b>	<b>Administrative Savings</b>	<b>Budget Stabilization</b>	
UMAINE	\$ 1,950,221	\$ -	\$ 1,950,221	\$ -	\$ -	\$ 1,950,221
UMA	(2,094,334)	(1,036,789)	(1,057,545)	-	-	(2,094,334)
UMF	(750,000)	47,835	(797,835)	-	-	(750,000)
UMFK	232,566	308,936	(76,370)	-	-	232,566
UMM	19,790	-	19,790	-	-	19,790
UMPI	41,470	-	41,470	-	-	41,470
Maine Law	(904,924)	(688,119)	(216,805)	-	275,320	(629,604)
USM	1,753,316	(2,958,831)	4,712,147	-	-	1,753,316
Campus Total	248,105	(4,326,968)	4,575,073	-	275,320	523,425
Governance	(350,000)	(500,000)	150,000	-	-	(350,000)
University Services	500,000	-	500,000	-	-	500,000
Early College	-	500,000	(500,000)	-	-	-
Admin. Savings	3,301,740	3,301,740	-	(3,301,740)	-	-
Addt'l Unrestricted Investment Income	1,562,000	-	1,562,000	-	-	1,562,000
<b>TOTAL</b>	<b>\$ 5,261,845</b>	<b>\$(1,025,228)</b>	<b>\$ 6,287,073</b>	<b>\$ (3,301,740)</b>	<b>\$ 275,320</b>	<b>\$ 2,235,425</b>

**Major factors impacting FY2018 forecast**

- Unrestricted investment income is budgeted at \$3.8 million; the current return on unrestricted investments is \$5.4 million for a positive budget-to-actual variance of \$1.6 million. No projections of future investment gains or losses are included in the forecast.
- Although UMaine's total credit hours were below budget, the out-of-state credit hours exceeded budget by 7.9% resulting in tuition & fee revenue exceeding budget. As a result of this change in enrollment mix and other cost saving efforts, UMaine is projecting to increase spending for necessary maintenance and capital investments. UMaine projects year-end positive operating results of \$1.9 million.
- UMA is currently projecting a loss of \$2.1 million. This represents a significant improvement from the losses forecasted in October (\$3.6 million) and February (\$2.3 million). This change is the result of spring credit hours exceeding previous estimates and cost reductions. UMA has sufficient reserves to offset this loss, if realized.

- Both the total credit hours and the number of out-of-state credit hours were below budget at UMF while the financial aid exceeded budget and contributes to the projected loss of \$750 thousand. UMF's combined E&G and Auxiliary reserves currently have a deficit balance of \$186 thousand. If this loss is realized, the deficit balance would grow to \$936 thousand.
- UMFK is projecting operating results of \$232 thousand. Though \$76 thousand less than budget, this is an improvement over the Period 1 projected loss and the Period 2 forecast of \$185 thousand.
- UMM forecasted a loss of \$117 thousand in October. The projected loss decreased in Period 2 to \$33 thousand. UMM continued to hold vacant positions to help offset the loss of revenue resulting from lower enrollments and currently projects positive operating results of \$20 thousand.
- UMPI's Period 1 & 2 projections were to break-even, as budgeted. Increased revenues in other sales & services and decreased spending are mitigating the projected shortfall in student tuition and fees resulting in a current year-end projection of \$41 thousand.
- Maine Law continues to project a loss of \$905 thousand as revenues are 11.3% or \$562 thousand below budget. Maine Law was approved to receive \$275 thousand in Budget Stabilization Funds, and USM will match that amount. The Law School has no reserves.
- USM is projecting positive operating results of \$1.8 million – up from the previous forecast of \$830 thousand and greatly improved from the budgeted deficit of \$3.0 million. Vacancy savings combined with non-compensation cost reductions result in the favorable forecast.

### Travel & Memberships/Contributions Reporting

Public Law 2011, Chapter 616 requires periodic reporting of the actual travel & contribution costs to the Board of Trustees. The budget-to-actual comparisons through April 2018 are below.

Travel, Meals & Entertainment				
Funding Source	Annual Base Budget	YTD Actuals	Variance	
E&G/Auxiliary	\$ 6,136,018	\$ 5,498,271	\$ 637,747	10.4%
Restricted/Other	4,423,601	3,301,066	1,122,535	25.4%
Total	\$ 10,559,619	\$ 8,799,337	\$ 1,760,282	16.7%

Memberships, Gifts, Donations & Sponsorships				
Funding Source	Annual Base Budget	YTD Actuals	Variance	
E&G/Auxiliary	\$ 1,619,196	\$ 1,285,243	\$ 333,953	20.6%
Restricted/Other	521,938	425,935	96,003	18.4%
Total	\$ 2,141,134	\$ 1,711,178	\$ 429,956	20.1%

## FACULTY EVALUATION STANDARDS

Maine Business School  
University of Maine  
April 9, 2014

The Tenure and Reappointment Committee conducts periodic reviews of all faculty to assess their contributions to the mission of the Maine Business School (MBS). This document and the Agreement of the University of Maine System with the Associated Faculties of the University of Maine System establish the criteria for these evaluations of professional performance. The University of Maine System is a public institution of higher education committed to excellence in teaching, research, and public service. Together, the students, faculty, and staff form our statewide University community. The quality of life on and about the member Universities is best served by courteous and dignified interaction between all individuals. Therefore the MBS shares with the UMS and AFUM the expectation that all members of the campus community will work to develop and maintain professional relationships that reflect courtesy and mutual respect.

The MBS is comprised of a faculty as a whole - it is not merely a group of individuals. All faculty are expected to act in a socially responsible and ethical way. They should have a physical presence beyond their teaching and office hours and should be available for meetings and other activities on teaching and non-teaching days. Guided by the general approach adopted by the university, peer judgments are determined by performance in scholarship, teaching, and service.

Collegial behavior, cooperative attitude, and acceptance of personal responsibility for one's actions are all valuable qualities of a unit member. Extreme cases of behavior, clearly and consistently disruptive to departmental affairs, as determined by 80% of the tenured members in a meeting, may result in a negative recommendation for reappointment, tenure, or promotion

The MBS is accredited by the Association to Advance Collegiate Schools of Business (hereafter AACSB). The maintenance of that accreditation is critical to the MBS and the University of Maine, hence faculty must contribute to it as required.

The Tenure and Reappointment Committee is currently a committee of the whole—all tenured faculty in the Business School are members. If it is decided by the faculty that the Committee should be reduced in size, the faculty will be involved in the development of a process by which this will occur, including, but not limited to agreement on its final size, the terms of office for members, how the members will be elected by the faculty and the distribution of faculty expertise across disciplines. Members with a conflict of interest relative to a specific candidate should recuse themselves during those deliberations.

### CONTRIBUTIONS TO THE MISSION

The Maine Business School serves as the primary source of management research, education, and service in the state of Maine. Through the integration of research, teaching and extensive interactions with the business community the MBS develops and communicates knowledge, prepares students for successful careers in a global economy, and contributes to the economic development of the region. Each faculty member has a professional responsibility to contribute to the mission of the MBS.

**Research and Other Intellectual Contributions:** The faculty of the MBS undertake original research, communicate results to other educators, researchers and practitioners, and are encouraged to incorporate research findings in their teaching. The evaluation of the quality of such research is necessarily an imprecise task. However, certain objective criteria are important to the evaluation process. Work that has been subjected to external evaluation will be weighted more heavily. Similarly, works which have been published usually represent a more substantial contribution than those which have received more limited circulation. Greater emphasis is placed on original scholarly work than upon texts or editorships of collections of readings. We recognize the special significance of invited contributions. In the case of jointly conducted research and scholarly activities and co-authored publications, the Committee will assess, to the degree possible, the relative contribution of the MBS faculty member. Professional recognition is reflected by the standards of review imposed by the publishers of a faculty member's materials (double-blind review, editorial review etc.). The Committee utilizes these implicit evaluations in its own evaluation process. Specific attention is paid to the generally acknowledged ratings of professional journals and to the editorial standards (such as acceptance rates and impact factors) of journals. Each journal is evaluated on its own merits and will be checked by the Committee. The proliferation of pay-to-publish (as distinct from a submission, reprint or review fee) and of marginal outlets is of concern and candidates should avoid them and not expect to receive credit for those publications. The mere appearance of a journal in Cabells does not assure quality. The Committee supports interdisciplinary work including that published outside of one's field. Significant weight will be given to the written evaluations of external reviewers required when the candidate prepares the tenure document. The Committee considers the following factors in evaluating the contributions of faculty to the research mission of the MBS.

#### Primary factors

- Publications in refereed journals with preference for quality journals
  - At least one sole-authored article is encouraged
  - Articles published with many coauthors may carry less weight
  - Assessment of 'quality' depends a variety of factors: the candidate must provide some measures
- Assessment of work by external reviewers
- Publications in editorially reviewed journals
- Research grants awarded
- Publication of a scholarly book
- Publication of an original textbook (not a customized textbook)
- Publication of case studies, instructional resource (course software, study guide, etc.), or chapter in scholarly book<sup>1</sup>

#### Secondary factors

- Editor of scholarly journal
- Editor of proceedings, editor of a special issue, associate/assistant editor of scholarly journal (provide evidence of work required)
- Proceedings or presentations at scholarly conferences
- Review of article for a refereed journal
- Published review of a book
- Publication of new edition of textbook

- Candidates may include other evidence of research activity not listed above (e.g. work in progress)

**Teaching:** The MBS faculty provides each student with the intellectual foundation for a productive professional career in a world-wide economic system. Student input is essential to the improvement of instruction and an important consideration in the evaluation of teaching. Faculty members are required to conduct student evaluations in all classes. The Committee considers several factors in assessing the contributions of faculty to the teaching mission of the MBS. Factors that may be considered, among others, include:

**Primary factors**

- Student evaluations (must be considered)
- Course and curriculum development
- Currency and impact in the instructional field as demonstrated by course materials and content
- Accessibility to students including holding scheduled classes, maintaining office hours, and providing prompt and thorough feedback
- Responsiveness to Assurance of Learning or other activities needed to meet AACSB accreditation standards

**Secondary factors**

- Professional development activities for instructional improvement
- Innovations in instructional processes including creative use of technology
- Consideration of required versus elective courses and large versus small class sizes
- Student advising
- Peer classroom visits
- Candidates may include any other evidence they deem important

**Service:** As an integral part of the land-grant mission of the University of Maine, the MBS has a special responsibility to contribute to the economic development of the State. In addition, faculty contribute to their profession through service activities. The Committee considers many factors when judging the contributions of faculty to the service mission of the MBS. The following is not meant to be an all-inclusive list of service activities.

- School, College and University committee assignments and other service
- Involvement with student organizations
- Public service activities that require professional expertise performed as a faculty member as distinct from service rendered in the role of citizen
- Participation in the business community and contributions to the economic development of the State
- Business-related publication or appearances in newspapers, magazines, radio, television or other media outlets
- Management development seminars and consultation on business problems
- Other participation in professional associations and one's discipline
- Development of workshops or conferences for external constituencies

All faculty should be familiar with accreditation standards and must contribute to the School's maintenance of accreditation. The tenured faculty have a special responsibility to assume a leadership role in the accreditation process and to represent the MBS within the University and business communities. In addition, the tenured faculty should provide guidance and support for junior faculty.

#### **REAPPOINTMENT RECOMMENDATIONS**

The Committee advises the Dean regarding the reappointment of probationary faculty, both tenure-track and lecturers without just cause protection. All are evaluated annually using the same criteria except that lecturers have no research requirements (although research is welcomed). The University and the Committee require probationary faculty to report their activities on a yearly basis. These reports are cumulative in nature. At the third year, the member must use the *Third and Subsequent Year Reappointment Format* available from the Human Resources Department's website (Google: Human Resources University of Maine). This format will facilitate the final format the member must use when applying for tenure or just cause.

Under ordinary circumstances, holding a terminal degree in the tenure track faculty member's discipline is necessary for a favorable tenure recommendation. This requirement can be waived by the Committee at the time of hiring if a faculty candidate has exceptional professional experience and qualifications. Lecturers normally hold a master's degree in their field.

During the first two years, faculty are expected to work developing their teaching skills. By the end of two years, they should also have enough of a portfolio of scholarly work (see Secondary factors above) to provide evidence that publications will ensue. They should provide service but not so much as to impinge on their research and teaching development.

Over the next three years, faculty should continue to improve teaching and to build a library of publications. It is recommended that some publications be directed towards known, quality journals with impact factors. Pay-to-publish (see page 2) and marginal outlets are of concern and candidates should avoid them. It is also recommended that one or more publications be single authored. Ideally, a candidate for tenure will have at least five refereed articles by the time of the tenure decision (usually at the beginning of the 6th year). Service should increase during this period. The faculty may take on a leadership role in some service capacity during these latter years but it is not required.

Committee members will rate the candidate on each of the performance criteria as excellent, satisfactory or unsatisfactory. These ratings, as a whole, should be viewed as assessments of 'progress towards tenure' and not an assessment of that year's work and not an early vote for or against tenure. For example, a first year faculty member might receive an 'excellent' vote on research without having any publications because of – for example – several works in progress and conference presentations. Clearly, that is not a vote for tenure, but rather, progress towards it. A simple majority vote in favor of reappointment constitutes a recommendation to reappoint.

#### **PROMOTION TO ASSOCIATE PROFESSOR WITH TENURE (LECTURER WITH JUST CAUSE)**

The Committee advises the Dean concerning the tenure application of probationary faculty. A favorable tenure recommendation by the Committee must be justified by evidence that the faculty member has made important contributions to the mission of the MBS. A favorable tenure recommendation requires

an evaluation of "excellent" in research or teaching and "satisfactory" in the other two areas although such a vote does not ensure a favorable recommendation. A split vote averaging a low 'excellent' rating plus a barely satisfactory rating in another area may well result in a vote not to recommend tenure. The following definitions are guidelines for judging "excellent" and "satisfactory" performance in research, teaching, and service but this is not meant to be an all-inclusive listing of those activities that can result in an a particular evaluation. The primary and secondary factors listed earlier should help solidify judgment.

- Satisfactory performance in research: Continued and sustained effort in scholarly research beyond the doctoral dissertation resulting in articles in refereed journals and other quality publications and good evaluations by external reviewers. Typically, at least five publications in peer-reviewed journals of which one is recommended to be sole-authored, will be required for a candidate to be considered for a satisfactory or higher evaluation. The committee considers progression and continuity of scholarly effort and evidence of the likelihood of future publication. Evidence for this is provided through a portfolio of other scholarly work (as noted on page 2).
- Excellent performance in research: Excellence is manifested through numerous publications in refereed journals and other quality publications and excellent evaluations by external reviewers. The committee considers the quality of the journals as well as the impact on the profession. The committee considers progression and continuity of scholarly effort and evidence of the likelihood of future publication. Evidence for this is provided by a significant portfolio of supporting scholarly work (as noted on page 2).
- Satisfactory performance in teaching: Conscientious and dedicated attitude in the classroom which leads to a reputation among colleagues and students as a competent and effective teacher and advisor.
- Excellent performance in teaching: Demonstrated outstanding and distinctive reputation as an accomplished teacher and advisor among both students and colleagues.
- Satisfactory performance in service: Continuing cooperative participation in the business School, college, university, community, and/or professional organizations through activities such as committee work, special assignments, mentorship of student organizations, consulting, executive development programs, development of workshops or conferences, etc.
- Excellent performance in service: Conspicuous leadership or extensive contributions in the business School, college, university, community, and/or professional organizations through activities as listed above.

A vote for tenure implies that the committee believes that the candidate has met the criteria for promotion and will continue to be active in these areas as his or her career progresses. A majority of those serving on the Tenure and Promotion Committee must vote in favor of granting tenure in order to forward a favorable recommendation. A faculty member must review the candidate's materials and participate in committee deliberations in order to vote on a tenure decision.

*Note that the criteria for classification of faculty for AACSB accreditation purposes are unrelated to promotion and tenure criteria; therefore such a classification does not in any way ensure a satisfactory or excellent evaluation in any area of the tenure assessment.*

#### **PROMOTION TO FULL PROFESSOR**

The Professors of the Tenure and Reappointment Committee advise the Dean concerning applications for promotion from Associate Professor to Professor. To earn promotion, an Associate Professor must demonstrate teaching ability, research productivity and service of a high order. The candidate must, at minimum, be voted as excellent in two of the categories of research, teaching and service and satisfactory otherwise.

A reasonable expectation for applying for the rank of Professor is that the candidate has served at least five years in the rank of Associate Professor. The candidate will have a substantial post-tenure publishing record and receive excellent assessments of that record from external reviewers. Without suggesting that specific numbers of publications are required, recent successful candidates have averaged one or more peer reviewed articles per year since achieving tenure. This period is one in which the tenured candidate might choose to produce higher impact pieces in better established journals, resulting in fewer total publications than if other outlets had been targeted. Emphasis on quality is sought. There should be evidence of an increased national, and even, international recognition. Of course, evidence that scholarly activity will continue should be present.

It is expected that service to the University, Maine Business School, or profession has increased. The candidate should have demonstrated a greater emphasis on service and leadership than would be expected from an untenured faculty member. While leadership can be difficult to define, the candidate should be known for taking on leadership roles. The committee also looks for extensive interactions with the business community. The following examples are illustrative:

- organizing events for the benefit of the MBS and business community
- chairing major committees
- editing journals
- expanding one's scholarly reputation
- holding positions in professional organizations
- initiating and championing major curricular changes

A majority of the Professors holding that rank must participate in deliberations for promotion to full Professor. While the document format is undefined by AFUM and the University, care should be taken to present a professional document. Using the same format as that used for tenure is advised.

#### **POST TENURE (JUST CAUSE) REVIEW**

There are two purposes for the periodic evaluation of tenured and just cause faculty

- 1) To encourage all faculty to remain productive, participative and collaborative
- 2) To reward those faculty who achieve the standards stated in 1.

The Professors of the Tenure and Reappointment Committee conduct the reviews of all tenured and just cause faculty. A Professor will not, of course, review him or herself.



The faculty member will submit documentation to the committee attesting to his/her research, teaching, and service over the prior four years. Document format is undefined by AFUM and the University but care should be taken to present a professional document. Using the same format as used for tenure is advised. The committee will use the same criteria for assessing performance as indicated above for tenure. However, it is expected that the faculty member demonstrate a greater emphasis on service and leadership as noted in the section on "Promotion of Tenured Faculty" than would be expected from an untenured faculty member. An overall assessment of satisfactory or excellent will be made.

According to the AFUM Agreement, Article 20, G: Any unit member (with tenure), or any Lecturer, with over six (6) years of continuous full-time regular service...shall be eligible for consideration for the award of compensation at the time of his / her post tenure review. Such eligibility occurs every four years. A raise of 3.5% is recommended if the faculty member earns a vote of satisfactory or better from the peer committee. An administrative review (by the dean or appropriate administrator) may result in overturning the committee's recommendation and the committee will be informed of the reasons for this. An additional award of up to but no more than 3.5% is also possible upon administrative review of the committee's recommendation due to stellar performance, salary compression and/or equity.

This document supersedes the **Evaluation Policy for Tenure Faculty** of November 10, 1988 and the **Evaluation of Full-Time and Part-Time Non-Tenure Track Faculty** of January 14, 1991, the **Reappointment and Tenure Policy** of March 20, 1992, and the Faculty Evaluation Standards of 1998.

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<sup>i</sup> Peer-reviewed published cases are categorized as "publications in refereed journals." Cases published in textbooks or study guides contribute to the faculty member's overall portfolio.

WELCOME

University of Maine at Augusta  
UMA-Bangor  
Master Plan Report  
Executive Summary



FACILITIES MASTER PLAN  
BOARD OF TRUSTEES FFT  
PRESENTATION  
MAY 2018



## MASTER PLAN PROCESS

- PHASED ANALYSIS AND DEVELOPMENT
- STRATEGIC GOALS AND DRIVERS
- SPACE NEEDS COMPARITIVE ANALYSIS
- SQUARE FOOTAGE SUMMARY

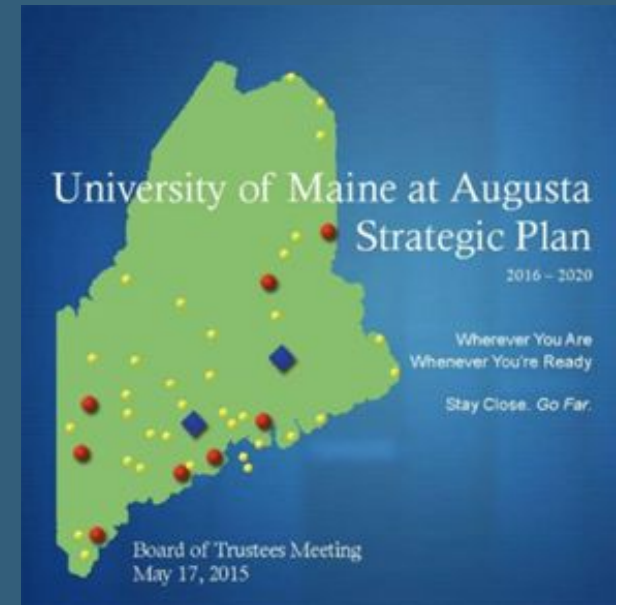
## UMA- AUGUSTA RECOMMENDATIONS

- CAMPUS SHORT & LONG TERM GOALS
- OVERVIEW OF FINAL VISION

## UMA- BANGOR RECOMMENDATIONS

- CAMPUS SHORT & LONG TERM GOALS
- OVERVIEW OF FINAL VISION

## AGENDA



## 1. URGENT NEEDS (FACILITIES)

- FACILITIES ISSUES
- PROGRAM EXIGENCIES



## 2. SHORT-TERM MASTER PLAN 0-10 YEARS

- FACILITIES
- PROGRAM
- CAMPUS



## 3. LONG-RANGE MASTER PLAN 10-20+ YEARS

- CAMPUS EXPANSION: CONFERENCE CENTER, ACADEMIC BUILDING, STUDENT LIFE, ATHLETICS



**THEMES | GOALS | DRIVERS | 3 CATEGORIES**

## AUGUSTA DRIVERS

- CONSOLIDATE CAMPUS
- ENHANCE BRAND AND IDENTITY OF CAMPUS
- REINFORCE COMMUNITY CONNECTIONS
- ESTABLISH ARTS AND MUSIC CLUSTER
- ESTABLISH MEETING SPACES
- ESTABLISH WELCOME CENTER
- IMPROVE PEDESTRIAN EXPERIENCES
- IF HOUSING, WHERE?

## BANGOR DRIVERS

- TRANSFORM AN AD-HOC GROUP OF BUILDINGS TO FEEL MORE LIKE A CAMPUS
- ESTABLISH A CAMPUS IDENTITY BEYOND THE PROGRAM OFFERINGS
- CREATE SOCIAL SPACES INSIDE & OUT
- LESSEN IMPACT OF ROADS & NON-UMA BUILDINGS
- CREATE A MORE COLLEGIATE CHARACTER

**THEMES | GOALS | DRIVERS**



## SITELINES COMPARISON

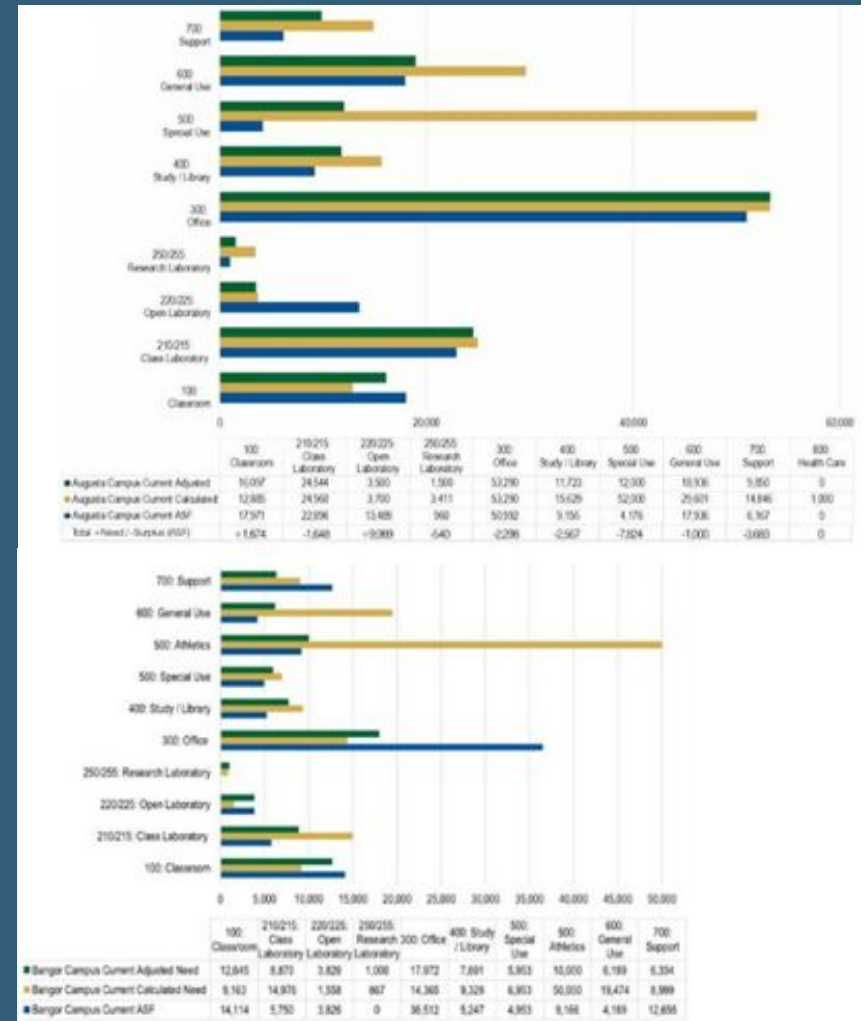
- Total SF / Headcount & FTE

## RICKES ASSOC. SPACE NEEDS ANALYSIS

### ANALYSIS

- Total Assignable SF / Headcount & FTE
- Analysis by FICM Category
- Recommendations Based Upon SF Required for Specific Types of Learning (FICM)

## SPACE NEEDS / SPACE UTILIZATION



## SQ. FT. REDUCTIONS THROUGH 2016

Dow Chapel	11,638
Lincoln Hall	10,804
Augusta Hall	25,600
Caribou Hall Redeploy to UM	5,130
Katahdin Hall	3,100
Schoodic Hall	3,100
Subtotal	<b>59,372</b>

## SQ. FT. REDEPLOYMENT TO UMS

Robinson Hall	12,240
3rd Floor Lewiston Hall	8,300
Subtotal	<b>20,540</b>

<b>TOTAL SQ. FT. DECREASE</b>	<b>79,912</b>
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Figure 0.22 Bangor Campus Existing Conditions, Looking East



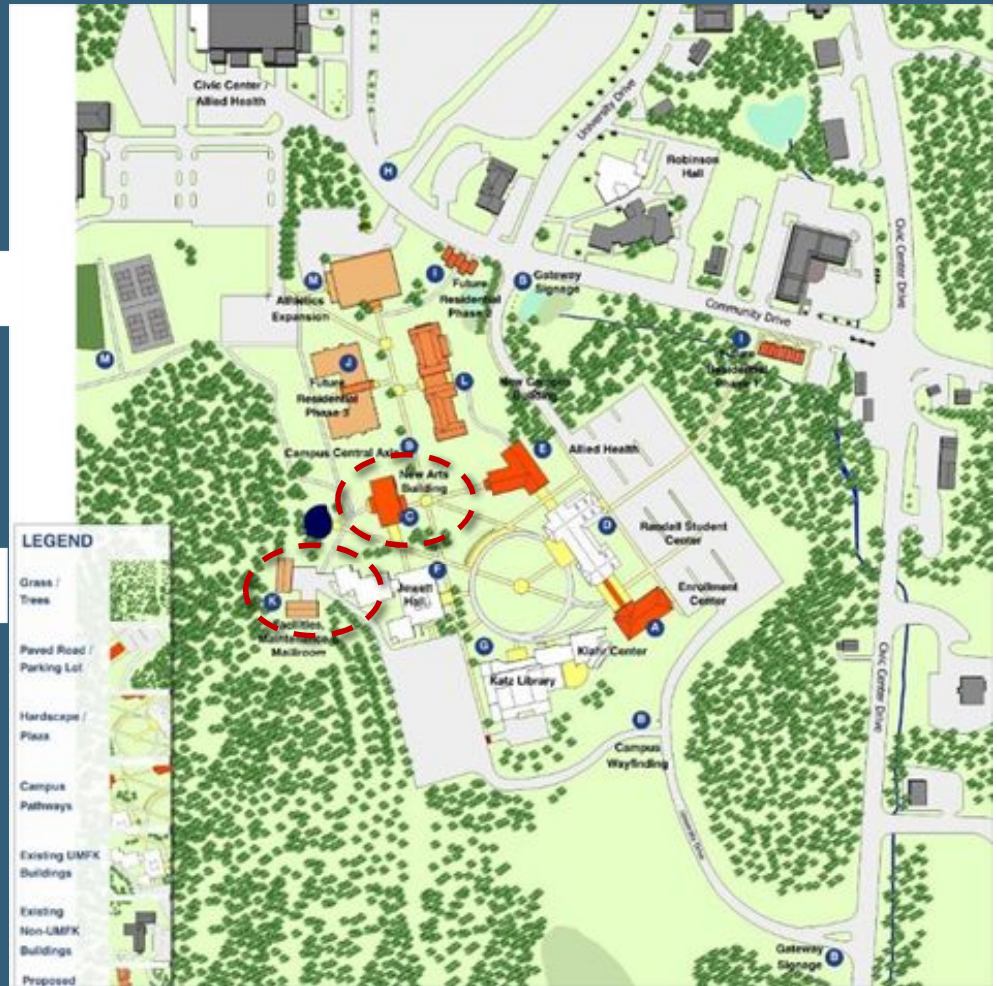
Figure 0.18 Augusta Campus Existing Conditions, Looking Northwest

## UMA CAMPUS SQUARE FOOTAGE



## SHORT-TERM:

- Address deferred maintenance
- Increase academic program density around the Campus Common
  - Welcome / Enrollment Services Center
  - Fine Arts
  - Allied Health
- Strategic renovations to meet current program needs



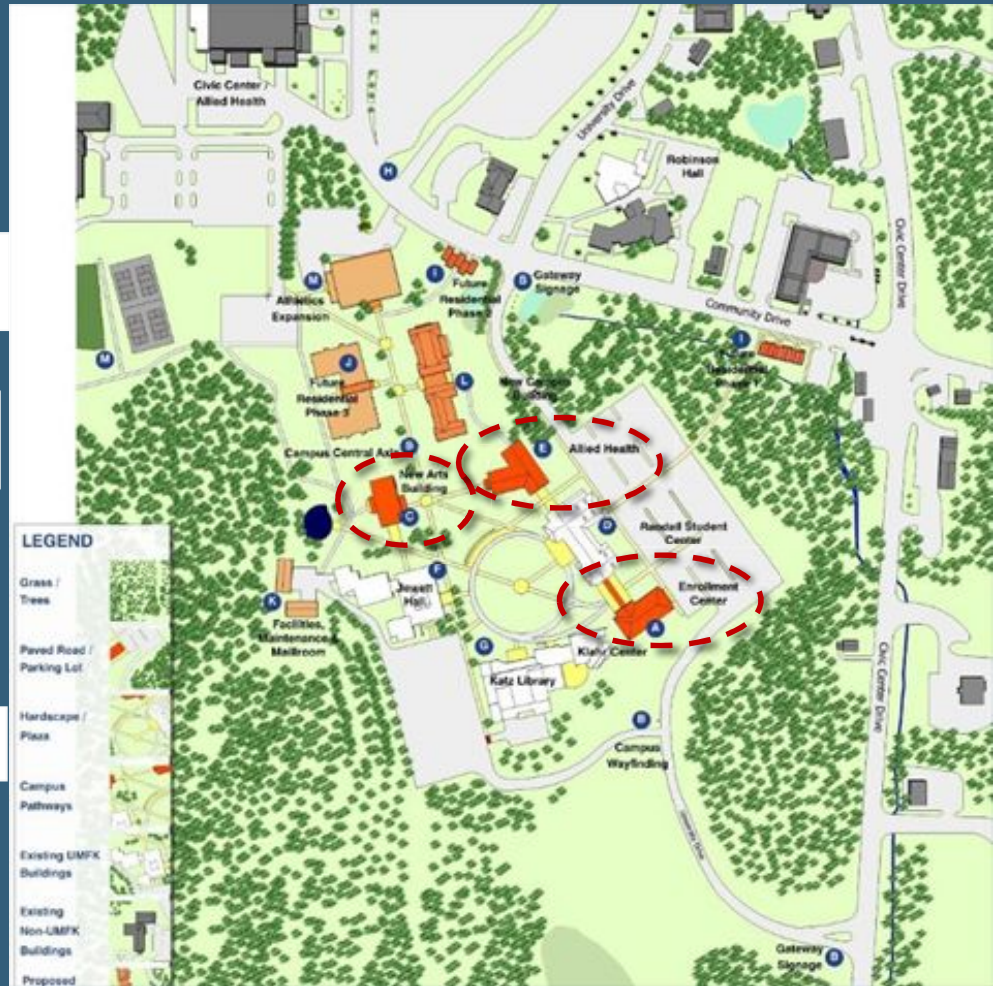
## AUGUSTA CAMPUS GOALS





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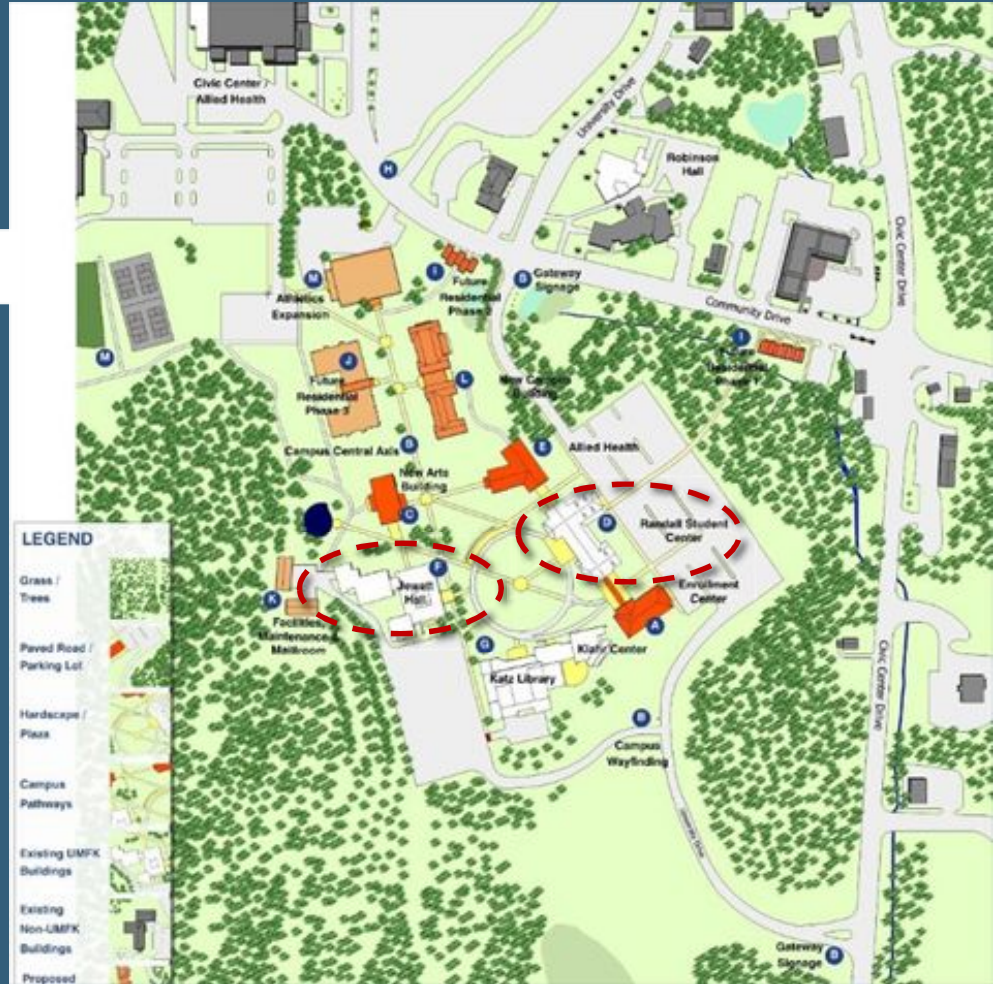


## AUGUSTA CAMPUS GOALS



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## AUGUSTA CAMPUS GOALS

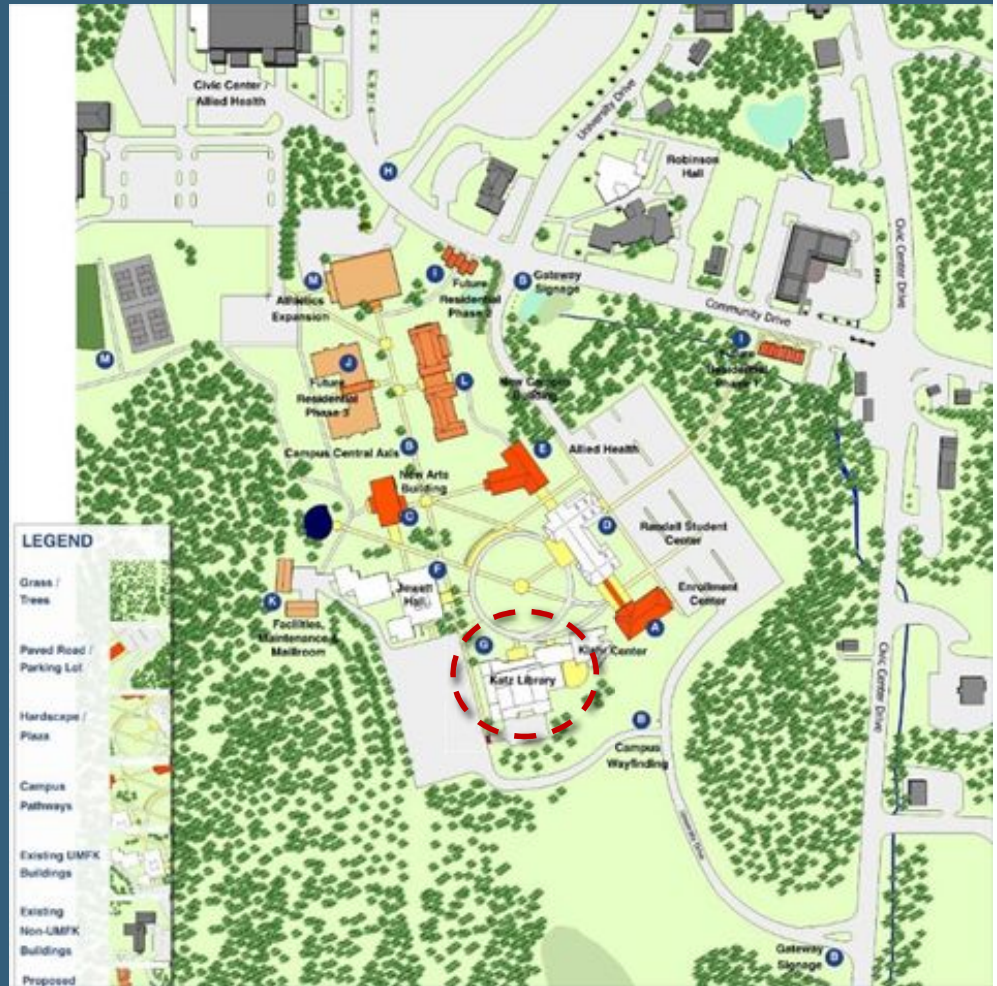




**AUGUSTA:** SHORT-TERM DEVELOPMENT VIEW TOWARD JEWETT & KATZ

## LONG-TERM: GROWTH DEPENDENT

- Renovations of large existing campus buildings
- New building construction initiatives based upon growth and potential need for residential program

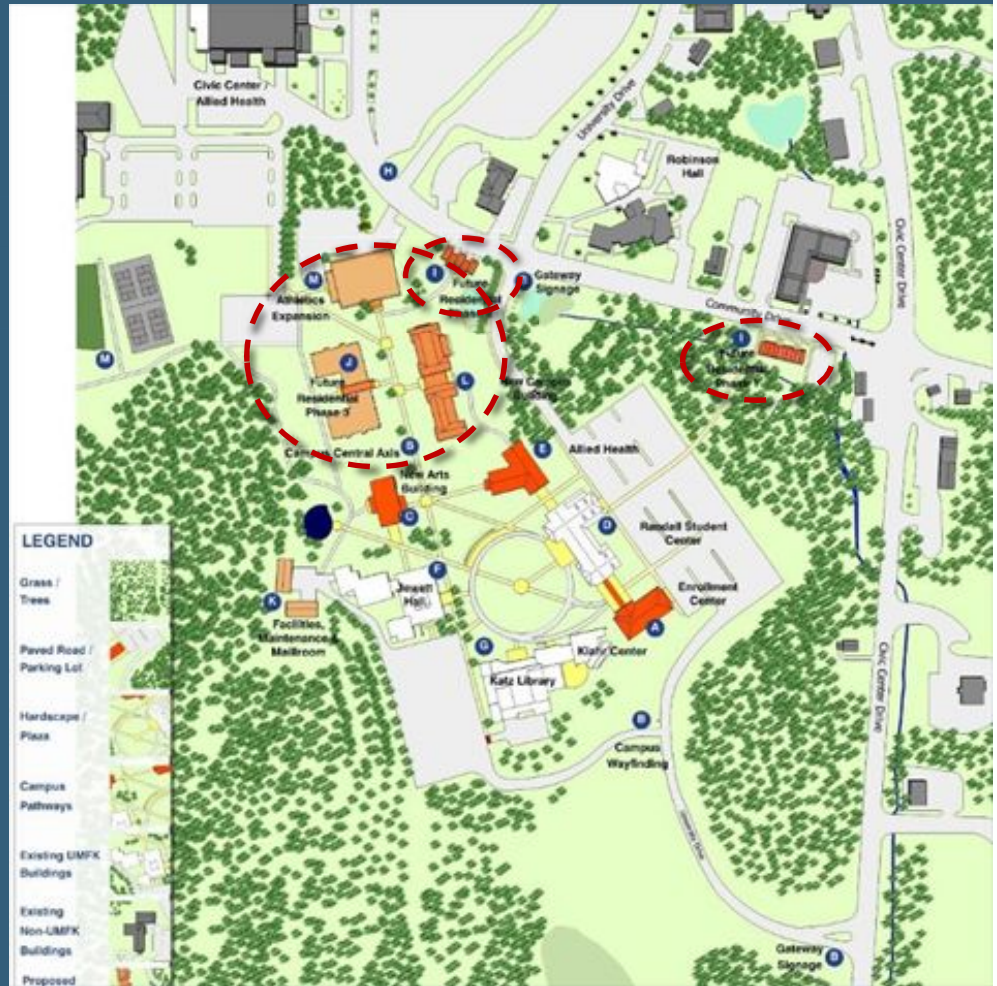


## AUGUSTA CAMPUS GOALS



## LONG-TERM: GROWTH DEPENDENT

- Renovations of large existing campus buildings
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## AUGUSTA CAMPUS GOALS



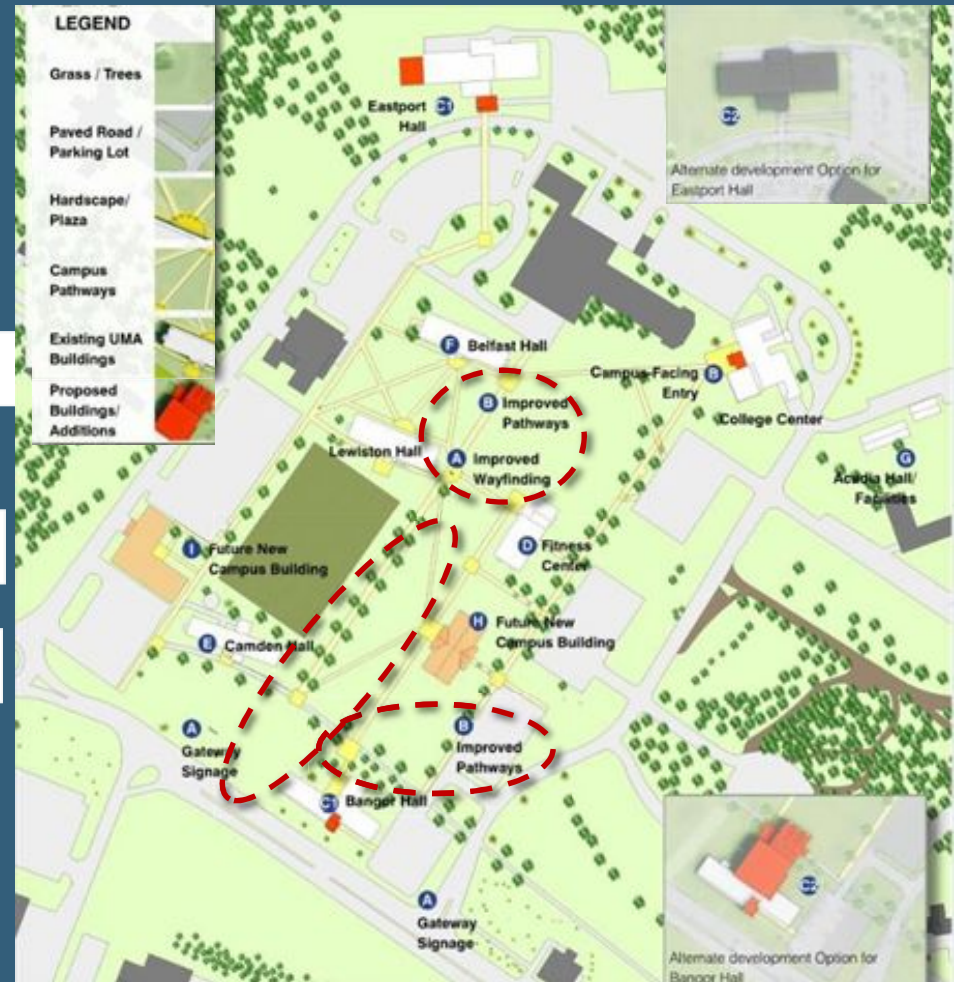


**AUGUSTA CAMPUS: OVERVIEW OF COMPLETED MASTER PLAN**



## SHORT-TERM:

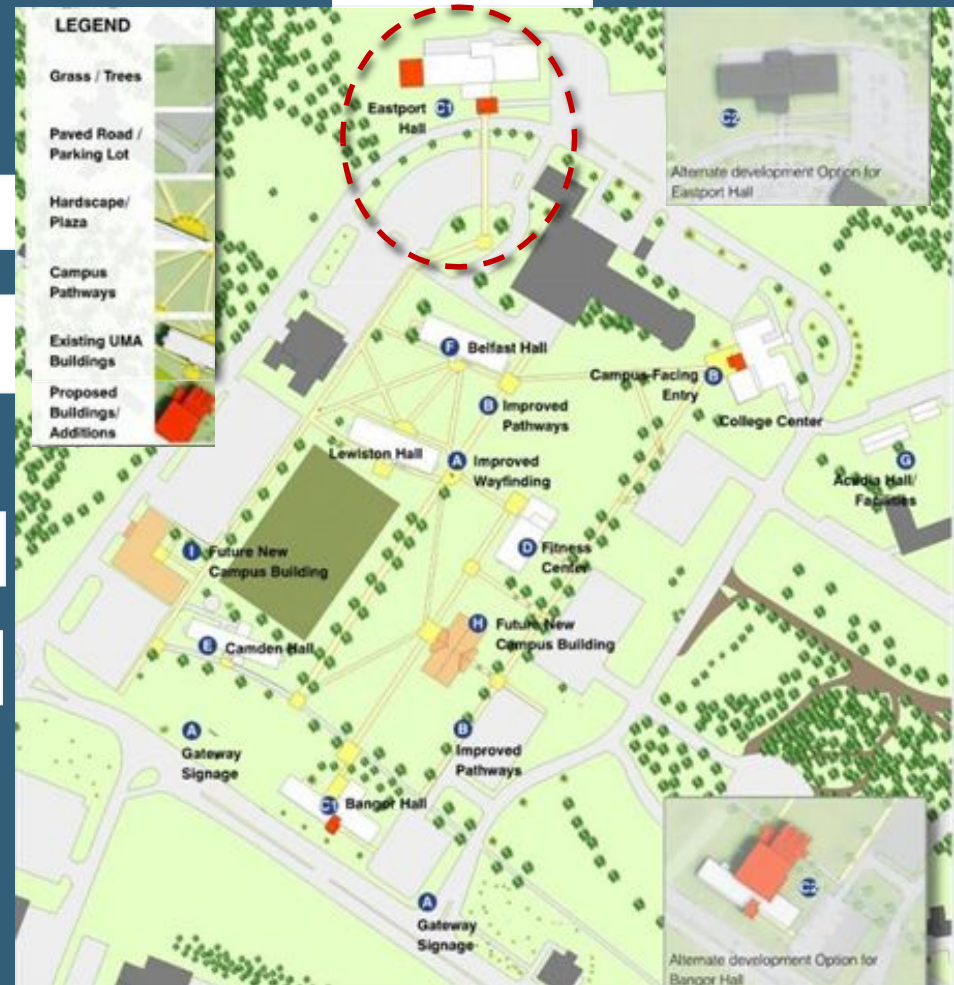
- Improve campus identity with pathways, signage, and landscaping
- Strengthen connection to Eastport Hall from core campus
- Improve relationship of College Center with an entrance that faces inward instead of toward the street
- Renovate Bangor Hall to create a front door and Welcome Center



## BANGOR CAMPUS GOALS

## SHORT-TERM:

- Improve campus identity with pathways, signage, and landscaping
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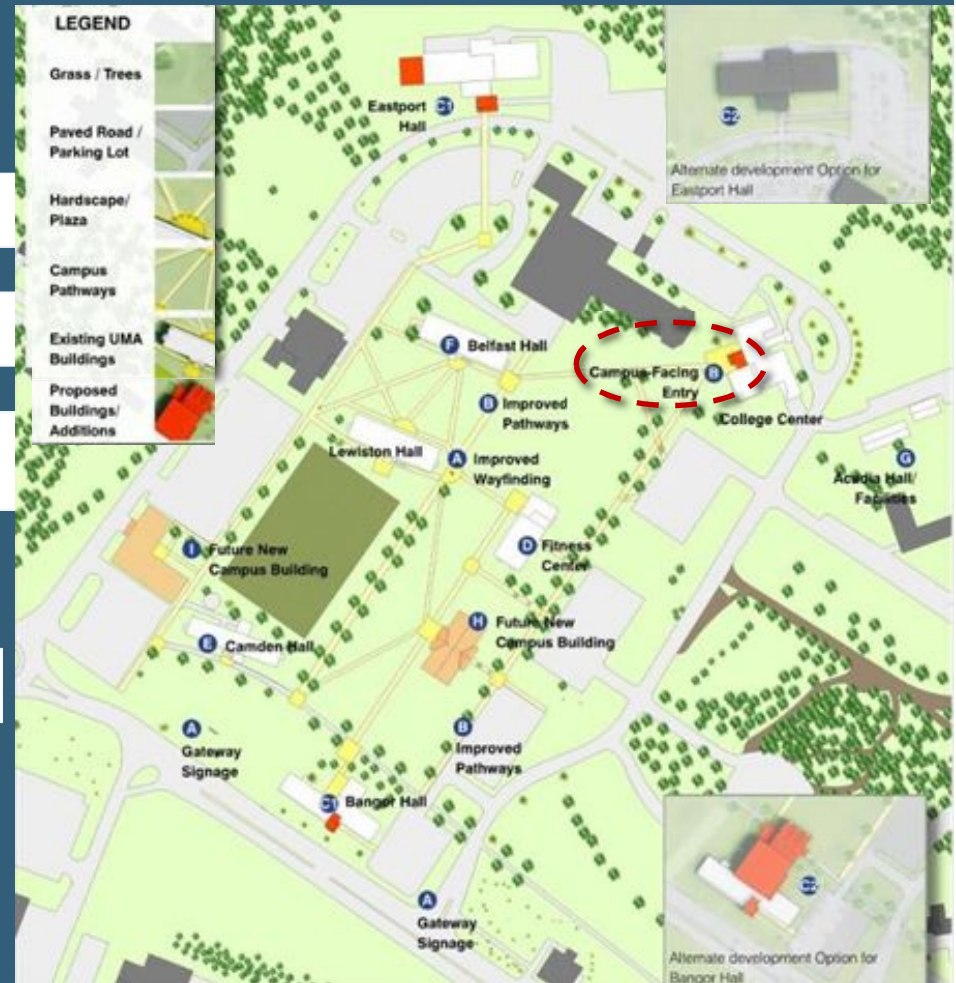
## BANGOR CAMPUS GOALS





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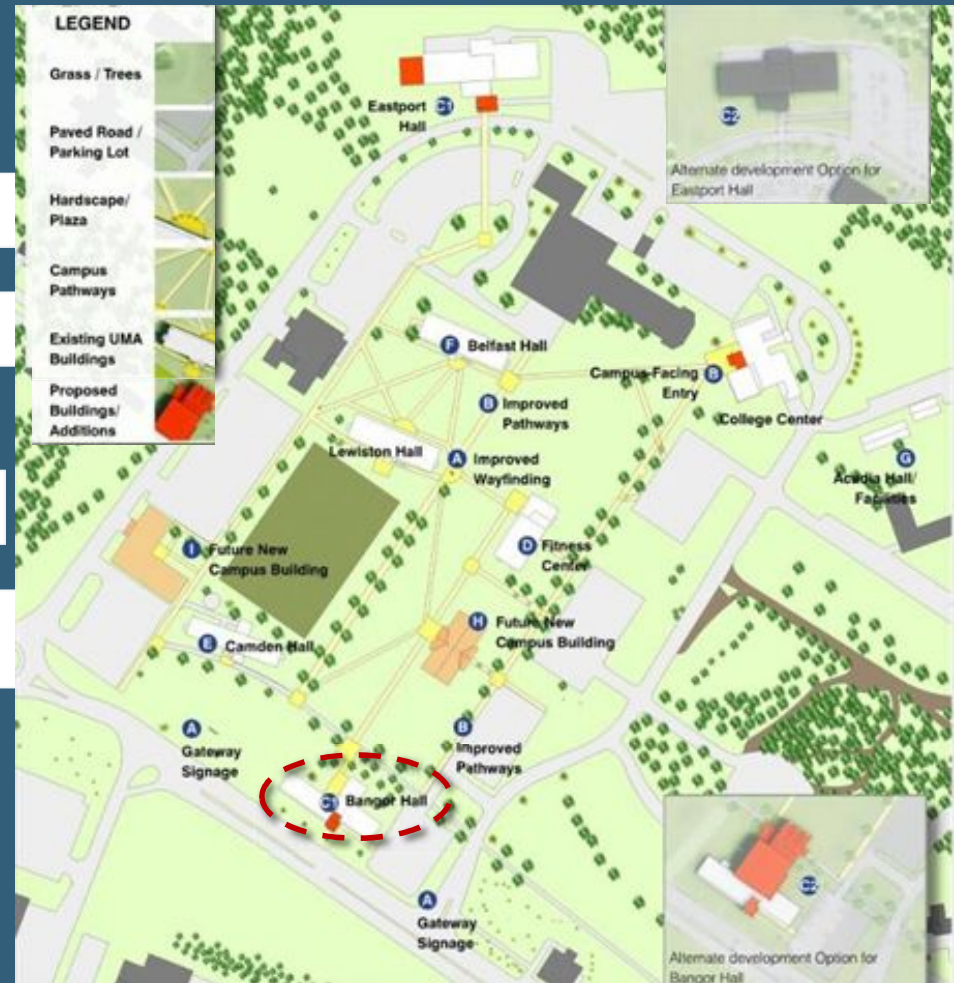
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## BANGOR CAMPUS GOALS

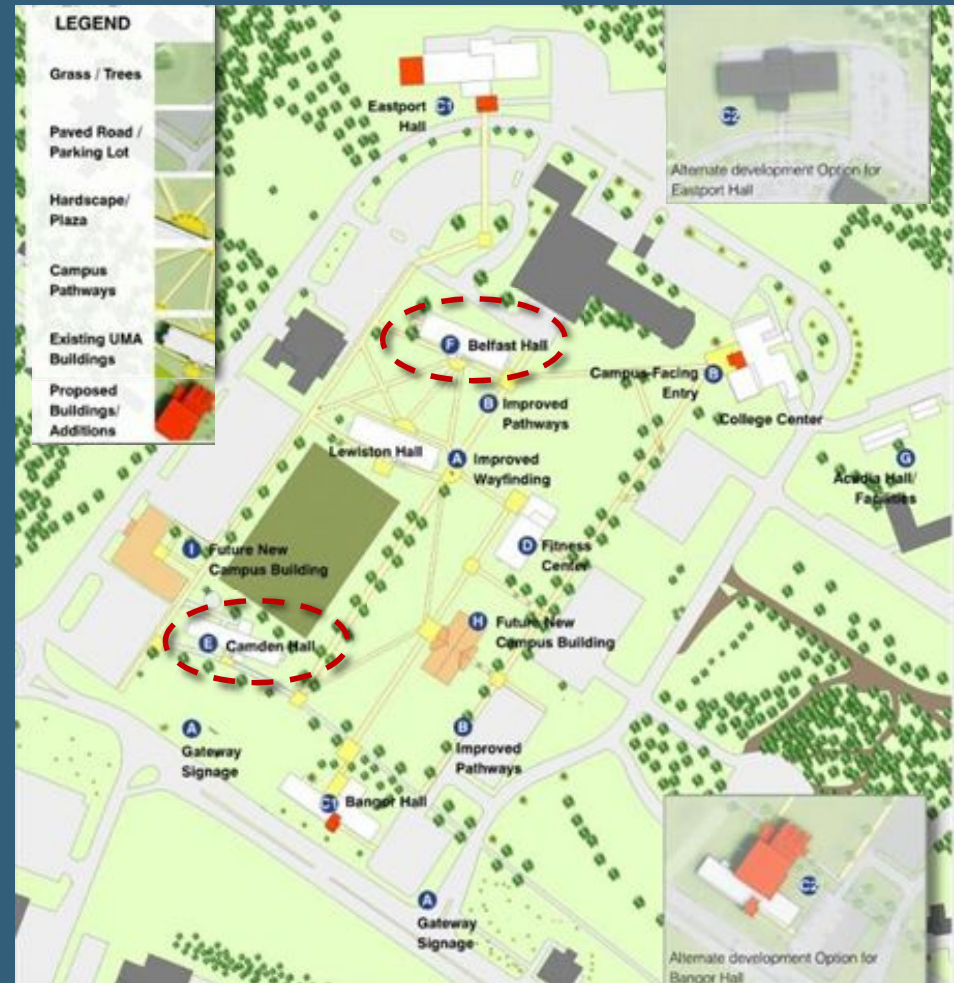




**BANGOR:** SHORT-TERM DEVELOPMENT VIEW OF IMPROVED PATHWAYS

## LONG-TERM: GROWTH DEPENDENT

- Renovations of existing campus buildings
- New building construction initiatives based upon growth and/or programmatic changes

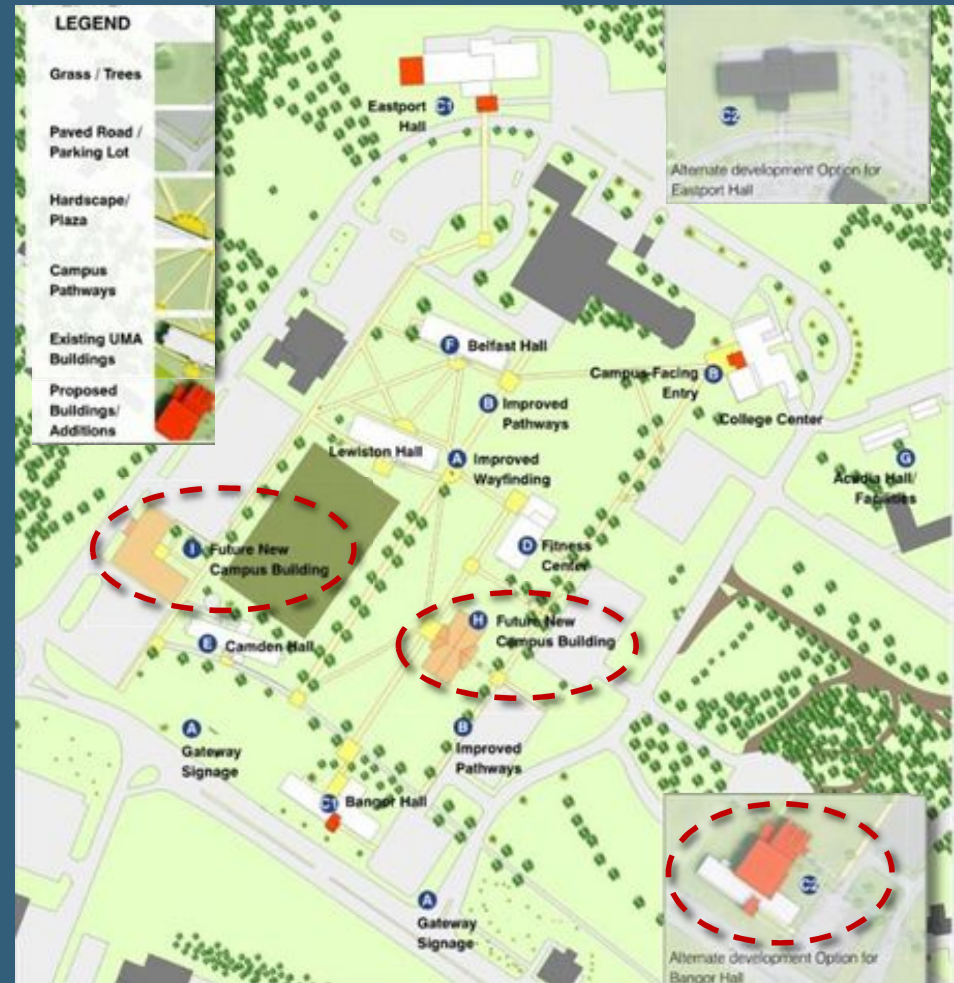


## BANGOR CAMPUS GOALS



## LONG-TERM: GROWTH DEPENDENT

- Renovations of existing campus buildings
- New building construction initiatives based upon growth and/or programmatic changes



## BANGOR CAMPUS GOALS





Existing Conditions View

**BANGOR CAMPUS: OVERVIEW OF COMPLETED MASTER PLAN**





Figure 0.18 Augusta Campus Existing Conditions, Looking Northwest



Figure 0.22 Bangor Campus Existing Conditions, Looking East



Figure 0.19 Planned Augusta Campus, Looking Northwest



Figure 0.23 Planned Bangor Campus, Looking East

## OVERALL CAMPUS VIEWS: BEFORE AND AFTER

**THANK YOU**







# Blue Sky Outcomes

Reaffirming Public Higher Education  
at Maine's Flagship University

May 2018 • Reflections and Progress

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## UMaine for a Renewed Maine



## The Blue Sky Project

# Blue Sky Vision

**The University of Maine aspires to be the most distinctively student centered and community engaged of the American Research Universities.**



Dr. Susan J. Hunter, President



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

The Blue Sky Plan provided strategic guidance for the University of Maine from 2012 through 2017. This report summarizes the university's accomplishments under the plan as well as some lessons learned on the journey. By looking back at what we set out to do in light of what we actually accomplished, we can learn from our experiences. UMaine is a stronger institution today than it was five years ago, and the context within which the university operates has changed significantly in that time. Our hope is that this report will provide a foundation upon which the UMaine community can build a new vision and develop a new set of priorities to guide the institution through the next chapter of its story.

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# Blue Sky Strategic Plan Assessment Final Report

## Development of the Blue Sky Strategic Plan

The Blue Sky Plan is the 2012–17 strategic plan for the University of Maine. It was developed over the course of the 2011–12 academic year through an intentionally inclusive and consensus-driven process. The work was overseen by a Planning Leadership Team composed of 27 members, including faculty, staff, students, administrators and community members who met weekly to develop the plan. In order to garner the perspectives of the wider community, this group held 30 “listening sessions” regarding a variety of focused topic areas, and a website was created to effectively share information. UMaine community members were encouraged to share their ideas for UMaine’s future. More than 250 ideas were submitted and the Blue Sky Project’s website was visited over 6,600 times. Other constituents participated, including UMaine’s Board of Visitors, the University of Maine Foundation Board, the University of Maine Alumni Association Board, the Pulp & Paper Foundation Board, the 4-H Foundation Board, the Maine Municipal Association and University of Maine System Presidents. Released in 2012, the Blue Sky Plan was organized around the following vision: *The University of Maine aspires to be the most distinctively student centered and community engaged of the American Research Universities.*

Continued commitment to the strategic plan persisted through a presidential transition. The Blue Sky Plan was developed during the administration of former University of Maine President Paul W. Ferguson, with then Provost Susan J. Hunter. In 2014, Hunter became the university’s 20th president and continued the implementation of UMaine’s five-year strategic plan. *“I will focus my efforts in three major areas. The first is continued implementation of the initiatives defined by the Blue Sky Strategic Plan. It became the new operating model of the institution. Strategic plans often end up on the bookshelf, but not this one.”* (Hunter, July 2014)



## Assessment of the Strategic Plan

As the Blue Sky Plan reached the five-year mark, President Hunter charged Provost Jeffrey Hecker with developing an approach to lead the university in a process of self-reflection and assessment of progress made during the implementation of the Blue Sky Plan. This reflection provides the opportunity to celebrate successes, undergo a realistic appraisal of where we have fallen short and identify lessons learned in the process.

Provost Hecker formed and chaired the Blue Sky Strategic Plan Assessment Steering Committee, with Michael Scott, president of the Faculty Senate, serving as co-chair. Five additional individuals were named to the committee, and each was charged with chairing a Pathway Team composed of faculty, staff, administrators and a UMaine Board of Visitors member (see pages 6–7).

The Steering Committee developed guiding principles for this work, including a commitment to an inclusive process of engaging the UMaine community, and efficiency by mining existing data. The assessment focused on the Blue Sky initiatives, since the context for specific strategies changed over the life of the plan.

In the spring 2017 semester, the Pathway Teams identified sources of relevant data and provided initial thoughts regarding Pathway progress on actions taken and relevant outcomes. Two graduate students, Paul Fink and Kassie Stevens, were hired to work over summer 2017 to aggregate data from existing sources, such as annual reports, and to identify gaps in the data.

In the fall 2017 semester, the Provost hosted six open forums. The goal of the forums was to share information gathered to date and collect additional input. At the initial forum, Provost Hecker and President Hunter provided an overview of the progress made and laid out the plan for the five Pathway Forums. In each Pathway Forum, the Pathway chair presented a summary of actions taken in support of the initiatives outlined in the Pathway, as well as relevant outcomes and impacts, and feedback was collected. A website was created with information related to each Pathway, a video of each forum for those unable to attend, and a portal for the UMaine community to contribute ideas and questions. The Pathway Teams reflected on the discussions at the forums and the feedback gathered through the website, and collected additional information as needed.

The Steering Committee synthesized the information gathered and developed a draft report. Working with the Pathway Teams, the final report was completed in March 2018.

## Blue Sky Plan Assessment Steering Committee

**Chair** Jeffrey Hecker, Executive Vice President for Academic Affairs and Provost

**Co-Chair** Michael Scott, Faculty Senate President

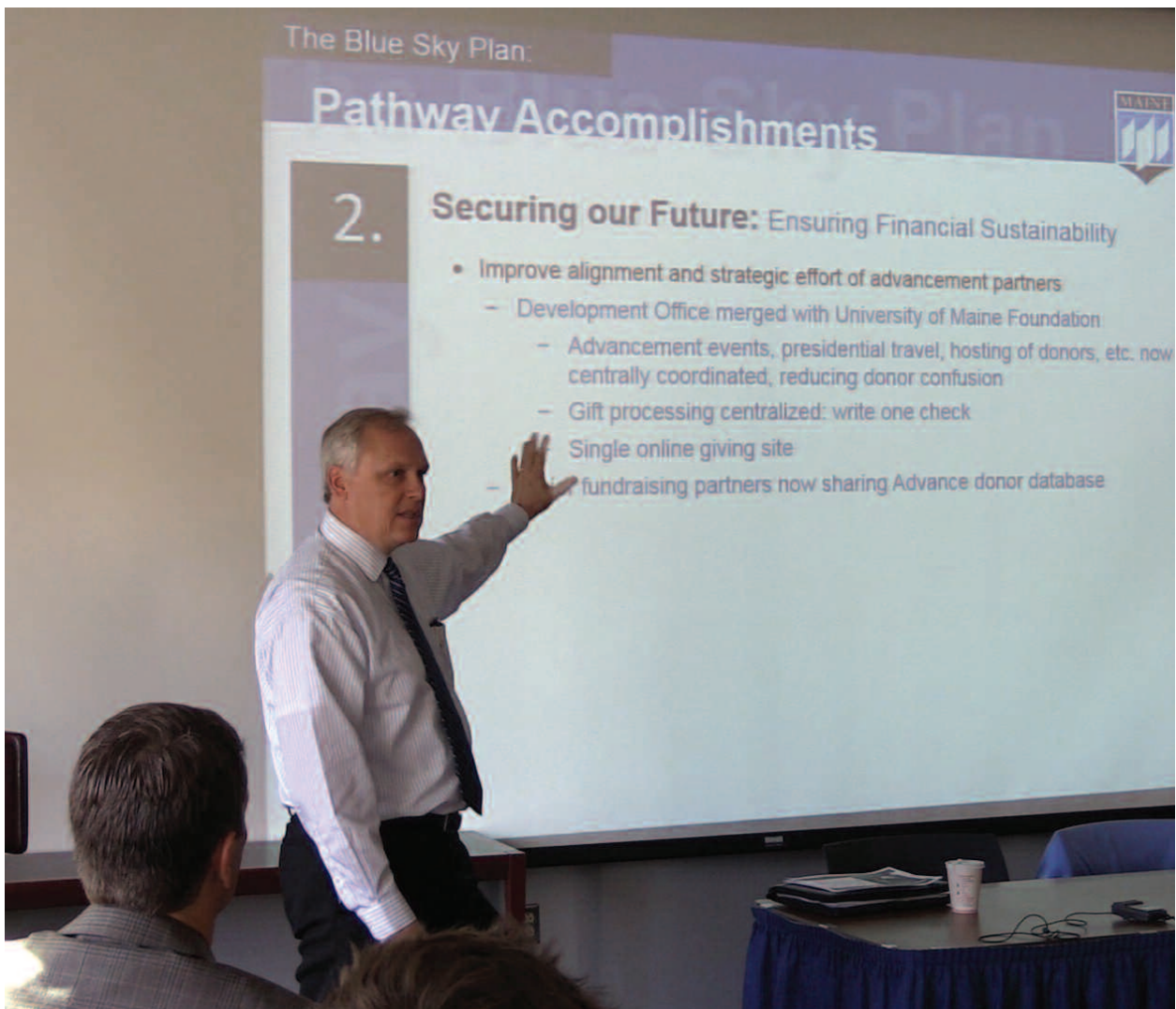
**Members** Jake Ward, Vice President for Innovation and Economic Development

Jeffery Mills, University of Maine Foundation President

Monique LaRocque, Associate Provost for Lifelong Learning

Kenda Scheele, Assistant Vice President for Student Life and Senior Associate Dean of Students

Stewart Harvey, Executive Director of Facilities and Capital Management Services





## Pathway Committees

### Pathway 1

**Jake Ward**, Chair, Vice President for Innovation and Economic Development  
**Ivan Manev**, Dean, Maine Business School  
**Todd Gabe**, Professor of Resource Economics and Policy  
**Jason Bolton**, Associate Extension Professor  
**Jason Charland**, Director of Grant Development  
**Heather Leslie**, Director of the Darling Marine Center  
**Philip Hamilton**, Board of Visitors Member

### Pathway 2

**Jeffery Mills**, Chair, University of Maine Foundation President  
**Claire Strickland**, Chief Business Officer  
**Dana Humphrey**, Dean, College of Engineering  
**Grant Miles**, Associate Professor of Management  
**Jonathan Rubin**, Director of the Margaret Chase Smith Policy Center  
**Sarah Doheny**, Director of Student Financial Aid  
**Nathan Briggs**, Board of Visitors Member

### Pathway 3

**Monique LaRocque**, Chair, Associate Provost for Lifelong Learning  
**Timothy Reagan**, Dean, College of Education and Human Development  
**Larry Lewellen**, Vice President for Human Resources  
**Cindy Isenhour**, Assistant Professor of Anthropology  
**Darren Ranco**, Chair, Native American Programs  
**Lynn Coutts**, Senior Associate Director of Athletics  
**Kathy Olmstead**, Board of Visitors Member

### Pathway 4

**Kenda Scheele**, Chair, Assistant Vice President for Student Life and Senior Associate Dean of Students  
**Emily Haddad**, Dean, College of Liberal Arts and Sciences  
**Mary Mahoney O'Neil**, Associate Dean, College of Education and Human Development  
**Farahad Dastoor**, Lecturer in Biological Sciences  
**Elizabeth Allan**, Professor of Higher Education  
**Silverio Barrera Jr.**, Associate Director for Events, Office of Undergraduate Admissions  
**Owen McCarthy**, Board of Visitors Member

### Pathway 5

**Stewart Harvey**, Chair, Executive Director of Facilities and Capital Management Services  
**Fred Servello**, Dean, College of Natural Sciences, Forestry, and Agriculture  
**Jeffrey St. John**, Senior Associate Provost for Academic Affairs  
**Heather Hamlin**, Assistant Professor of Aquaculture  
**Patti Miles**, Associate Professor of Operations Management  
**Tim O'Neil**, Board of Visitors Member



## PATHWAY

## 1.

## Serving Our State: Catalyzing Maine's Revitalization

**T**he University of Maine will align its innovation, entrepreneurship and community outreach with the priority economic and cultural needs of Maine. Our interconnected research, teaching and service mission will be a primary engine that drives Maine's future. Our research enterprise will increase UMaine's stature and footprint, and expand "use-inspired research." We will focus on targeted growth in arenas promising returns on investment that will ultimately benefit all of our constituencies.

Following this Pathway will ensure that UMaine is a more responsive, adaptive and powerful partner, and will enable critical growth in areas such as business development, sustainable energy development and entrepreneurship, addressing Maine's STEM (science, technology, engineering, mathematics) needs, regional research and economic development, P-20 education, and health care and social services. We will promote the state's cultural heritage while affirming the centrality of a liberal arts education at the state's flagship university in providing critical thinking and communication skills to all professions, while enhancing quality of life for Maine's citizens.

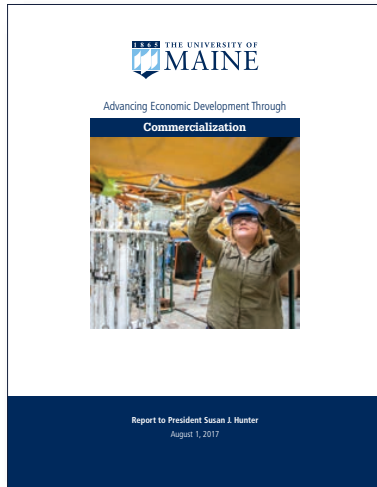
### **Enhance our impact on the economic and social fabric of Maine, including strengthening existing campus/private sector partnerships, while increasing our total partnerships 50% by 2017**

- Since the inception of the Blue Sky Plan, the University of Maine has seen significant growth in the number of UMaine/private sector partnerships as defined by formal contracted activity. In addition, many more informal partnerships exist.

#### **UMaine Commercial Partners**

	<b>FY12</b>	<b>FY17</b>	<b>% Increase</b>
Number of Partners	180	389	116%
Number of Projects	305	557	83%
Dollar Value of Projects	\$3,561,826	\$4,973,394	40%

## Blue Sky Outcomes



- To build Maine's entrepreneurial ecosystem, Maine Accelerates Growth was created in 2015 by a statewide team that included the University of Maine, Maine Technology Institute and Maine Center for Entrepreneurial Development. UMaine's role includes managing the Innovate for Maine Fellows program, hosting the Top Gun Entrepreneurial Accelerator in the Bangor region.
- UMaine is actively engaged with partners statewide, including the University of Maine System campuses, to support company growth. Partners include:
  - Alliance for Maine's Marine Economy
  - Bangor Region Chamber of Commerce
  - Bangor Target Area Development Corporation
  - Board of Agriculture
  - Eastern Maine Development Corporation
  - Economic Development Council of Maine
  - Educate Maine/Project Login
  - Maine Aquaculture Innovation Center
  - Maine Center for Entrepreneurs
  - Maine Chamber of Commerce
  - Maine Development Foundation
  - Maine Forest Economy Growth Initiative
  - Maine Municipal Association
  - Maine Potato Board
  - Maine Technology Institute
  - Maine Wild Blueberry Commission
  - Portland Region Chamber of Commerce

### **Continue to match and more closely align UMaine research strengths with the seven Maine Technology Sectors for Economic Development**

- In 2013–14, UMaine went through a deliberative process to identify its Signature Areas of Excellence and Emerging Areas of Excellence. Several of the Signature and Emerging Areas align with and support the seven Maine Economic Improvement Fund sectors: Forestry and Agriculture; Aquaculture and Marine; Biotechnology; Composites; Environmental; Information Technology; and Precision Manufacturing.
- The state appropriation for the Maine Economic Improvement Fund (MEIF) FY16–17 increased by \$2.65 million per year (\$1.8 million per year to UMaine), and supported/expanded research and development in Maine's seven designated technology sectors.
- In 2016–17 Provost Hecker formed and led the Commercialization Working Group that developed a plan for accelerating the movement of intellectual

property from laboratory to market, and for working more closely with Maine industries to meet their research and development needs. Key actions to emanate from the Commercialization Working Group included a statewide Commercialization Summit (Jan. 9, 2018), the creation of the Innovation and Economic Development Council, and activation of the University of Maine Research Foundation.

### UMS Grants and Contracts in MEIF Sectors

Grants and Contracts Awarded in MEIF Sectors	FY13	FY14	FY15	FY16	FY17
Aquaculture and Marine	7,045,322	9,153,389	15,187,566	12,631,690	21,229,069
Biotechnology	1,985,295	6,353,450	1,524,204	2,399,487	3,821,390
Composites	9,230,715	5,135,033	5,247,712	6,974,264	13,504,642
Cross Sector	2,990,129	4,681,209	1,018,132	507,842	4,274,394
Environmental Technologies	5,781,658	7,959,264	4,349,651	5,045,536	5,543,121
Forestry and Agriculture	8,642,424	7,654,060	14,194,009	10,317,799	4,660,014
Information Technologies	7,422,675	2,520,521	4,473,781	11,497,199	5,292,726
Precision Manufacturing	1,130,746	1,414,700	780,694	1,009,921	1,009,518
<b>Total</b>	<b>\$44,228,964</b>	<b>\$44,871,626</b>	<b>\$46,775,749</b>	<b>\$50,383,738</b>	<b>\$59,334,874</b>

**34 percent growth FY13–FY17**

- In 2014, the University of Maine System Board of Trustees established the Research Reinvestment Fund to strengthen research and development activities that are tied to Maine businesses and industries that are critical to the future of Maine. UMaine administers and manages these funds, which support research and development activities systemwide.



## Blue Sky Outcomes

### **Align technology and educational programs with Maine's economic development needs**

- **Innovate for Maine Fellows Program** annually supports paid internships. It has placed 162 student fellows representing 29 colleges and universities with 168 Maine businesses focused on solving the company's innovation challenge.
- **STEM Ambassadors Program** is a Cooperative Extension 4-H youth development program, created to bring trained students to youth programs statewide to engage them in exciting experiential learning STEM activities. In 2014, a grant from the Board of Trustees expanded the program to include students from the other UMS universities. Over 100 UMS students work with more than 1,000 Maine youth each year, enhancing their after-school experiences and exciting them about STEM disciplines.
- **Flagship Internship Program** was developed after a working group reviewed best practices and model internship programs. In spring 2017, an inaugural cohort of 19 students participated in the Flagship Internship with Maine companies, including Poland Spring, Bangor Savings Bank, TRC, Lane Construction Co. and WEX.
- **The Maine Center for Research in STEM Education (RiSE Center)** received a \$2 million National Science Foundation grant in 2016 to promote STEM education in rural schools.



### **Reaffirm and integrate the core goals of a liberal arts education in community/culture with innovation and economic development**

- In spring 2012, a \$300,000 grant from the Presidential Request for Visions of University Excellence (PRE-VUE) Program provided stimulus funding to develop a center dedicated to supporting and advancing humanities education, scholarship and public engagement. A fundraising campaign culminated with a naming gift to create the Clement and Linda McGillicuddy Humanities Center. The center operates with a core endowment \$1.2 million, \$200,000 in affiliated endowed funds, and over \$200,000 in expendable operating funds — all raised from private donors.

Pathway 1 Findings



## Blue Sky Outcomes

### **Prepare UMaine graduates for Maine's future workplace needs**

- Maine's future workforce needs graduates with training in the STEM disciplines, and science, technology, engineering and mathematics education is one of UMaine's Signature Areas of Excellence. Enrollment in STEM undergraduate degree programs has grown 17% over the past five years. In fall 2017, nearly half (47%) of all undergraduate students were enrolled in STEM majors.
- Enrollment in disciplines key to Maine's economic well-being grew significantly over the course of the Blue Sky strategic plan years: Forestry, 28%; Business, 25%; Marine Sciences, 21%; Nursing, 8%; Engineering, 6%.
- The Innovation Engineering minor, and undergraduate and graduate certificates, include tools and methods for creating, communicating, and commercializing meaningfully unique ideas and complements any major or field of study, including the sciences, arts, humanities, business, engineering and education. In the past five years, 34 students earned the innovation engineering minor or certificate and 724 students took at least one innovation engineering course.
- Internships and fellowships highlights include:
  - The creation of an internship office in the Maine Business School, featuring collaborations with nearly 90 employers.
  - Placement of College of Education and Human Development student-teachers in more than 500 classrooms throughout Maine every semester.
  - Development of the SEA (Science for Economic Impact & Application) Fellows Program by UMaine Darling Marine Center director Heather Leslie and University of Maine at Machias professor Brian Beal to catalyze university-industry partnerships related to the state's marine economy and ecosystems on which it depends.
- Career services highlights include:
  - Career-related presentations delivered to 3,899 students in 2015–16 and 5,927 students in 2016–17 through one-on-one appointments, walk-ins and presentations in academic classes, honor societies and student organizations.
  - Organization and hosting of the largest Career Fair in Maine in 2015–16, with 146 organizations attending. That same year, the state's largest Engineering Job Fair featured 96 organizations. In 2016–17, the combined participation broke the previous year's record with 281 employers. In addition to jobs for graduates, 62% of the companies offered internships for current students.
  - Expansion of the Maine Mentor Program to include 30 new mentors, with 106 high-quality matches.



**Increase commercialization and the number of small businesses developed as a result of technology spinoffs**

Proactive support and visibility for commercialization has increased during the Blue Sky term.

**UMaine Commercialization Metrics**

<b>FY Commercialization Metrics</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>
License revenue	\$121,469	\$55,344	\$60,295	\$90,594	\$186,148
New inventions disclosures	26	11	19	15	26
U.S. patents issued	16	10	6	4	6
U.S. provisional patents applications filed	9	13	9	5	5
Nonprovisional U.S. or PCT patent applications filed	14	11	12	20	7
Number of new licenses signed	4	8	9	4	3

- The journey from an investigator’s disclosure of a potential invention through the patenting process to commercial application is a long one. The four-year pattern of near exponential growth in licensing revenue is continuing in fiscal year 2018. At the mid-point of the year licensing revenue surpassed the \$500,000 mark.
- The Office of Innovation and Economic Development supports business incubation facilities, including the UpStart Center for Entrepreneurship, Foster Center for Student Innovation, Darling Marine Center and the Center for Cooperative Aquaculture Research. In FY17, Ellsworth, Maine created the Union River Center for Innovation, where UMaine is providing the business support to tenants and affiliates with funding through the Department of Commerce Economic Development Administration. Also in FY17, UMaine provided coaching and counseling to 69 community entrepreneurs, and supported seven tenants and one affiliate company at the UpStart Center.



## Blue Sky Outcomes

- In FY17, the Foster Center provided counseling to 78 students and business space for five companies/innovation projects. Successes included Boreal Games, which received a Libra Future Fund and Maine Technology Institute Tech Start grant. In addition, two tenants were finalists in the UMaine Business Challenge, including Boreal Games, which won the second-place prize.
- Former Innovation Center tenants and users had several successes in 2017:
  - Cobbler Technologies, Revolution Research and Tip Whip all received Seed Grants from the Maine Technology Institute. Sea & Reef Aquaculture received an MTI Business Accelerator Grant, and Revolution Research received a \$100,000 EPA grant.
  - Tip Whip participated in “Greenlight Maine,” and SCORE named the company an American Small Business Champion.
  - Innovation engineering graduate and tenant in Stillwater Posters, Nate Wildes, opened Flight Deck Brewery in Brunswick, which was recently named the Best Tap Room in Maine by *Down East* magazine.
  - Flowfold announced a partnership with L.L.Bean to sell an exclusive line of products.
  - *VegNews* magazine listed Redd Bar among its 50 favorite brands of vegan energy bars. It also raised more than half of a \$1.5 million equity investment round.

### UMaine-Affiliated Business Incubator Activity.

Incubator Location	Companies per year				
	2013	2014	2015	2016	2017
Tenant Companies at UpStart Center for Entrepreneurship in Orono (formerly the Target Technology Center)	8	7	11	11	7
Affiliate Companies at UpStart Center for Entrepreneurship in Orono (formerly the Target Technology Center)	3	0	3	0	1
Tenant Companies at UMaine Center for Cooperative Aquaculture Research, Franklin	4	3	3	4	5
Tenant Companies at UMaine Darling Marine Center, Walpole	2	1	2	3	5
Tenant Companies at Union River Center for Innovation in Ellsworth (est. FY17)	-	-	-	-	1
Affiliate Companies at Union River Center for Innovation in Ellsworth (est. FY17)	-	-	-	-	1
Student Companies at Foster Center for Student Innovation	4	4	6	3	5
<b>Total companies per year</b>	<b>21</b>	<b>15</b>	<b>25</b>	<b>21</b>	<b>25</b>

**Enhance UMaine organizational support for promoting regional economic impact**

- The Office of Innovation and Economic Development formed in 2012 under the leadership of Vice President for Innovation and Economic Development Jake Ward. The unit consists of the Department of Industrial Cooperation, Foster Center for Student Innovation, Economic Development Programs, Technology Commercialization, and business incubation through the Center for Cooperative Aquaculture Research and the UpStart Center for Entrepreneurship.

**Use our resources to highlight Maine's rich cultural heritage, and relate the arts and humanities better to economic development**

- The University of Maine Humanities Initiative, funded with a PRE-VUE grant in 2012, developed a strong record of community partnerships and fundraising, culminating in the naming of the privately endowed Clement and Linda McGillicuddy Humanities Center in 2017.



## Blue Sky Outcomes



- Fogler Library contributes to cultural and economic development in Maine in a variety of ways:
  - In 2013, library staff members offered a workshop on grant seeking for nonprofits, a session on business research for Penquis Incubator Without Walls, and consulted with the Penobscot Nation and the Hirundo Preserve on grant opportunities.
  - In 2014, the Maine Shared Collection Cooperative worked with 14 public libraries in Maine to analyze their existing print collections. This work allows libraries to discard materials that are duplicated statewide with the knowledge that other libraries have made the commitment to retain those materials.
  - In 2015, reference staff collaborated with an interdisciplinary research team to submit a National Science Foundation grant to study the reuse economy in Maine and its impact on the environment.
  - In 2016, library staff offered the Incubator Without Walls instruction and consultation for small business owners, assisted with 54 patent and trademark consultations with members of the public, and provided consultation service through New Ventures Maine.
  - In 2017, Fogler Library's Canadian Studies Office served the state by building a strong collection of Canadian materials focusing on economic, historical, cultural, environmental, and business links between Maine and both the Maritime Provinces and Quebec. These links help Maine businesses and government agencies increase trade and cooperation with the state's neighboring provinces.
- The University of Maine Press published books that celebrate Maine cultural heritage and natural resources, including *The Historical Atlas of Maine*, *Hearts in Suspension*, *Plants of Baxter State Park* and *Sedges of Maine*.
- During the course of the Blue Sky plan, the Collins Center for the Arts hired a new executive director and associate director, and strategic planning for the center moved forward. The Collins Center is home to the Bangor Symphony Orchestra and has hosted:
  - Bangor Region Chamber of Commerce's Business After Hours
  - Maine Music Educators Association's Maine All State Festival
  - Maine International Conference on the Arts
- In a typical year, more than 14,000 people of all ages visit the University of Maine Museum of Art. UMMA expanded its location in downtown Bangor and now includes 3,800 works. It partners with Maine museums, and art programs and camps to provide support to arts and humanities development statewide. UMMA Director George Kinghorn has served as a panelist for the Maine Arts Commission's International Conference on the Arts, and has presented professional development sessions for the Chamber of Commerce Building Bridges Program and the Bangor Region Leadership Institute.



**Continue to increase support in signature areas, including engineering, environmental and sustainability studies, renewable energy, alternative fuel research, STEM education and literacy**

- In 2013–14, Provost Hecker led the UMaine community through a multistage process for defining the university’s Signature Areas of Excellence. In the process, criteria were established, and a two-stage proposal-review was used to develop consensus around seven signature areas. These areas of excellence have guided marketing, recruitment and strategic resource allocation, including investment in key faculty positions:
  - Forestry and the Environment
  - Marine Sciences
  - College of Engineering
  - Advanced Materials for Infrastructure and Energy
  - Climate Change
  - STEM Education
  - Honors College

**Identify, promote, and invest in key emerging areas, such as biomedical sciences, new media, and the arts and humanities**

- Emerging Areas were identified along with UMaine’s Signature Areas using the same criteria and processes:
  - Graduate School of Biomedical Science and Engineering
  - Northeastern Americas: Humanities Research and Education
  - Data Science and Engineering
  - Sustainability Solutions and Technologies
  - Aging Research
  - Finance Education



PATHWAY

2.

## Securing Our Future: Ensuring Financial Sustainability

**W**e will take bold and innovative steps to strengthen our financial position efficiently by increasing operating revenues as an offset to operating expenditures. We will revise our organizational structure to support our academic and research agendas effectively and efficiently. This will require us to redesign and define the optimum business model of higher education for a 21st century public research university that strategically grows new operating revenues beyond operating expenditures to ensure fiscal sustainability. We will use data-driven decision making and bold leadership to reshape the size and quality of Maine's flagship campus enrollment. We will strive to increase the university base budget to fund new campus initiatives, including strategic faculty hires, with clarity and confidence. We will sculpt the optimal balance of in-state, out-of-state and international students at the graduate and undergraduate levels to foster and sustain the most healthy and vibrant university for Maine. We will encourage colleges and other academic units to cooperatively pursue entrepreneurial avenues toward improving financial sustainability. We will enhance our research capacity and output as measured in the core areas of research expenditures, private foundation funding, intellectual property creation and royalty income, and industry-funded research. We will realign our Advancement partners to conduct friend-raising and fundraising in a more strategic and effective manner. This will achieve new revenues that ensure UMaine's fiscal stability. We will continue to increase transparency and accountability through established benchmarks and metrics. Following this Pathway will enable UMaine to fund the excellence consistent with our vision for engagement and consistent with the strategic directions of the University of Maine System. This will require a commitment to entrepreneurial approaches in institutional budgeting and decision making, and will build the necessary foundation for future investments in key academic areas, including the hiring of new faculty necessary for maintaining excellent teaching, research and outreach activities at UMaine.



**As a significant measure to strengthen net revenue, we will establish a new UMaine administrative unit under a new Vice President centered on enrollment management, responsible for the development and implementation of a comprehensive “Maine-sizing the Flagship” Enrollment Management Plan to realistically increase the student body up to 15,000 students by 2017**

- The Office of Enrollment Management was created and placed under the direction of the Vice President for Enrollment Management. Key accomplishments in the enrollment management operation include:
  - A complete overhaul of the system for financial aid allocation
  - Development of Flagship Match and Maine Match programs
  - Complete revamping of a multimedia marketing campaign
  - Development of several college-specific enrollment management collaborations to grow applications and increase yield
  - Increased academic partnerships with Maine community colleges to promote college access and affordability
  - Creation of 38 new E&G supported graduate assistantships to support graduate student enrollment
  - Thirteen online graduate degrees and 15 online graduate certificates were brought together under the newly branded UMaineOnline portfolio
  - Creation of fully online MBA, MSW, M.Ed. in instructional technology and M.A. in spatial informatics programs
  - Creation of several bachelor’s to master’s degree pathways to motivate and support UMaine undergraduate students to continue into graduate programs.
  
- Innovations in Enrollment Management have yielded positive results. Highlights include:
  - Between 2012 and 2017, 116% increase in first-year enrollment from New England states other than Maine, and a 119% increase in first-year students not from New England
  - In fall 2016, 44% of the first-year entering class and 49% of fall 2017 first-year students were from out-of-state.
  - Consecutive years of record first-year enrollment in fall 2016 and fall 2017.

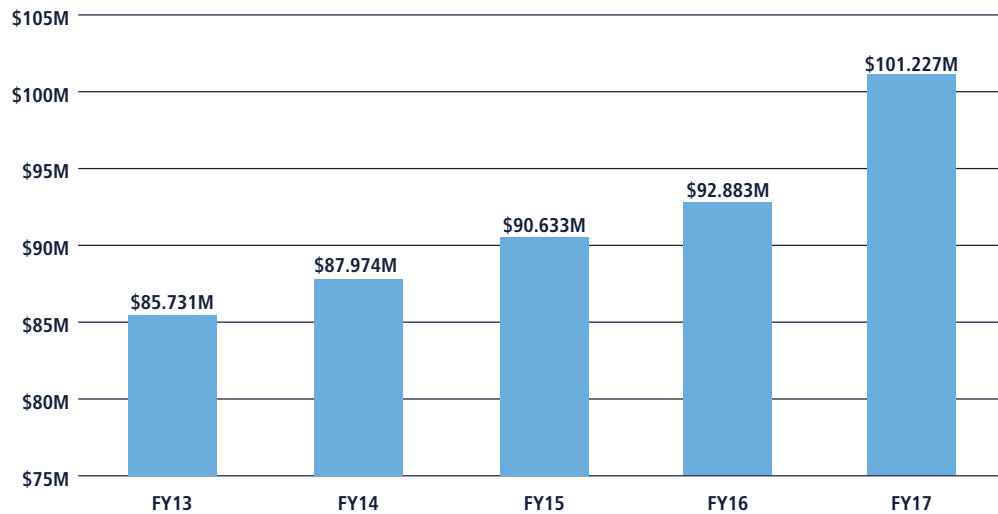


## Blue Sky Outcomes



- The Division of Lifelong Learning launched a new effort to offer Professional Development Programs at the Hutchinson Center in Belfast, and in Orono through Conferences and Institutes. The 10 new programs included:
  - Instructional Technology
  - Restorative Practices Workshops for Educators K–12
  - Ethical Dimensions of Self-Care in Social Work and Human Services
  - Business Writing and Grammar
  - Integrative Health Care Workshop
  - Mindful Leadership Certificate
  - Fundraising Leadership for Nonprofit CEOs
  - Tools for Success: Social Media Marketing Workshop
  - Grant Writing
  - MidCoast Leadership Academy

**Net Tuition and Fee Revenue (after scholarships and awards)**

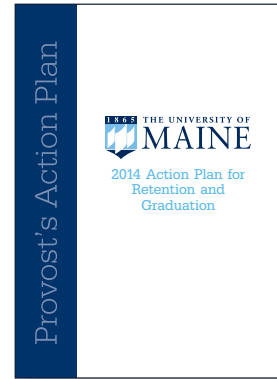


Note: In-state tuition rate did not increase over this five-year period.

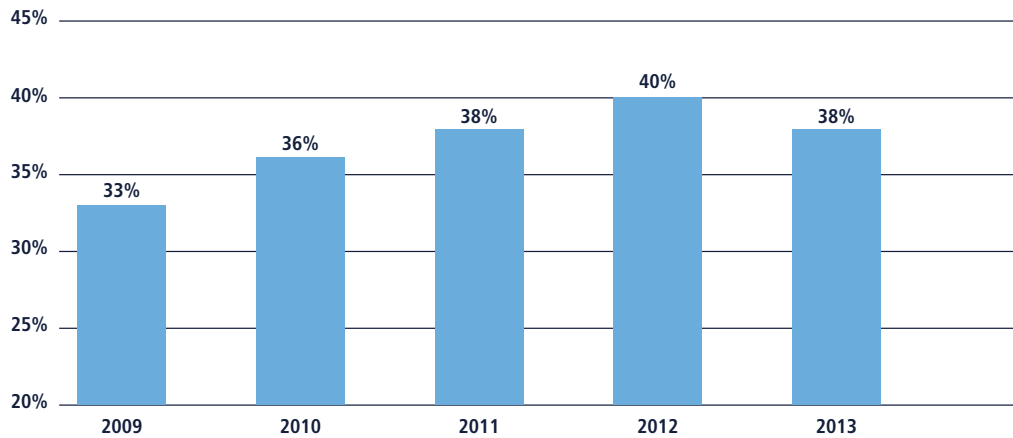


**Improve annual student retention rates by 5%, and four- and six-year graduation rates by 10% by FY17**

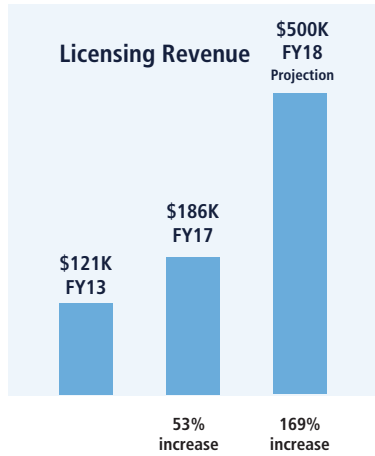
- In the 2013–14 academic year, a team of faculty, staff and administrators led by Provost Hecker developed the Provost’s Action Plan for Retention and Graduation. The plan outlined a series of actions steps for the next two years.
- The Think 30 initiative launched in summer 2015. It features a campuswide awareness campaign about the importance of obtaining 30 credit hours every calendar year, advisor training, improved year-round scheduling and financial aid incentives. The Think 30 campaign has resulted in a 10% increase in the number of students earning 30 or more credit hours during their first year enrolled at UMaine.
- A fully online Winter Session was created to provide students with the opportunity to earn additional credit hours between semesters. Launched in 2016, Winter Session has proved to be highly popular with 656, 905 and 1140 students earning three or more credits in its first three years, respectively.



**The four-year graduation rate for undergraduate students has improved over the past five years**



## Blue Sky Outcomes



**Work to reduce administrative overhead costs per student full-time equivalent (FTE) by increasing enrollment, becoming more efficient in delivering educational programs at lower costs and reducing administrative costs**

- Several operations, including procurement, human resources, information systems and capital project management have been centralized by the University of Maine System, resulting in significant cost savings.

**Increase total income from UMaine research and development initiatives**

- The total value of UMaine commercial partner projects increased 40% from FY12 to FY17, \$3,561,826 and \$4,973,394, respectively. The total number of commercial partners more than doubled over this time.

**Increase sales and service revenues from the current level of 5.6% of total revenues to 10% of total operating revenues**

	FY13	FY14	FY15	FY16	FY17
Sales and Services	\$17,549,785	\$17,822,025	\$15,720,058	\$16,049,423	\$16,266,646
Total Operating Revenue	\$198,709,326	\$203,816,497	\$201,791,720	\$201,209,459	\$215,781,838

**Create a strong culture of philanthropy and instill our students with the expectation that they can give back to UMaine – their time, their money and their networking capacity – after graduation**

- UMaine students participate in Maine Day of Giving events held in conjunction with Maine Day.
- UMaine student leaders, including Senior Skulls and All Maine Women, have been involved in many Advancement events involving UMaine donors, including President’s Club Brunch, University of Maine Foundation Annual Meeting and Stillwater Society Dinner.
- Advancement staff meet with class leadership through council meetings to help select a class giving opportunity, with an emphasis on endowed scholarships.

- Advancement staff created a comprehensive handbook for class councils, which is updated regularly, to facilitate class councils in their fundraising efforts.
- UMaine students who have benefitted from philanthropy in Advancement are highlighted in print and digital communications.

**Grow the percent of private and capital gifts as a percent of total revenues from the current level of 10% to 15% by 2017**

	FY13	FY14	FY15	FY16	FY17
<b>Private Gifts</b>	\$13,695,911	\$16,744,680	\$16,056,456	\$14,989,517	\$12,088,864

(These numbers do not include pledged gifts.)



## Blue Sky Outcomes

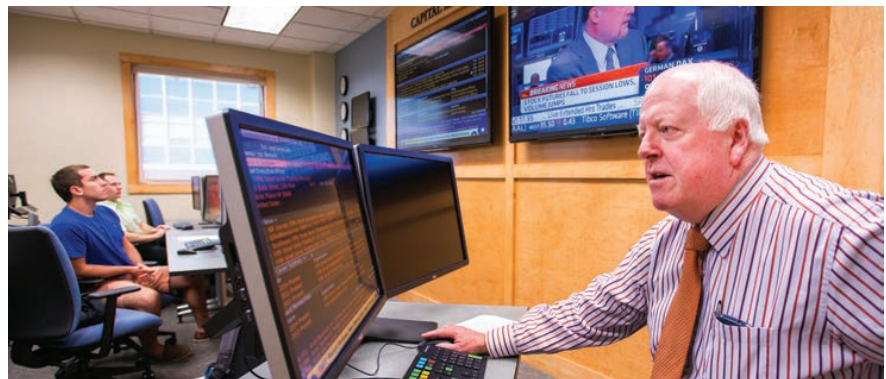


### **Improve alignment and strategic effort of the Advancement Partners, including the Alumni Association, Office of Development, the University of Maine Foundation, the Pulp & Paper Foundation, and the Maine 4-H Foundation**

- The Development Office merged with University of Maine Foundation in FY17 to create an integrated and efficient fundraising operation.
- Fundraising partners — the University of Maine Foundation, Pulp & Paper Foundation, 4-H Foundation — share a database and participate in shared prospect management.
- Advancement events, presidential travel and donor hosting are centrally coordinated by Advancement Events and Presidential Travels committees to optimize resources and reduce confusion.

### **Prepare for a new and bold comprehensive campaign in conjunction with the University of Maine's 150th anniversary in 2015**

- External donor feasibility study conducted by consulting firm confirmed a goal of at least \$200 million.
- Comprehensive campaign was approved by UMS Board of Trustees and launched in October 2017.
- As of February 2018, \$134 million has been raised.
- Many improvements to annual giving were made, including the branding of the Alford Fund and use of iModules.
- Significant gifts made to the campaign include the Gerard S. Cassidy '80 Capital Markets Training Laboratory, the Stephen E. King Chair in Literature and a \$10 million anonymous gift to support the planned Engineering Education and Design Center.



PATHWAY

3.

## Embracing a Culture of Excellence: Promoting Spirit, Collaboration and Community

**W**e will refresh and reintroduce the unique UMaine brand to our many constituencies on campus and externally across the state, region, nation and the world. Our communication and outreach efforts will be thoughtful, strategic and consistent, and we will recruit key constituencies to help us advance our mission and achieve our vision. We will plan with intent to grow a culture of continuous engagement among our campus citizens and community partners. Our teaching and research enterprise will increase its stature and footprint in expanding the boundaries of knowledge as measured by interdisciplinary collaborations, publications, public dialogue and disciplinary impact. We will continue to strategically and creatively hire world-class faculty who further these boundaries and provide the best possible education to future leaders. We will celebrate and materially reward criteria-based achievement among our faculty and staff by increasing resources for professional development, and creating a structured means for providing training and incentive opportunities. Our plan aims to reward excellence and energize our faculty and staff, who are the key to shaping UMaine's future and establishing a high-quality workplace. Following this Pathway will result in a more engaged and interactive UMaine campus with our constituencies by creating an effective communication infrastructure to build community and streamline best practices. Also, appropriately rewarding hardworking faculty and staff and promoting morale will help us to recruit and retain the best and brightest employees to advance UMaine.

**Strive for 100% brand awareness of UMaine quality and impact in the state of Maine among all constituencies by clarifying our reputation for excellence in research, teaching and public service**

- Marketing and Communications created Brand Standards and a Branding Tool Kit to facilitate branding.
- Two Communicators Summits were conducted.
- UMaine's web presence — [umaine.edu](http://umaine.edu) — was redesigned for optimal institutional positioning and marketing.
- The Communicators Network was established.
- *UMaine Today* magazine was redesigned in print and online.
- *UMaine Today* videos air on Maine Public television.
- UMaine's yearlong 150th anniversary observance included branding, pole banners, posters, website and Open University Day as part of Homecoming 2015.

Blue Sky Outcomes



- Display ads in Portland Jetport and Bangor International Airport focus on UMaine's statewide partnership in economic development and student recruitment.
- Weekly UMaine News alerts are sent to the UMaine community, including Board of Visitor members and legislative representatives

**Harness the goodwill, time and talents of our alumni through consistent, strategic communication, outreach and engagement efforts, particularly in the areas of increasing student internship and career networking opportunities.**

- The UMaine Alumni Association (UMAA) expanded its publication and distribution of the *MAINE Alumni Magazine* — online and in print, introduced new digital communications newsletters, and expanded presence on social media.
- In 2016, the Alumni Association revamped its off-campus programming, doubling the number of event attendees over the previous year. It also revamped four major activities: Reunion, Homecoming Weekend, Alumni Achievements Awards program, and the Distinguished Maine Professor Award and annual dinner, resulting in significant increases in attendance over previous years.
- UMAA established a presence on LinkedIn, connecting with more than 15,000 alumni.
- In September 2016, UMAA created two awards: Faculty Excellence Award and Dirigo Award, the latter recognizing an undergraduate who exemplifies the academic and civic ideals of UMaine.

**Strengthen the organization for, and reaffirm the campus engagement of, Athletics, promoting our role as the state's only Division I school.**

**The Department of Athletics:**

- Collaborated with the Division of Marketing and Communications to produce an annual athletics/alumni publication.
- Partnered with a national leader in ticketing and marketing (MG) to better connect the Black Bear brand to UMaine fans.
- Streamlined its fundraising structure under one umbrella — Alford Fund.
- Restructured its volunteer organization, which is now called The Alford Fund Ambassadors.

## Blue Sky Outcomes

- Created signature events to better involve donors and volunteers, which enhances the experiences of student-athletes, donors, volunteers and fans. The inaugural event was the Alford Golf Classic held at Belgrade Lakes Golf Club in August 2017.
- Improved UMaine digital presence online with ESPN3 and America East TV.
- Improved the Black Bear brand in southern Maine with events in Portland, such as men's and women's ice hockey, football, baseball and softball games.
- Created a student-athlete leadership group called Elite 13. This group will partner with the Student-Athlete Advisory Committee, an NCAA Division I national program. The mission will be to enhance the total student-athlete experiences by advancing opportunity, protecting student-athlete welfare, teaching leadership and championing a positive student-athlete image.

### **Encourage and value diversity through our uniquely diverse community members by tangible programming of UMaine multicultural groups, including international programs**

- The number of students of color enrolled at the University of Maine grew from 1,091 in AY12–13 to 1,422 in AY16–17 — a 30.3% growth.





- The Wabanaki Center and Native American Studies merged into Native American Programs, resulting in broader partnerships between UMaine and tribal communities.
- LGBTQ Services was recognized with the Community Partner Award by Equality Maine for its partnership in co-sponsoring and hosting the spring 2016 Equality Maine Youth Conference.
- Students were celebrated through campuswide events and initiatives, including Coming Out Week, Gay Thanksgiving, Transgender Day of Celebration, Day of Remembrance, Pride Week and Lavender Graduation.
- Diversity Week, organized each year by Multicultural Student Life in the Division of Student Life, focused on educating the campus on diversity and providing a means of celebration in various venues.
- The Office of Multicultural Student Life offers bi-weekly lunchtime programs about current and relevant topics affecting international students.
- The Student Heritage Alliance Council (SHAC) hosted the annual Hunger Banquet.
- Monthly diversity and inclusion training is offered to campus through the Office of Multicultural Student Life. Additionally, Safe Zone training (LGBTQ) are also regularly offered across campus.
- The Office of International Programs conducted outreach to international students, including weekly International Coffee Hours.
- The Franco-American Centre and Franco-American Studies programs merged to form Franco American Programs.
- The ADVANCE Rising Tide Center was created by a \$3.2-million, five-year National Science Foundation grant. The center's primary purpose was recruiting, retaining and supporting the professional development of women faculty in STEM and social and behavioral sciences. In 2016, the center transitioned to become the UMaine Rising Tide Center, with ongoing institutional funding and an expanded mission to include advancement of all women faculty regardless of discipline.
- In 2016, the Provost's Council on Advancing Women Faculty was created as a permanent committee of the administration to advise the provost on policy and practice matters that support recruitment, retention and advancement of women faculty.
- In summers 2016 and 2017, UMaine hosted young African leaders through the national Mandela Washington Fellowship program. The program empowers young leaders from Sub-Saharan Africa through academic coursework, leadership training and networking opportunities.



## Blue Sky Outcomes



**Create and sustain a continuous culture of community engagement, consistent with, and as stimulated by, the Blue Sky Project, led by members of the UMaine community through innovative approaches and venues that bring together people from diverse corners of campus to share current projects, best practices and accomplishments**

- The Bodwell Center for Service and Volunteerism substantially grew its student community engagement. Volunteer hours for the Welcome Weekend Day of Service, for example, more than doubled from 2012–17. The center worked with 49 student organizations. 5,285 students served 103 local community partners throughout the academic year and logged over 21,000 volunteer hours.
- Black Bear Mentors logged over 2,226 support hours through individual meetings and activity participation with their mentees, and 12 tutors supported 1,728 hours of educational support in 2017.
- UMaine's Carnegie Community Engagement classification was renewed in 2015.
- Engaged Black Bear initiative launched in 2016. This innovative electronic badging program provides incentive and recognition for students to be engaged in community activities.
- The coordinator of community engagement position was created to manage activities across campus, including the Engaged Black Bear, Flagship Internship program and service-learning courses.
- The number of companies with which UMaine has research and development partnerships increased from 180 in 2012 to 389 in 2017.
- School of Earth and Climate Sciences, and Climate Change Institute faculty collaborated with the Maine Center for Disease Control to develop regional-scale climate models for exploring local climate change and airborne disease vectors in Maine.
- The Department of Electrical and Computer Engineering helped organize the 11th Maine Learning Technology Initiative conference, attended by 1,200 teachers and students.
- UMaine's NSF-EPSCoR Track III Storm Water Project sponsored 60 high school students and 15 teachers from Bangor, Portland, Auburn and tribal communities for a week of learning and training in STEM fields.
- The College of Education and Human Development partnered with 19 public school districts to improve student learning through the Penobscot River Partnership.

- The Maine Business School and Net Impact, a student group, partnered with several businesses and nonprofits on sustainability-related projects and initiatives.
- The Honors College spearheaded the Sustainable Food Systems Research Collaborative, bringing together faculty, students and community partners to identify and address problems in the food system.
- UMaine Cooperative Extension hosted the first Maine Food Summit, bringing together food producers and processors, nongovernmental organizations, business owners and other community members interested in Maine's dynamic food system. These partners are influencing the Maine Food Strategy, a collaborative planning effort to make Maine more food independent and reduce food insecurity.
- Cooperative Extension's 4-H Engaging Youth, Serving Community program continued to create youth-adult partnerships through community projects. In 2017, five teams of 224 young people and 97 adults devoted a combined 8,669 hours toward solving community problems.
- In UMaine's Senior Companion Program, 121 volunteers helped 469 isolated or homebound seniors remain independent and in their homes. A recent study by the School of Economics showed that the program produces a minimum cost savings of \$4.6 million annually.
- Fogler Library Special Collections staff worked with representatives of the Passamaquoddy and Penobscot tribes to develop collaborative plans for preserving tribal histories.
- Partnering with staff in the College of Education and Human Development, Fogler Library received a \$43,000 IMLS grant for a Literacy to Go project to help local libraries and schools encourage early childhood literacy.
- College of Liberal Arts and Sciences and the Office of Sustainability received a Maine Campus Compact Davis Educational Foundation grant to embed service-learning pedagogy into courses on environmental stewardship.
- College of Liberal Arts and Sciences supported the Maine Science Festival where over 4,500 people visited the Virtual Environment and Multimodal Interaction (VEMI) Lab.
- Emera Astronomy Center presented planetarium shows to over 5,500 visitors, including 3,250 children.
- The Expanding Your Horizons program brought middle school girls to campus to learn about careers in STEM disciplines.



## Blue Sky Outcomes



- In partnership with collaborators university-wide and across the state, the McGillicuddy Humanities Center hosted an annual Humanities Summit, a public humanities celebration in downtown Bangor, a humanities-themed issue of *Maine Policy Review*, and two conferences on indigenous languages for academics and practitioners of language revitalization efforts.



**Working through the new leadership of the Department of Human Resources, and with our faculty and staff leadership, effectively and efficiently address (needs)**

- HealthyU partnered with Cutler Health Center and the New Balance Student Recreation Center to provide various health-improvement workshops and programs, including the Employee WorkFit Program, the Wellness Walk Program, Fitness Hooping Events and the Employee Express Fitness Class.
- The Faculty Fellows Program was created in 2014. Each year, a cohort of mid-career faculty members participate in a series of professional development activities focused on public communication and leadership development. To date, four cohorts comprising 56 faculty have participated.
- New Faculty Orientation was revamped in 2015.
- Provost Hecker created the Chair and Director Training Committee to plan and deliver an annual series of professional development activities for this group of academic leaders.
- The Rising Tide Center offers a robust schedule of professional development opportunities and events designed to support faculty, particularly women and underrepresented faculty.
- The Center for Innovation in Teaching and Learning, created in 2016 to provide workshops, training and individualized consultation, supports faculty teaching, and integrating teaching and research.
- In 2015, the Office of the Vice President of Research and Dean of the Graduate School organized a university-wide Maine Celebrating Scholarship Event to recognize the research and creative achievement of more than 80 faculty members.

PATHWAY



## Transforming Lives: Strengthening the UMaine Undergraduate and Graduate Student Experience

**W**e will promote student achievement and success through graduation, career preparation, job placement and cross-cultural enrichment. We will continue to ensure that our students are taught by appropriately qualified faculty and have a productive learning experience in the classroom. We will expand these and similar avenues of opportunity for our undergraduates, with a special emphasis on cutting-edge undergraduate research collaborations with our finest research faculty and graduate students. We will strengthen our signature Honors College, and we will improve the quality and range of student life and learning opportunities, including new resident life strategies. We will enhance the number and quality of Graduate Research Assistantships/Fellowships available for graduate students to enable us to focus on world-class research experiences. The University of Maine will advance an integrative model of excellence for graduate education in the 21st century, and will foster dynamic professional training and development activities through university-wide interdisciplinary research networks. Following this Pathway will attract top students to UMaine and provide them with stellar support and preparation for careers or further academic achievement. It will reinforce UMaine's academic excellence, expand opportunities for professional success and improve quality of life during their time at UMaine.

### **Prioritize and support programs to increase student success and job placement**

- In 2012, a Presidential Request for Visions of University Excellence Grant (PRE-VUE) grant was awarded to the Center for Undergraduate Research (CUGR). With this support, the center has grown so that, in 2016–17, CUGR and Graduate Student Government, in collaboration with the Office of the Vice President for Research, presented the first combined Student Symposium at the Cross Insurance Center in Bangor. The symposium featured the work of more than 500 graduate and undergraduate students.
- Opened in spring 2017 in the Memorial Union, Hackerspace promotes creativity and cross-disciplinary innovation for individual students and classes. The Hackerspace initiative is a collaborative partnership between the divisions of Lifelong Learning, Academic Affairs, Student Life and other partners.
- Launched in September 2016, the Center for Innovation in Teaching and Learning supports faculty, instructors and graduate teaching assistants in course design, use of classroom technology and learning analytics, in addition to offering colloquia, workshops and presentations.

- Opened in 2015, the TeachLive Avatar Laboratory is a mixed-reality teaching environment that allows education majors and in-service teachers the opportunity to learn, create and test new and innovative teaching techniques without students being present.
- The Gerard S. Cassidy '80 Capital Markets Training Laboratory opened in 2014. It provides students and faculty with access to global up-to-the-second energy prices, stock and bond values, interest rates and supply chain analyses, supporting real-world teaching-learning opportunities, in addition to providing an ideal facility for portfolio management, and business modeling (commercializing) for new and emerging technologies.
- The Innovative Media Research and Commercialization (IMRC) Center opened in January 2014. The center is a state-of-the-art facility for prototyping products, audio and video production, interactive innovation and out-of-the-box creation. Outfitted with state-of-the-art equipment such as 3-D printers and scanners, computer-controlled machine tools and a plastic vacuum former, the center supports innovation, economic development and student success.



## Blue Sky Outcomes

- The Advanced Structures and Composites Center annually employs more than 100 students from all majors. The center provides students with interdisciplinary, experiential learning and the opportunity to become full research partners, inventors and authors.
- The first Flagship Internship Program cohort of 19 students in spring 2017 participated in a week-long, campus-based orientation before engaging in a summer of mentoring, networking and traveling the state.

### **Make international and/or cross-cultural opportunities central to the undergraduate experience**

- Recruitment of international students to UMaine is strong, with new international applicant numbers nearly doubled. The Office of International Programs provides extensive support, including advising, social integration, an orientation course, visa workshops and other programs. Annual events — Culturefest, International Dance Festival, Study Abroad Fair — encourage community engagement.
- The Intensive English Institute earned Commission on English Language accreditation.
- It is now easier for students to take courses abroad that seamlessly transfer to UMaine. Study Abroad destinations — more than 700 — have been organized into themes.





- The Multicultural Center was moved from Hannibal Hamlin Hall to the Memorial Union and renovated. The center, in the Office of Multicultural Student Life, is home to several student organizations and offers annual programs, including Latin American Heritage Month, Native American Heritage Month, Diversity Week, Black History Month and the Dr. Martin Luther King Jr. Breakfast. The center offers Safe Zone training — identifying people and offices supporting marginalized students — as well as tutoring and mentoring for multicultural and LGBTQ students.
- The Bias Response Team was formed in fall 2017. This group serves in an advisory capacity to the Vice President for Student Life to enhance support for students who are victims of bias or hate-related behavior, track/monitor these incidents and recommend appropriate response for the campus community.

#### **Establish outcomes-based, campuswide assessment of academic programs**

- The Office of Assessment was created in 2014 to work with academic units to develop methods to assess programs and student outcomes in a systematic, periodic, uniform and iterative way.

#### **Improve and adapt the General Education curriculum to be most responsive to the intellectual development of UMaine students and best prepare them for future careers in any field**

- In October 2015, Provost Hecker led a faculty forum focused on foundational educational outcomes in the 21st century. Growing out of this discussion and led by the Office of Assessment, UMaine joined the Multistate Collaborative sponsored by the Association of American Colleges and Universities, and the State Higher Education Executive Officers Association to develop scoring rubrics to evaluate undergraduate student learning outcomes.
- Assessment of the first General Education area — Human Values and Social Contexts: Western Cultural Tradition — is in spring 2018.
- All areas of the General Education curriculum will undergo evaluation over a four-year cycle.

#### **Increase the number of externally funded undergraduate students involved in research**

- The position of director of grant development was created to support faculty grant-seeking activities that could include funding to involve undergraduates in research.

## Blue Sky Outcomes

- The Center for Undergraduate Research (CUGR) grew 53% after its first year and continues to grow.
- Grants funded by NSF and USDA involve unique research opportunities for undergraduates.

### **Continue to develop the unique quality of the Honors College as an unparalleled “value added” UMaine undergraduate experience**

- The Honors College’s Idea Network of Biomedical Research program and the Sustainable Food Systems Research Collaborative connect Honors students to business, public service organizations and other social change agents.
- The Phage Genomics Project — an Honors College, Mount Desert Island Biological Laboratory, The Jackson Laboratory, Department of Molecular and Biomedical Sciences collaboration — serves as a model to bring public and private partners together to enhance the undergraduate research experience, and may expand metacognitive aspects of education with existing lab research.
- The Servant Heart Collaborative is a program created through private donation to explore issues of community development in Sierra Leone. Local workers identify issues that Honors College students can help resolve. Current projects include creating an online test platform for middle and high school students to complete Sierra Leone National Exams, and working in child refugee centers to develop trauma-sensitive education programs.



- The Honors College is a partner on a recently awarded USDA grant that explores beekeeping and maple syrup production challenges and opportunities, and marketing for small- and medium-size beekeeping and maple syrup producers in the state.
- The College of Natural Sciences, Forestry, and Agriculture-Honors Preceptor of Genomics position was created in 2016. Modeled on the successful College of Liberal Arts and Sciences-Honors Preceptor positions, this jointly appointed faculty line serves the Honors College and the Department of Molecular and Biomedical Sciences. This position grew the number of base-funded full-time faculty members with full- or half-time appointments in Honors to seven.

**Explore new opportunities to enhance the undergraduate and graduate residential life and community experience**

- UMaine hosted the first systemwide Residence Life Summit in 2016, which brought together professional residence life staff to discuss common issues, explore opportunities to collaborate, and options for improvement in the delivery of programs and services.
- In 2013, the Second Year Program was launched and Residence Life added the academic support coordinator role (graduate assistantship) to the First and Second Year Student Center to assist first- and second-year students academically.
- The First and Second Year Student Center, renamed the First Year and Transfer Student Center, was moved to the Memorial Union to accommodate its expanded scope.



## Blue Sky Outcomes

- Specialized training is now required of all Residence Life staff in the following areas: addressing mental health concerns, gatekeeper suicide prevention, self-care and boundaries, conflict resolution, Title IX, and “Behind Closed Doors” — role playing student issues/problems.
- The Office of Sexual Assault and Violence Prevention was created in 2013. The office takes in and manages complaints, offers educational, awareness and prevention programs, accommodates students (academic, residential, etc.), assists students needing to go to court, and provides advocates for students engaged in the student conduct process.
- In 2015, Residence Life refocused its departmental programmatic approach to specific, measurable learning outcomes with an accompanying assessment regiment. This was the first step toward development of a residential curriculum for 2016, with full implementation in 2017.
- In 2015, Green Living Learning Community (LLC) and Leave Your Print LLC launched.



- Student Life hired additional staff in 2015 and 2016 to serve the growing number of students in the LGBTQ and multicultural/international student communities.
- In 2014, the Student Wellness Resource Center launched its peer coaching program called Live Well. The program, which is free to students, includes consultation on life skills, personal habits and health.

**Enhance e-learning quality through curricular innovation, technological advancement and 24/7 support services**

- The Center for Innovation in Teaching and Learning opened in 2016 to support faculty members and graduate students who wish to learn about, experiment with, assess and adopt new approaches to teaching and learning.
- UMaine Online was created in 2016 and now offers courses year-round with summer and winter sessions.
- Division of Lifelong Learning introduced Winter Session in 2016. Part of the Think 30 initiative, Winter Session features a select group of high-demand undergraduate courses taught online.
- All of the graduate programs in the College of Education and Human Development are offered online, in the evenings, and on weekends to accommodate working professionals.
- Students can access nearly 100,000 online periodicals through Fogler Library, with more than 400 licensed indexes and databases.
- Cooperative Extension is realizing significant success in disseminating information as a result of prioritizing technology delivery in recent years. Extension's 60 websites received nearly 2.5 million page views in 2014. The online catalog now contains more than 70 publications, each with embedded educational videos.
- Hackerspace has developed workshops and training sessions to help students become familiar with technology in order to facilitate cross-disciplinary collaboration and innovation.
- The Center for Innovation in Teaching and Learning is working with the Writing Center to develop an online tutor resource. This resource will be managed through an iterative software so that student progress can be tracked and monitored.
- The Center for Innovation in Teaching and Learning is developing a dashboard for faculty that can extract academic progress data from Blackboard to be used to flag struggling students.



## Blue Sky Outcomes

### **Increase the number of graduate students funded by assistantships and fellowships**

- The number of university-supported graduate assistantships has increased by 38 positions, representing a 17% increase. Seven of these graduate fellowships were funded through reallocation of central funds; 22 were funded through the Research Reinvestment Fund; and nine were funded through the shared Teaching Assistant pool. Additional assistantships come from externally supported positions (grants and contracts), TA positions created due to increased undergraduate enrollment, and positions outside of academic units (e.g., Student Life, Auxiliary Services, Athletics, etc.).

### **Develop Graduate Certificate Programs that enhance the graduate experience and align with demands of the 21st century workplace**

- New graduate certificates include Instructional Design, English as a Second Language, Aerospace Engineering, Autism Spectrum Disorders, Interdisciplinary Climate Studies, and Teacher Consultant in Writing.



## PATHWAY

# 5.

## Restoring the Dream: Renewing Pride and Stewardship of Place

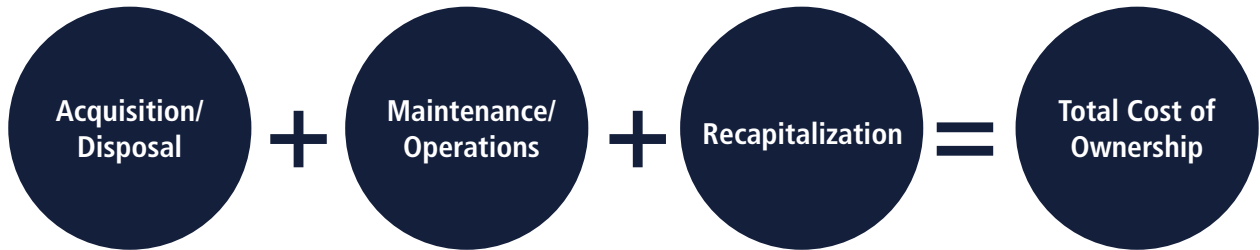
**W**e will restore the dream of the land-grant mission by revitalizing the brick-and-mortar and technology infrastructure critical to our flagship campus. We will ensure funding toward ongoing campus improvement and beautification as we renew pride and renew a culture of stewardship at UMaine. Consistent with the goals of our strategic planning, we will review, revise and expand the campus master plan to align the optimum use of historic buildings with the need for new construction in support of the academic, research and outreach mission, including close monitoring of ongoing capital construction projects to ensure on-time and on-budget progress. We will incorporate long-term planning for our off-campus locations. We will build state-of-the-art technology infrastructure for both on- and off-campus use, and we will work to ensure sound site and utility infrastructure. Following this Pathway will signal that we value our work and our institution with its 368 campus buildings and structures on 8,313 acres at close to \$1 billion in infrastructure and real estate. This will affirm our responsibility to maintaining and preserving our physical environment as a place of learning and discovery.

**Revitalize the brick-and-mortar infrastructures critical to fulfilling UMaine's flagship mission and key to our fiscal stewardship of our facilities to result in increased net capital asset value. Incorporate the Total Cost of Ownership (TCO) approach to our management of UMaine's asset portfolio**

- Total Cost of Ownership (TCO) is an optimal standard for measuring the sustainability of the sum of all investments in a given asset, while considering the capacity to afford that asset relative to its role in fulfilling the mission of the institution. TCO refers to the sum of the one-time costs of asset construction or acquisition and disposal, the annual costs of maintaining and operating, and the periodic recapitalization costs of the asset expressed in terms of dollars per gross square foot (GSF). The TCO model is a cradle-to-grave analysis of asset management that employs a cost framework to inform the University of Maine's strategic investment strategy. UMaine has committed to pursue and achieve sustainable TCO practices in four areas: asset acquisition, daily maintenance, periodic maintenance and utility costs.

## Blue Sky Outcomes

- Total Cost of Ownership has two benefits for the institution: it helps us ensure that we can afford any new structures we build or acquire, and it helps us better understand our funding sources for our facilities management.



### Total Cost of Ownership A Holistic View of Asset Management

#### Life Cycle Components

#### Source of Funds

- |  |  |
|--|--|
| 1. Acquisition Costs: Buy, Build, Lease _____  | Gifts, Endowment, Bonds                      |
| 2. Daily Maintenance Costs: Cleaning, Trash, Grounds _____   | Annual Operating and Maintenance Budget      |
| 3. Periodic Maintenance Costs: Corrective, Preventive, Predictive _____  |  |
| 4. Utility Costs: Electricity, Gas, Water, Sewer _____   | Annual Utility Budget                        |
| 5. Capital Renewal Costs: HVAC, Water, Electric, Gas, Sewer _____<br>Roof, Safety, Streets, Other One-Time Institutional Resources | Capital Reserves, Gifts, Funded Depreciation |



**Develop an Asset Investment strategy that addresses where, what and how we invest**

- In 2012, the University of Maine partnered with Sightlines LLC to perform an integrated facilities plan (IFP) for the Orono campus. The IFP created a comprehensive facilities condition assessment database, which establishes a Net Asset Value (NAV) metric for each building and serves as a capital asset planning tool for UMaine. It entails the assessment and identification of campus building needs, and the assignment of preliminary budgetary values for renewal costs. The completed IFP includes 80% of the total square footage of E&G and auxiliary facilities on campus. This data is updated annually.
- In early 2013, UMaine partnered with Sightlines LLC to perform a classroom assessment study for 110 classrooms on the Orono campus. The study complemented the campus IFP study and provided an additional layer of detail with respect to the technology and indoor environmental quality needs of campus classrooms.

**Ensure a comprehensive, aligned and programmatic framework for facilities and asset management**

- In 2014, the university implemented a comprehensive Space Planning and Management Policy that applies to all faculty, staff, students and commercial tenants. It has been established to ensure best practices and support our reduction in square footage and increase in space use rates and net asset value.
- To ensure best practices, two working groups have been established to plan and manage the assignment and renovation of space:
  - Space Management Committee: This committee includes representatives from Facilities Management, Academic Affairs, Research, Student Life, Auxiliary Services and other units. The committee meets four times a year to review information about space assignments and reassignments, planned renovations, space constraints and related aspects of space management.
  - Classroom Paint and Polish Committee: This committee meets monthly, November through March, to review and prioritize classroom renovation projects requested by academic deans. Varying funding sources are applied to this work each year. Renovations are typically undertaken jointly by Facilities Management and Information Technology. The Classroom Paint and Polish Committee facilitated approximately \$400,000 in improvements in over 60 classrooms on the Orono campus and at the Darling Marine Center in 2016 and 2017.



**Continue to build annual budgeted investments to fully fund appropriate levels of maintenance and renewal in campus upkeep and beautification**

- The university annually funds a depreciation budget and a maintenance budget for E&G and auxiliaries. Funding depreciation at 100% is a long-term goal of the University of Maine System and the University of Maine.

**Employ progressive capital construction delivery methods that result in reduced overhead, decreased time to delivery and increased asset value, completing capital projects on time and on budget**

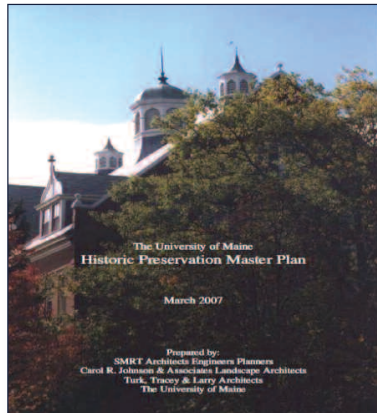
- The Pathway 5 Implementation Team reviewed several capital construction delivery methods. Capital construction at the University of Maine is accomplished through the collaboration of the university, the designer and the contractor. The most common avenue is the Design-Bid-Build approach, in which the owner develops a conceptual plan for a potential project based on user needs and program requirements. Standard procurement and contracting requirements (“front end”) documents are provided to the designer (architect and/or engineer) for the creation of specifications and drawings for the work. Bids are publicly solicited from general contractors based on these documents. A public bid opening is conducted and a construction contract agreement is awarded to the lowest responsive and responsible bidder.

**Develop a long-term plan to restore and use buildings effectively in the campus Historic District**

- The university created the University of Maine Historic Preservation Master Plan in 2007. In early 2014, UMaine engaged an architect to renew the campus Tier 1 Historic District Restoration Plan by creating design guidelines for each Tier 1 building. At the direction of the Pathway 5 Implementation Team, the guidelines incorporate prospective general uses for the spaces within the buildings, and inventory the optimal purpose and usage of each building.



## Blue Sky Outcomes



**Adopt and implement a five-year Information Technology Plan to ensure a robust and leading-edge technology infrastructure that supports the multifaceted mission of the university. Working in collaboration with the University of Maine System, review and implement, as appropriate, primary and strategic initiatives from the university-wide IT Strategic Plan**

- The campus IT Strategic Plan, completed in spring 2012, is in the implementation phase. Components of the plan that have been started include:
  - Establishing an IT governance structure for UMaine (completed)
  - Establishing a residence hall wireless service (completed)
  - Upgrading the campus wireless network (ongoing)
  - Installing Voice over IP (VoIP) throughout campus, and at the Hutchinson Center and Darling Marine Center (completed)
  - Developing a computer replacement program (ongoing)
  - Upgrading campus buildings to Cat6 wiring (ongoing)

**Continue to implement sustainability initiatives to meet the established goals of the University of Maine's American College & University Presidents' Climate Commitment**

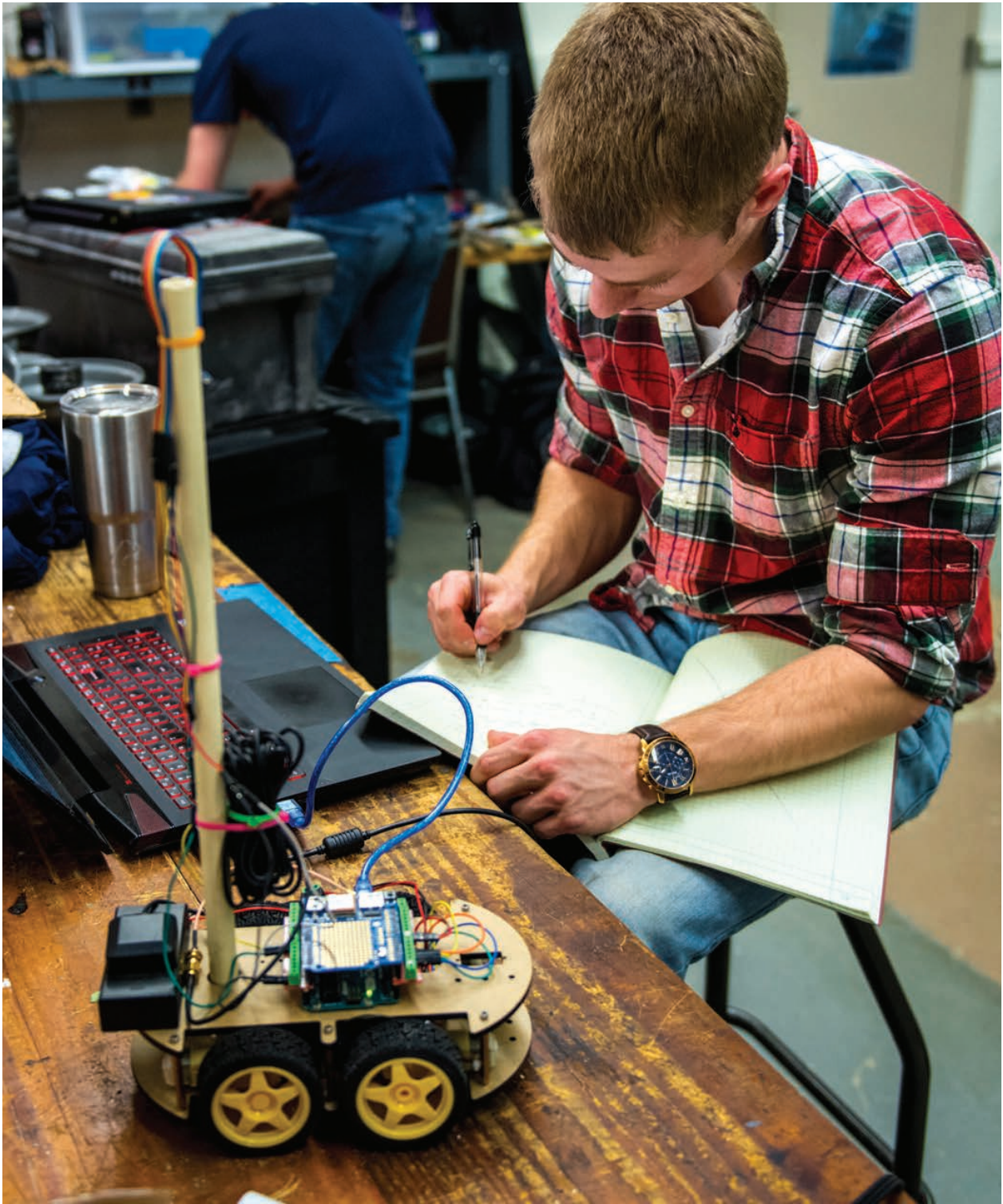
- In 2013, the university drafted an Energy and Utility Management Plan governing careful management of energy and utility services, including development, implementation and maintenance of a comprehensive program of prudent energy and utility management, encompassing energy, utilities, infrastructure and environmental sustainability.
- In 2016, the university implemented a request for proposal process for a broadly scoped energy solution for the Orono campus for the purpose of negotiating a long-term agreement that will result in the implementation of energy solutions that best meet the following four general goals:
  - Consistent with UMaine's 2007 Climate Leadership Commitment (formerly ACUPCC), reduce its net Greenhouse Gas Emissions to zero metric tons by 2040 through the use of renewable energy, purchased offsets, efficiency improvements and other emissions reduction strategies.
  - Minimize costs associated with energy, including the costs of maintenance and operation of UMaine's energy and utility infrastructure, which includes district steam heating and electrical distribution.
  - Provide an overall delivered energy cost structure that is predictable and stable into the future.
  - Proposed energy solutions that are robust, safe and reliable while also providing improvements to the UMaine steam and electrical distribution infrastructure.

Pathway 5 Findings

- The Office of Sustainability has led the campus in a number of sustainable initiatives that include a 10-year reduction of 19% in campus carbon emissions, diverting food waste from landfills, sourcing food locally, initiating a zero-waste protocol for major campus events and the founding of *Spire: The Maine Journal of Conservation and Sustainability*.



## Blue Sky Outcomes



# Reflections and Considerations

**A**ssessment of the Blue Sky Strategic Plan reveals much to celebrate. With the plan as a guide, the University of Maine community achieved several significant milestones and successfully navigated the uncharted waters that are higher education in the United States. The university established a solid foundation for continued success as it moves into its next chapter under new leadership. Among the accomplishments achieved under the Blue Sky plan, the following areas are particularly noteworthy:

**Identity** — There is a clearer understanding at the university, in the state and nationally, about who we are as an institution. Several initiatives contributed to this clarity. The identification of UMaine’s Signature and Emerging Areas of Excellence communicated clearly our areas of strength, where we will invest and how we can best serve the people of Maine. Through our public statements and, more importantly, our actions, we have embraced our role as the flagship campus of the University of Maine System. Ownership and celebration of this role have proven particularly important as the University of Maine System advances the One University initiative. Finally, consistency in the way the UMaine brand is presented and promoted has helped to communicate the breadth and depth of UMaine’s integration into the economic, cultural and civic fabric of the state.

**Enrollment and Student Success** — Ensuring that an adequate quantity of well-prepared students choose to study at the University of Maine may be the most important task we face as an institution. The past few years have seen unprecedented successes in this regard, with the last two first-year classes being the largest in UMaine’s history and with indicators of student preparedness on the rise. Over the course of the Blue Sky years, we have modernized our enrollment management operations, revamped our marketing strategies, and overhauled the way we use financial aid to recruit and retain students. As important, we have heightened our attention to student success, and are supporting students’ movement toward timely completion of their degrees in new and innovative ways.

## Blue Sky Outcomes

**Research and Economic Development** – The University of Maine is Maine’s only research university and, therefore, we have special responsibilities to the state. In the past five years, we have grown the number of partnerships we have with Maine companies, developed improved processes to support funded research, such as the return of a portion of indirect costs recovery to principal investigators, and embraced innovation and economic development as core functions of the university. Our improved financial standing has allowed for strategic faculty investments that are essential for continued research growth. We have reversed a more than decade-long trend of faculty shrinkage with three years of faculty growth. The quality of faculty that we have hired, along with the systems we put in place to support their success, bodes well for UMaine’s future.





The Blue Sky Strategic Plan was developed through an inclusive and consensus-driven process. The successes achieved under the plan can be attributed to the open way in which the plan was built, and, more importantly, the transparent manner in which the plan was implemented. The manner in which the Signature and Emerging Areas were developed, the frequent public presentations and discussions about the university's budget, and the development of a shared commitment to the success of the enrollment operations are three examples of sharing of responsibility for the institution's strategic directions. A hallmark of UMaine's operations under the Blue Sky Plan has been an integration of ownership for key initiatives across units. Whether it be enrollment, branding, advancement of Signature Areas or fundraising, responsibility for success did not lie with a single organizational unit. Rather, the campus embraced these and other initiatives, and, together, supported their success.

The process of assessing the Blue Sky Plan has yielded many important lessons that can guide future strategic planning. These lessons are discerned not only from the achievements under the plan, but also from the limitations discovered in its assessment. First among these lessons is the importance of clarity in defining strategic goals and benchmarks. To advance toward a goal, an institution must understand its starting point. Establishment of clearly defined baselines will facilitate understanding of the strengths and weaknesses of strategic initiatives. A second lesson is that attention to the implementation of a strategic plan is as important as attention to its creation. A strength of the Blue Sky Plan is that key elements of it continue to guide strategic decision making five years after its publication. A weakness is that regular assessment of progress toward strategic goals did not occur consistently across areas. A third lesson is that for a strategic plan to be useful, it must be a living document — subject to change as contexts evolve. Portions of the Blue Sky Plan became irrelevant; for example, because of unforeseen actions by the University of Maine System. Building in mechanisms for modification will strengthen future plans.

The University of Maine has evolved since the inception of the Blue Sky Strategic Plan. Much of that evolution was guided by the plan, but other aspects were shaped by events that could not have been foreseen in 2012. As examples, the University of Maine at Machias is now a regional campus of UMaine and the Maine Business School will integrate University of Southern Maine faculty members into its graduate faculty to offer its MBA in Portland and Orono, and online. Looking to the future, collaborations of this sort will undoubtedly feature prominently. There are great opportunities associated with this direction, and equally great challenges. Fortunately, the progress that we have made over the past five years provides a solid foundation for maximizing the opportunities and managing the risks that lie ahead.



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University of Maine  
5703 Alumni Hall  
Orono, ME 04469-5703

[umaine.edu](http://umaine.edu)



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## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Schematic Design Engineering Education and Design Center, UM
2. **INITIATED BY:** Norman L. Fournier, Chair
3. **BOARD INFORMATION:**                      **BOARD ACTION:**                      X
4. **OUTCOME:**    **BOARD POLICY:**  
Improve Student Success & Completion                      701 – Budgets-Operating & Capital
5. **BACKGROUND:**

The University of Maine System acting through the University of Maine requests authorization to expend up to a preliminary \$1 million to perform Schematic Design and related services for a new building expected to be known as the Engineering Education and Design Center (EEDC) on the Orono campus of the University of Maine.

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 of the Board of Trustees.

Early estimates indicate the project may cost approximately \$80 million. The cost is expected to be funded largely by University revenue bonds, supported with \$5 million in annual debt-service funding recently approved by the Legislature (P.L. 2017, c. 284). Other funding sources will include privately raised funds and other potential resources as may be identified by the University of Maine Chief Business Officer and University System Treasurer. This current request is for approval to expend only the amount necessary to begin formal design and bid preparation work.

The engineering program at the University of Maine has been growing for the last fifteen years, increasing 71 percent from 2001 to 2015. Employment of engineers in the State has also been growing and the need for engineers is greater than the available supply. In the last two years, the UMaine College of Engineering has needed to restrict enrollment in select programs due to the lack of sufficient facilities and faculty. The new facility will give UMaine the capacity to increase enrollment in engineering to 3,000 students. The current capacity is 2,000 students.

8/28/17 – Revised

The College of Engineering was identified as one of UMaine's Signature Areas of Excellence in 2014 and since then the new EEDC has increasingly been a focal point for planning in the College of Engineering and UMaine. This project was identified in the campus long-term capital plan. Funding had not been secured prior to FY2018 for this project so it was not included in the FY2018 capital plan.

The exact size, design, programming, timeline, operating costs and other details of the new facility remain to be determined. Also, the specific location of the new building on the Orono campus has not been finalized. However, the building will be the center of undergraduate engineering education, so it is essential that it be located in the heart of the engineering district. The particular location of the building will be among the details to be determined as part of the Schematic Design process.

The EEDC will be the heart of undergraduate engineering education at the University of Maine. The focal point is expected to be hands-on, team-based laboratories for senior capstone design projects bringing students from multiple engineering disciplines together to collaborate. Moreover, the intent is to have reconfigurable labs to allow use by several engineering departments and flexible classrooms to enable group learning. There will be informal collaboration spaces for students to work together on projects and assignments as well as specialized classrooms for engineering demonstrations and distance learning. The latter will allow select engineering courses originating at UMaine to be used across the System.

The new building will likely house the Department of Mechanical Engineering and the bioengineering portion of the Department of Chemical and Biological Engineering allowing them the space needed to expand their programs. These two programs currently occupy space in Boardman and Jenness Halls. The future of the space they vacate will be assessed for re-utilization.

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

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.

**5. TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the September 17-18, 2017, Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees authorizes the expenditure of up to \$1 million to begin the Schematic Design of the Engineering Education and Design Center at the University of Maine with funding to be identified by the University Treasurer.

***Meeting of the  
UMS Board of Trustees  
January 29, 2018***

**VCAA Report**

1. Course Cross-listing Update
2. 2018 Program Innovation Fund
3. UMS Online Program Manager Exploration
4. Early College Update
5. Campus Initiatives to Facilitate Nursing Education



***Bob Neely, VCAA  
261 Estabrooke Hall  
University of Maine System  
robert.neely@maine.edu***



# 1. Course Cross-listing Update

- **Commission on Institutions of Higher Education (NEASC)**
  - lead campus identified for collaborative programs involving cross-listing
  - identification of cross-listed courses in catalogs
  - identification of cross-listed courses on transcripts
  
- **June 11 – Joint Meeting of Student and Financial Administrative Program Integration Teams**
  - Three Foci: Next areas for cross-listing
    - ✓ Cross-listing of appropriate courses for UMFK – UMPI collaborations
    - ✓ Cross-listing of courses for the Maine Geospatial Institute program
    - ✓ Universities asked for courses that their faculty would like to see cross-listed;
  - Identification of remaining issues
  - Development of written guidelines to collaboration (including methodological details of cross-listing)
  - Timeline of deliverables for the three new foci and the guidelines





## 2. 2018 Program Innovation Fund

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### ***PROCESS***

October, 2017 – 43 pre-proposals; 21 invited for full proposal

March, 2018 – 19 full proposals received

April, 2018 – proposals reviewed by CAOC

May, 2018 – six awards made (four major awards, and two for for seed funding) totaling \$447,503



# Program Innovation Fund: Criteria & Scoring

	Poor (0 – 3 Points)	Good (4 – 7 Points)	Very Good (8 – 11 points)	Excellent (12 – 15 points)	Score
<b>Academic Merit (15 Points)</b>	Proposed program does not exemplify a coherent and suitable academic plan	Proposed program exemplifies a coherent and suitable academic plan	Proposed program exemplifies a strong and well thought out academic plan	Proposed program exemplifies an outstanding academic plan.	
<b>Career Readiness (10 Points)</b>	Poor (0 – 2 Points) Does not provide basic competencies nor provide preparation for successful transition into the workplace	Good (3 – 5 points) Provides basic competencies and provides some preparation for successful transition into the workplace	Very Good (6 – 7 points) Provides requisite competencies and provides solid preparation for successful transition into the workplace	Excellent (8 – 10 points) Provides essential competencies and provides outstanding preparation for successful transition into the workplace	
<b>Enrollment Growth (25 Points)</b>	Poor (0 – 6 Points) Shows little potential for enhancing enrollment growth through the plan outlined in the proposal	Good (7 – 13 points) Shows reasonable potential for enhancing enrollment growth through the sound plan outlined in the proposal	Very Good (14 – 18 points) Shows strong potential for enhancing enrollment growth through the solid plan outlined in the proposal	Excellent (19 – 25 points) Shows exceptional potential for enhancing enrollment growth through the superior plan outlined in the proposal	
<b>Collaboration (20 Points)</b>	Poor (0 – 4 Points) Will not enhance collaboration among UMS institutions and entities appropriate for the project proposed	Good (5 – 9 points) Could enhance collaboration among UMS institutions and entities appropriate for the project proposed	Very Good (10 – 14 points) Will enhance collaboration among UMS institutions and entities appropriate for the project proposed	Excellent (15 – 20 points) Will greatly enhance collaboration among UMS institutions and entities appropriate for the project proposed	
<b>Unique Disciplinary Combinations (20 Points)</b>	Poor (0 – 4 Points) Does not train students in a unique combination of didactic and/or experiential learning and will not provide a range of qualifications for students entering the workforce	Good (5 – 9 points) Will train students in a unique combination of didactic and/or experiential learning that will provide a proper range of qualifications for students entering the workforce	Very Good (10 – 14 points) Will train students in a unique combination of didactic and/or experiential learning that will provide a substantial range of qualifications for students entering the workforce	Excellent (15 – 20 points) Will train students in a unique combination of didactic and/or experiential learning that will provide a superior range of qualifications for students entering the workforce	
<b>Feasibility (10 Points)</b>	Poor (0 – 2 Points) Potential for producing a high quality program is very low, based on the outlined strategies and approaches; highly likely that the project will not meet its objectives	Good (3 – 5 points) Potential for producing a high quality program is reasonable, based on the outlined strategies and approaches; the project may meet its objectives	Very Good (6 – 7 points) Potential for producing a high quality program is strong, based on the outlined strategies and approaches; likely that the project will meet its objectives	Excellent (8 – 10 points) Potential for producing a high quality program is excellent, based on the outlined strategies and approaches; highly likely that the project will meet its objectives	
<b>TOTAL</b>					



# 2018 Program Innovation Fund Awards

Proposal	Funds Awarded	Proposal Applicants
Comprehensive Data Science	<b>\$155,314</b>	Joesph Szakas, Chris Bennett, James Suleiman, Bruce Segee, Laura Wilson
Helping the UMS Outcomes Statement Take Root	<b>\$31,193</b>	Ryan Dippre, Geraldine Cannon Becker, Joseph Becker, Christine Darrohn, Dylan Dryer, Pat Hager, Deborah Hodgkins, Tessa Mellas, Jessica Ouellette, Elizabeth Powers, Jessica Winck
Putting History to Work: Expanding Skill Development and Career Pathways for History and Art History Majors across the University of Maine System	<b>\$61,000</b>	Libby Bischof, Justin Wolff, Alexandra Platts
UMFK and UMPI Collaborative Baccalaureate Nursing Program	<b>\$170,000</b>	Eric C. Soucy, Barbara Blackstone, Steve Gammon, Jason Johnston
Sustainability Module – “S-Mod”	<b>\$15,000</b>	Douglas Reusch, John Messier, Drew Barton, Luke Kellett, Wendy Harper, Kirk Maasch, Karl Kreutz, Chris Gerbo, Peter Hardy, Rachel Hovel, Dawn Nye, Kristen Case, Matt McCourt, Paul Stancioff
Information Technology and Multimodality: Writing and Designing Across the Curriculum	<b>\$15,000</b>	John Muthyala, Jessica Ouellette, Eve Raimon, Grry Peters, Ben Bertram, Suzanne Nadeau, Sharon Ross, Judson Merrill, Margaret Reimer, Lisa Hibl, Francesca Vassallo, Kristen Case, Misty Krueger



## 2018 Program Innovation Fund Projects

1. *Putting History to Work: Expanding Skill Development and Career Pathways for History and Art History majors across the UMS*  
**Focus: Skills Development & Career Readiness**
2. *UMFK and UMPI Collaborative Baccalaureate Nursing Program*  
**Focus: Nursing Production – UMFK Launch with UMPI**
3. *Comprehensive Data Science*  
**Focus: Educational Pathway in the Digital Sciences**
4. *Helping UMS Outcomes Statement Take Place*  
**Focus: Piloting new learning outcomes & assessments in 1<sup>st</sup> Year writing**
5. *Sustainability Module "S-Mod" (seed funding)*  
**Focus: job ready skills from technical (coding, social media, GIS, data), to foundational (communication, teamwork, project management, etc.)**
6. *Information Technology and Multimodality: Writing and Designing Across the Curriculum (seed funding)*  
**Focus: Multimodal communication involving digital literacy for the humanities**



## 3. UMS Online Program Manager Exploration

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### Steps Thus Far:

1. RFP Process - **Academic Partnerships**
2. CAOC Meeting with Academic Partnerships
3. Presidents Council Discussion
4. Campus & Disciplinary Meetings
5. IT meeting with AP
6. Student Affairs/Enrollment Management Meetings



## AP Comprehensive Services



AP services are designed to scale with partners' online enrollment growth, ensuring the delivery of high quality and consistent service tailored to specific needs of students, faculty and administrators.

### Academic Support Services

- Program planning & design
- Course conversion
- Quality reviews
- Faculty workshops & support continuous optimization

### Enrollment Services

- Contact center technology
- An assigned in-house enrollment specialist team
- Application and registration support



### Integrated Marketing

- Market research & analysis
- Digital marketing
- Employer-based partnerships
- Off-line marketing & PR

### Retention Services

- In-house retention specialist team
- Student engagement campaigns
- Interventions for "at risk" students

### Partner Support

- Online process, system & technology enablement
- Enterprise-wide project management & implementation
- Continuous optimization & automation of student experience



## AP Services Support Your Existing Academic Structure



UNIVERSITY CONTROLS	AP RESPONSIBILITIES
<b>Admission standards and student acceptance to online programs</b>	Enablement of university's information systems and processes to facilitate the most optimal online student experience, including enrollment, communication and support
<b>Online curriculum and its quality</b>	Market research
<b>Online instruction and its quality</b>	Marketing and advertising
<b>Online evaluations and assessments</b>	Student recruitment to the specifications of the university's admission standards
<b>Hiring and management of online teaching assistants</b>	Guidance in course design and conversion from campus-based to an online format utilizing best practices in instructional design, i.e. program- and course-level planning against learning objectives, course sequencing, utilization of learning technologies, quality reviews, faculty workshops, etc.
<b>Grading, credentialing and academic advising</b>	Student retention through Student Success Coordinators, supplementing university's own student support services. Student Success Coordinators interact with online students from course-to-course through graduation but perform no academic duties. Students with academic concerns are referred to the university
<b>Financial aid advising and disbursement</b>	Student referral to the university's financial aid office



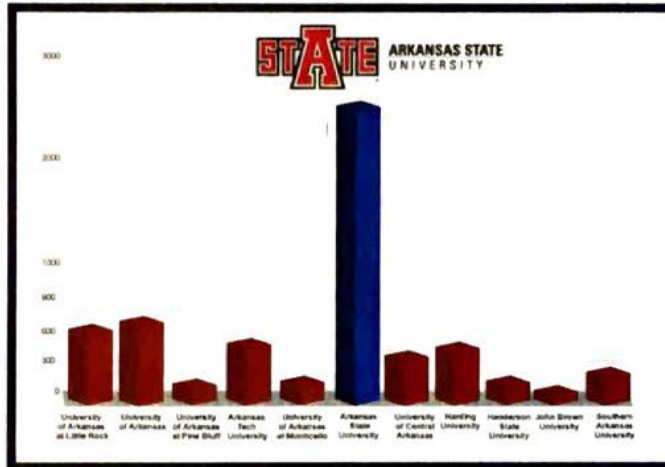
### 3. UMS Online Program Manager Exploration

- **Stage 1 Programs (primarily graduate programs)**
  - Nursing
  - Education
  - Business
- **Stage 2 Programs (graduate and undergraduate programs)**
  - Digital/Technology
  - Other Professional Masters, particularly health care
  - Undergraduate Programs





## Graduate Education Market Leaders



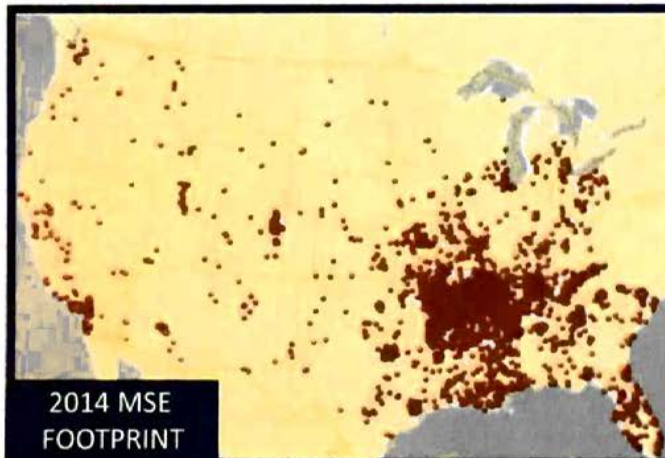
### Arkansas State University

**Launched:** 2008

**Growth:** 2016 (3,190) = 42% Growth

**Programs:** 39

**Persistence:** 97.7%



#### Bachelors

- Communications
- Criminology
- Political Science
- Sociology
- General Studies
- Interdisciplinary Studies
- RN to BSN
- Strategic Communications
- Applied Science

#### Post Grad

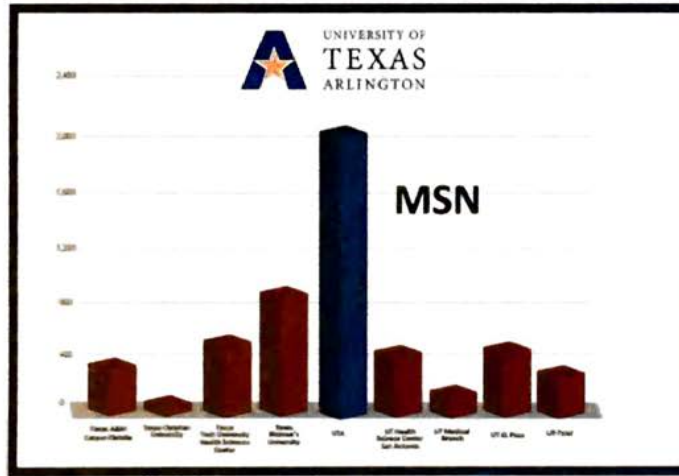
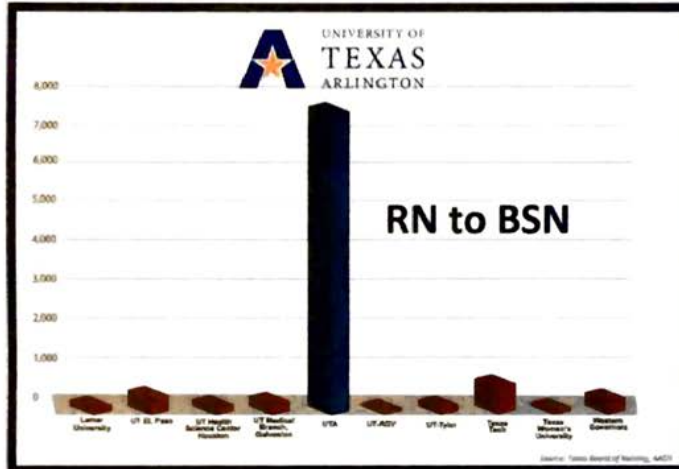
- Ed.S. Superintendent
- Ed.S. Principal
- Ed.S. Special Ed
- Ed.S. Curriculum Director
- Ed.S. Gifted and Talented

#### Masters

- MSE C & I
- MSE Ed Leadership
- MSE Gifted & Talented
- MSE Ed Theory and Practice
- MSE Reading Education
- MSE Special Ed
- MPA Public Management
- MPA Non-Profit Management
- MS Sports Management
- MS Engineering Management
- MS Early Childhood
- MS Media Management



# Nursing Market Leader



## University of Texas Arlington

**Launched:** 2008

**Growth:** 2016 (10,920) = 28% Growth

**# Programs:** 17

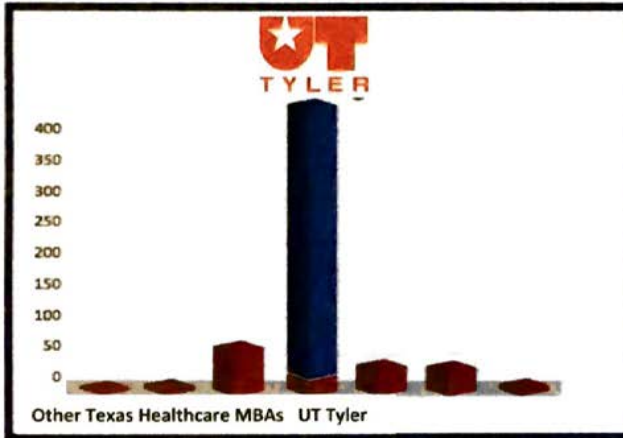
**Persistence:** 97%

**2015:** Center of Excellence in Nursing Education

**2016:** R1 Doctoral: Carnegie Classification

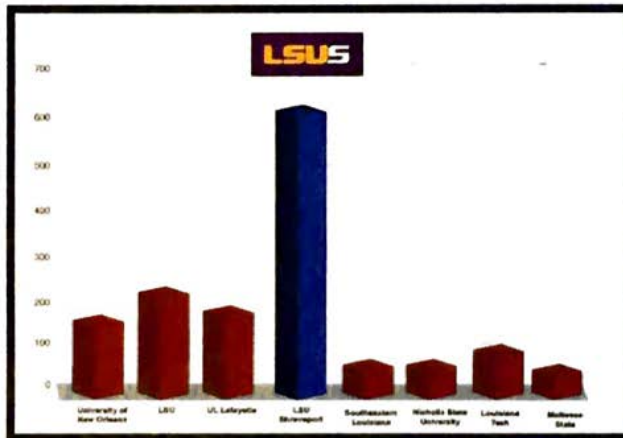


# MBA Market Leaders Dominate Their States



## University of Texas Tyler

**Launched:** 2012  
**Growth:** 2016 (393) = 27% Growth  
**Programs:** 6  
**Persistence:** 95.90%



## LSU Shreveport

**Launched:** 2013  
**Growth:** 2016 (1,163) = 34% Growth  
**Programs:** 10  
**Persistence:** 87.4%

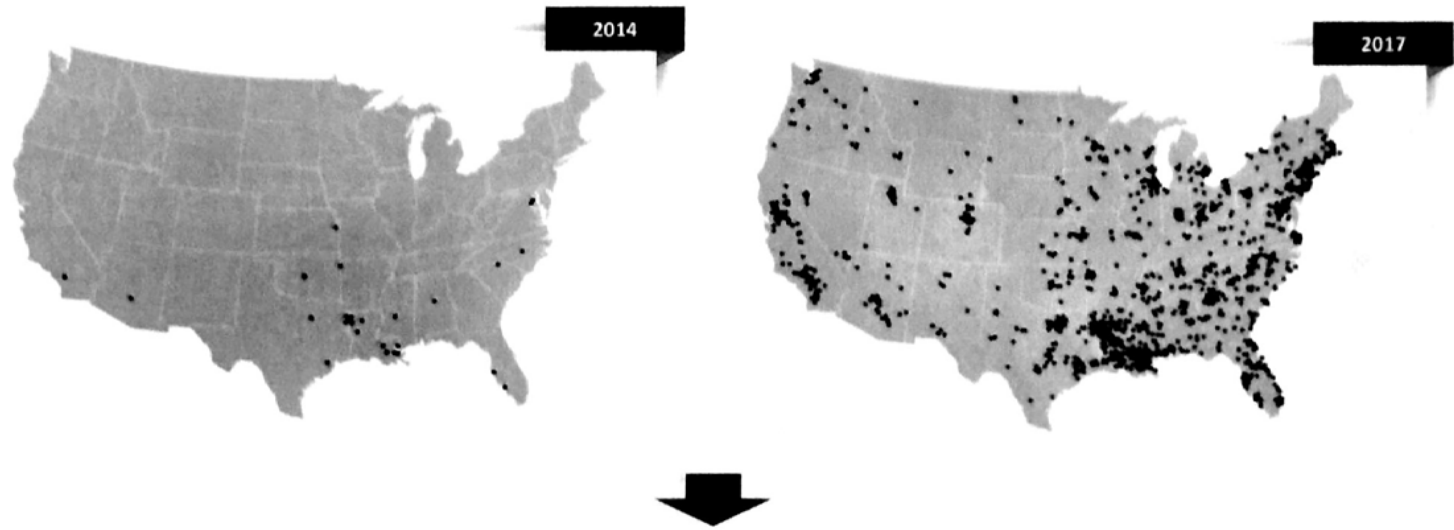


# Case Study – LSU Shreveport Enrollment Map



In the first year after launch of the online MBA program, it had **429 students** enrolled in the online program

After the first **44 months**, the university had more than **1,794 students** enrolled in the program



In 2013, LSUS had 56 on campus MBA students prior to AP partnership. In 2017, LSUS enrolled **53% of all MBA students** attending Louisiana public universities



## 4. Early College Update

EXPAND ENROLLMENT

IMPROVE QUALITY

INCREASE MATRICULATION  
AT UMS CAMPUSES



## 4. Early College Update

### Amy Hubbard, Ph.D.

- Doctorate from University of Maine's Higher Education program.
- Dissertation research focused on Early College programs within the Maine Community College system.
- Master of Science in Education with a concentration in Teaching and Learning from the University of Southern Maine.
- Measured Progress in Dover, N.H.; led the development and implementation of large-scale science assessments.
- Biology teacher and science department chair at Bonny Eagle High School in Standish, Maine; promoted and taught Early College courses; supported partnerships with local colleges and universities.



## 4. Early College Update

### Software Management System

- RFP process currently underway

### Early College Pathway to Careers

- UMM approved to pilot, Teaching, Business, Liberal Studies, Psychology- will award 15 credit certificate targeted to Early College students
- UMA
  - Dental- Almost complete
  - Potential collaboration with UMFK for Nursing, Computer Information, and Cyber Security
- UMaine
  - Engineering with UMPI
  - Hutchinson Center- Forest Management, Outdoor Recreation, STEM

Piloting new mode of delivery for Dual Enrollment classes which will also provide access to high school teacher-to-master's degrees/credentialing

- Working with UMFK to pilot with 2-3 high school teachers serving as facilitators and a faculty member teaching an online asynchronous course for this fall



## 4. Early College Update

# Strategic Marketing

- Website
- Following 14 High School seniors, 2 from each UMS campus
  - Serve as ambassadors for our Early College programs
- Infographic



# the WHY

## Early College

### at Maine's Public Universities

Information for Students & Parents

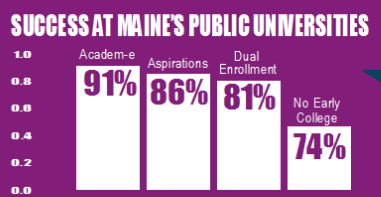


Reference: www.collegeboard.org/article/0,10999,18389,0\_0\_0\_0\_0\_0,00.html; www.collegeboard.org/article/0,10999,18389,0\_0\_0\_0\_0\_0,00.html; www.collegeboard.org/article/0,10999,18389,0\_0\_0\_0\_0\_0,00.html; www.collegeboard.org/article/0,10999,18389,0\_0\_0\_0\_0\_0,00.html; www.collegeboard.org/article/0,10999,18389,0\_0\_0\_0\_0\_0,00.html

### PARTICIPATION IN EARLY COLLEGE INCREASES:

Students who participate in Early College are **MORE LIKELY TO EARN A COLLEGE DEGREE.**

**COLLEGE ENROLLMENT**  
 Nationally, 80.9% of students who participate in Early College enroll in college after high school. (compared to 72.2% for all high school students)



Early College students who graduate from high school and enroll in a Maine Public University are more likely to enroll in college (persist) for a second year.

- IMPROVES RIGOR OF HIGH SCHOOL CURRICULUM
- BETTER STUDY SKILLS
- BUILDS CONFIDENCE



**HIGHER HIGH SCHOOL GRADUATION RATES**  
 Students who participate in Early College are less likely to drop out of high school.

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## DECREASES ANXIETY TRANSITIONING TO COLLEGE

*"It eased the transition from High School to College. When I started attending UMF as a matriculated student, I knew I could complete the course work based on my Early College experience."*  
 - Nancy, Early College Student

Students who participate in Early College are **LESS LIKELY TO NEED REMEDIAL COURSES IN COLLEGE.**

**Save up to \$14,000**  
 in tuition, fees, and other expenses!  
 Estimate is based on transferring up to 30 credits to UMaine.

**EARN A DEGREE IN LESS TIME.**  
 Students who enter college with Early College credits are more likely to earn a degree on time than students with no Early College.





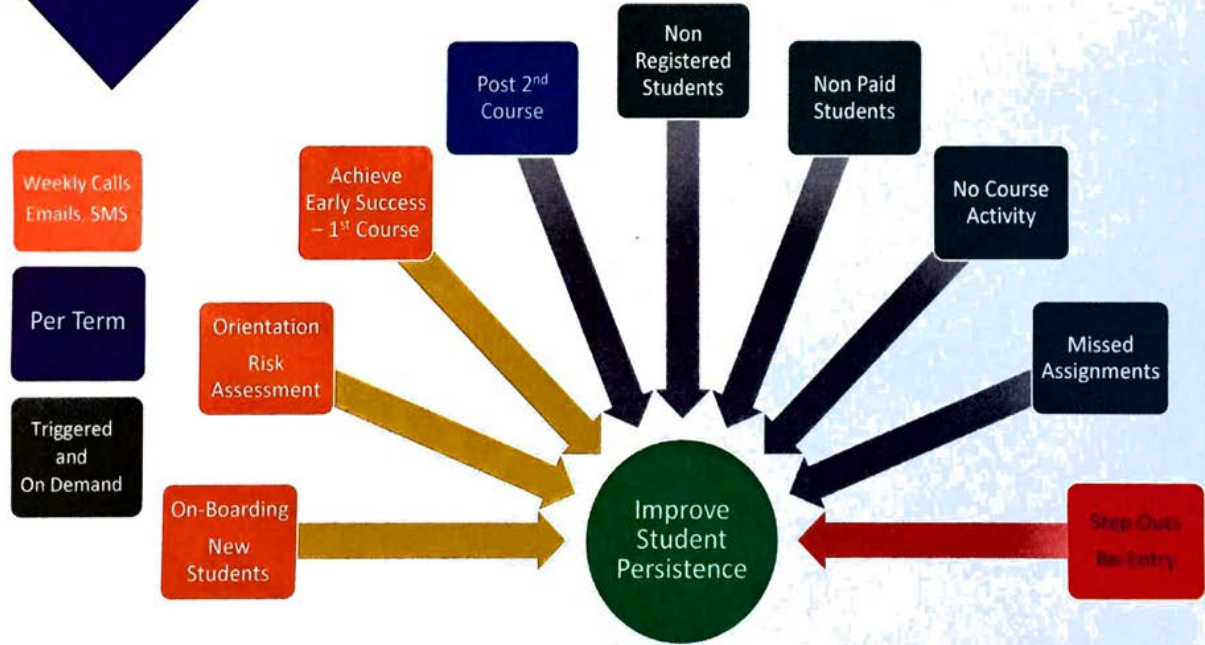
## 5. Campus Initiatives to Facilitate Nursing Education

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Enrollment to Course Completion

- Position: Retention Specialist
- Receives warm handoff from Enrollment Specialist
- Reviews role and support functions, sole point of contact from course start to graduation
- Weekly engagement through first 2 courses \* leverage 3<sup>rd</sup> party technology / coaches to identify at-risk behavior and performance
- Feedback loop to Academic Services monthly
- Engages utilizing a proprietary strategy to ensure engagement, and questions are answered
- Average initial engagement 10 minutes, weekly call 5 minutes per student per week



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*University of Maine System*

**Jason E. Coombs**

*Whereas*, Jason E. Coombs has served the University of Maine System with distinction as the Student Trustee for two years;

*Whereas*, Mr. Coombs has ably served as a voice and advocate for students in Board deliberations, in working with the Student Representatives to the Board and in the public arena and has also contributed his special knowledge as a non-traditional student;

*Whereas*, he served on the Academic and Student Affairs Committee and the Finance, Facilities and Technology Committee;

*Whereas*, he's also been a Trustee representative on the University of Maine Foundation for two years;

*Whereas*, in May 2018 Jason Coombs received a BA in Liberal Studies from the University of Maine at Augusta and intends to continue his education at UMA to earn a BS in Public Administration;

*Whereas*, Jason Coombs has served as the Student Trustee for the University of Maine System since May 12, 2016 and will complete his term on April 30, 2018.

*Now*, therefore, be it known to all that we, the University of Maine System Board of Trustees, offer our most sincere gratitude, thanks, and best wishes to Jason E. Coombs for his outstanding contributions to the quality of higher education in Maine.

*Approved* on the 21st day of May 2018, by the University of Maine System Board of Trustees, acting as stewards of Maine's public universities and their nearly 30,000 students, 5,000 employees and more than 200,000 living alumni.

*University of Maine System*  
**Norman L. Fournier**

*Whereas*, Norman L. Fournier has served the University of Maine System with distinction as a Trustee for almost eleven years;

*Whereas*, Mr. Fournier has been an active voice and advocate for higher education over many years;

*Whereas*, he has set a high standard for the level of involvement for a Board member including service on the following committees: Audit Committee, Executive Committee (since 2008), Finance, Facilities, Technology Committee (since 2008 and chair for 9 years), Human Resources & Labor Relations Committee (since 2008), Investment Committee, Trustee Affairs Committee, and Investment Committee;

*Whereas*, he served as UMS Trustee representative to the University of Maine Pulp and Paper Foundation for nine years and has represented the Board of Trustees at nearly every commencement since 2008 and was a member of presidential search committees for UMA (2015) and UMPI (2012) and chaired the presidential search for UMFK (2015);

*Whereas*, Trustee Fournier has especially left his mark through his leadership of the Finance, Facilities, Technology Committee when several significant initiatives were developed: Outcomes Based Funding; Information Technology Reorganization; Strategic Procurement and Facilities Planning, Construction and Management. In addition he presided over this Committee when major reforms to reflect best practices were brought forward by the administration to monitor and report on the UMS's financial health to the Board and the public including: multi-year financial analysis; current fiscal year forecasting; financial ratio analysis; implementation of a Budget Stabilization Fund; and development of the unified budget.

*Whereas*, Mr. Fournier has been an outstanding colleague and friend to Trustees and staff and has exemplified commitment to the University through his unfailing availability and presence, no matter how challenging the schedule;

*Now*, therefore, be it known to all that we, the University of Maine System Board of Trustees, offer our most sincere gratitude, thanks, and best wishes to Norman L. Fournier for his outstanding contributions to the quality of higher education in Maine.

*Approved* on the 21st day of May 2018, by the University of Maine System Board of Trustees, acting as stewards of Maine's public universities and their nearly 30,000 students, 5,000 employees and more than 200,000 living alumni.

*University of Maine System*  
**Susan J. Hunter**

*Whereas*, Susan J. Hunter began her full-time career at the University of Maine in 1991 as a faculty member in the Department of Biological Sciences;

*Whereas*, her administrative positions included Chair of the Department of Biological Sciences, Associate Provost and Dean for Undergraduate Education, the Executive Vice President for Academic Affairs and Provost; and just prior to her appointment as UMaine's first woman president, Dr. Hunter served as Vice Chancellor for Academic Affairs for the University of Maine System;

*Whereas*, Dr. Hunter has served as the 20<sup>th</sup> President of the University of Maine since July 1, 2014 and became the President at the University of Maine at Machias on July 1, 2017;

*Whereas*, University of Maine achievements under Dr. Hunter's leadership include advances in enrollment, fundraising, and advocacy and partnerships;

*Whereas*, since 2014, UMaine has recruited its largest incoming classes and the largest number of out-of-state students in the university's history;

*Whereas*, during her presidency she served as a valued advisor and member of the Chancellor's Council of Presidents;

*Whereas*, upon assuming the presidency, Dr. Hunter continued the implementation of UMaine's five-year strategic plan developed during her tenure as Provost and enhanced partnership with the University of Maine Foundation that resulted in restructuring of advancement operations into a single entity for greater impact and engagement with the donor community.

*Whereas*, Dr. Hunter has worked with members of the Board of Trustees closely and constructively to advance the Board's priority outcomes and the One University initiative;

*Whereas*, Dr. Hunter will retire from the University of Maine System on June 30, 2018;

*Now*, therefore, be it known to all that we, the University of Maine System Board of Trustees, offer our most sincere gratitude, thanks, and best wishes to Susan J. Hunter for her outstanding contributions to the quality of higher education in Maine.

*Approved* on the 21st day of May 2018, by the University of Maine System Board of Trustees, acting as stewards of Maine's public universities and their nearly 30,000 students, 5,000 employees and more than 200,000 living alumni.

*University of Maine System*  
**Kathryn A. “Kate” Foster**

*Whereas*, Kathryn A. “Kate” Foster has served as the 14<sup>th</sup> president at the University of Maine at Farmington from July 1, 2012 to June 30, 2018;

*Whereas*, prior to UMF, Dr. Foster spent 15 years at the University of Buffalo, the largest campus in the State University of New York System. There she served as Director of the school’s Regional Institute, chair of the Department of Urban and Regional Planning, and Associate Chair for Undergraduate Education and Director of Undergraduate Studies;

*Whereas*, under her leadership, UMF turned around a five-year decline in enrollment, boosted student selectivity and success, created a university advancement division, and developed and aligned plans for programming and investment through the university strategic plan, campus master plan, recruitment and retention plan, advancement plan and marketing plan;

*Whereas*, Dr. Foster also focused on campus facilities by refurbishing the gymnasium, creating study and socialization spaces, improved classrooms and lounges, upgraded the residence halls, secured the athletic fields for permanent use by the university and community, and built a Central Biomass Heat Plant which together with geothermal wells significantly reduced campus dependency on fossil fuels;

*Whereas*, during her tenure, UMF received a ten year accreditation from CIHE of NEASC, expanded university governance with a staff senate and inclusion of faculty on the President’s cabinet, and energized the university’s Board of Visitors;

*Whereas*, Dr. Foster chaired the UMS committee on Academic Program Review and Integration, co-chaired the committee on small campus advancement, spearheaded discussions on campus differentiation, and participated in development of the outcomes-based funding model for the UMS;

*Whereas*, Dr. Foster is the “students” President – she is beloved by the students, has sung and danced with them and attends all of their events;

*Whereas*, Dr. Foster has accepted an appointment as of July 1, 2018 to serve as the 16<sup>th</sup> President of the College of New Jersey (TCNJ) in Ewing Township, New Jersey;

*Now*, therefore, be it known to all that we, the University of Maine System Board of Trustees, offer our most sincere gratitude, thanks, and best wishes to Kathryn A. Foster for her outstanding contributions to the quality of higher education in Maine.

*Approved* on the 21st day of May 2018, by the University of Maine System Board of Trustees, acting as stewards of Maine’s public universities and their nearly 30,000 students, 5,000 employees and more than 200,000 living alumni.

## **Capital Project Status Report**

### **Executive Summary**

May 2018

Attached is the Capital Project Status Report for the May 20-21, 2018 meeting of the Board of Trustees.

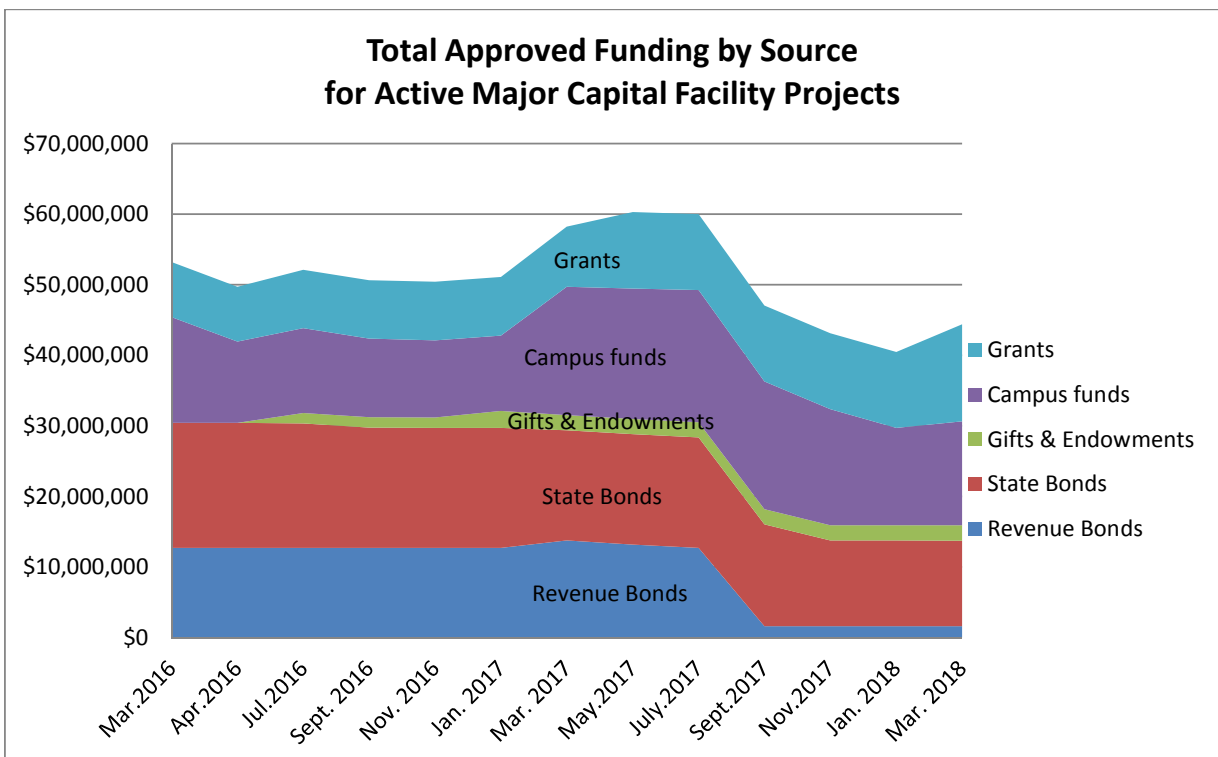
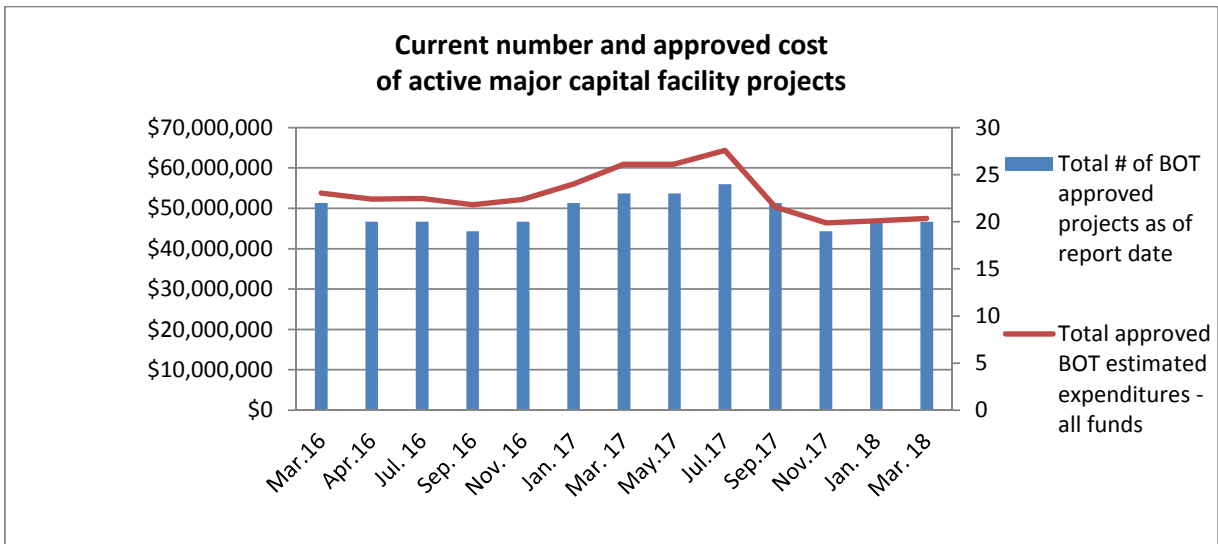
The report reflects a total of 20 projects, with one project being removed since the previous report, and one new project added to this report.

The USM Anderson Hall Renewal & Renovations project (6200191, 6100272) has been removed from this report. With a limited timeline for this project, this project was terminated early, with costs coming in under budget. A new project has been added to this report; USM's Athletic Field Lighting project (6100289).

Six projects will be removed from the following report. They are USM projects Campus Card Access Install (6100271), Gorham Softball Field Improvements (6200181), Brooks Kitchen Exhaust Upgrade (6100245), Costello Field House Floor Replacement (6100280), Science Building Renovations & Build-Out (6100274); and UMM project Science Building Laboratory Upgrade (4100027).

5/10/2018





4/23/2018

**Capital Project Status Report**  
**Board Approved Projects**  
**May 2018 - Board of Trustees**  
**With Grand Totals and % of Current Approved Estimates**

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
<b>UM</b>								
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 Design in Progress	2014	2018	\$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%)	Construction in Progress	2016	2018	\$9,000,000	\$9,400,000	92%	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%)	Construction in Progress	2017	2018	\$2,300,000	\$2,800,000	7%	Board approved \$2.3M in January, 2017. Board approved increase of \$500,000 (8.6%) in project cost in November, 2017.
Barrow's Hall ESRB Lab Renovations (5100424)	Campus E&G Funds (100%)	Construction in Progress	2017	2018	\$1,900,000	\$1,900,000	57%	Board approved \$1.9M in March, 2017
Memorial Union Bear's Den Renovations (5100427)	Campus AUX Funds (100%)	Construction Complete	2017	2018	\$3,600,000	\$3,600,000	86%	Board approved \$3.6M in March, 2017
Darling Marine Center Waterfront Infrastructure (5100459, 5100460, 5100461)	2017 University Bond (100%)	Design in Progress	2017	2018	\$3,000,000	\$3,000,000	0.36%	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	\$1,000,000	24%	Board approved \$1M in September, 2017.
Wells Commons Generator (5100433)	Campus Auxiliary Reserves (100%)	Construction in Progress	2019	2019	\$525,000	\$525,000	1%	Board approved \$525,000 January, 2018.
<b>UMF</b>								
Science Labs Renovations (Preble & Ricker (2100065, 2100068)	2013 Lab & Class State Bond (100%)	Substantially Complete	2014	2018	\$1,377,000	\$1,377,000	88%	Board approved \$1.377M in July 2014.
<b>UMFK</b>								
Forestry Geographic Info Sys Tech Labs/Nursing Lab Renov/Teleconf Ctr Upgrades (3100029 3100030 3100031)	2013 Lab & Class State Bond (100%)	Substantially Complete	2014	2018	\$1,200,000	\$1,200,000	99%	Board approved \$1.2M in May 2014.
<b>UMM</b>								
*** Science Building Laboratory Upgrades (4100027)	2013 Lab & Class State Bond (100%)	Complete	2014	2018	\$600,000	\$600,000	98%	Finance & Facilities Committee Approved \$600K in January, 2014.
Compressed Natural Gas Heating Conversion (4100028)	Revenue Bonds (100%)	Substantially Complete	2014	2018	\$1,800,000	\$1,800,000	84%	Board approved \$1.8M in July 2014.
Card Access Project (4100036, 4100037)	Campus E&G Funds (21%), Campus Auxiliary Funds (79%)	Substantially Complete	2018	2018	\$571,000	\$597,500	65%	Board approved \$571,000 in July, 2017. Change in project cost to \$597,500 (4.6% change) approved by Chancellor in October 2017 per Trustee policy 701.

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
<b>USM</b>								
*** Campus Card Access Install (6100271)	Campus E&G Funds (100%)	Complete	2017	2018	\$700,000	\$700,000	83%	Board approved \$700K in March, 2017.
*** Gorham Softball Field Improvements (6200181)	Campus E&G Funds (100%)	Complete	2015	2017	\$1,500,000	\$2,389,000	97%	BOT approved \$1.5M in July, 2015. Board approved increase to \$2.2M in March, 2016. Change in project cost to \$2.389M (8.6% change) approved by Chancellor in January 2017 per Trustee policy 701.
*** Brooks Kitchen Exhaust Upgrade (6100245)	Campus E&G Funds (100%)	Complete	2016	2018	\$819,000	\$893,000	95%	Board approved \$819,000 in March, 2016. Change in project cost to \$893K (9.04% change) approved by Chancellor in March 2017 per Trustee policy 701.
*** Costello Field House Floor Replacement (6100280)	Gifts & Endowments (100%)	Complete	2017	2017	\$900,000	\$900,000	91%	Board approved \$900,000 in November, 2016.
*** Science Building Renovations & Build-Out (6100274)	Campus E&G Funds (100%)	Complete	2017	2017	\$1,600,000	\$1,600,000	75%	Board approved \$1.6M in January, 2017.
* Athletic Field Lighting (6100289)	Campus E&G Funds (100%)	Design in Progress	2018	2018	\$1,780,000	\$1,780,000	1%	Board approved \$1.78M in March, 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.
Explanatory Notes: * Project is new as of this report. ** Details of this project include updates since the last report. *** This project has been completed since the last report and is not expected to appear on the next report.	Funding source(s) reflects primary source(s) for project.		Calendar Year unless otherwise noted.				Percentage expended reflects total expended as of March 31, 2018 as a percentage of the current approved project estimate.	

**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
- 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  
                  Appropriation Request
- OCTOBER:**     Fiscal Matters  
                  Review of Annual Financial Report
- NOVEMBER:**   Academic Affairs  
                  Awarding of Academic Degrees
- Student Affairs  
                  Official Fall Enrollment Update

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# University of Maine System

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2017 Workforce Profile

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Office of Human Resources

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## Workforce Profile

### Highlights

The Workforce Profile is an overview of the UMS workforce, reflecting full-time and part-time regular employees. This represents the 4,475 regular employees that were actively receiving a paycheck as of October 31, 2017. Additionally, there were 867 part time faculty members teaching in the Fall 2017 semester.

#### Count and Gender by Category

- Of the 4,475 UMS employees reported: 2.1% are administrators, 27.4% are faculty, 38.9% are salaried staff, and 31.6% are hourly paid staff.
- Women are a minority of the full-time faculty at all universities except USM, UMA and UMF. Overall women constitute 45.7% of full time faculty.
- Women are well represented among administrators at 41.5%. There are 94 administrators, 68 of whom are in the Management Group. 33.0% of the Management Group are women.
- Approximately 55.2% of hourly paid employees are women.

#### Average Salary by Category

- The average salary for administrators is \$136,839; \$77,320 for faculty; \$53,662 for salaried staff; and \$32,019 for hourly staff.
- Wage increases were negotiated and implemented during the fiscal year 2018 resulting in a net increase across the board.
- There is less variation across the universities in average salaries of hourly staff due to greater similarity of jobs and because salary and wage programs establish pay levels.
- Most faculty are appointed on an academic year basis and the annual salary is for the nine-month appointment.

#### Age

- Age distribution is an important consideration for Workforce and Succession Planning.
- The average age by employee category is: Administrators average age is 55, faculty 52, salaried 46, and hourly employees average age is 51.
- A significant proportion of faculty (46.5%), hourly (47.2%) and administrators (56.4%) are 55 or older.

#### Highest Degree

- As would be expected, a high number of faculty (73.0%) and administrators (37.2%) hold terminal degrees.
- 15.5% of hourly staff have self-reported a baccalaureate or higher degree. More than 31.7% of salaried staff have a master's degree or higher. Education level was not reported by 27.6% of employees.

### **Race and Ethnicity**

- There is limited diversity as measured in the federal ethnicity categories. Faculty diversity is gradually increasing with 8.1% of all faculty declaring minority status, an increase of 0.2% since the 2016 report.
- The University of Maine at Fort Kent has the largest proportionate diversity among its employees with 8.2% identifying as minority. The University of Maine reports the highest quantity of minority employees with 124 employees identifying as such.

### **Years of Service/Average Years of Service**

- UMS has many long-service employees. Average length of service ranges from 10.3 years for salaried staff to 14.2 years for administrators.
- More than 21.0% of faculty and more than 25.5% of administrators have 25 or more years of service.
- The University of Maine has the highest average years of service for all employment categories at 12.5. The University of Maine at Machias has the lowest average years of service at 9.6 years.

### **Part-Time Faculty**

- In the Fall 2017 semester there were approximately 867 Part-Time Faculty teaching 4,667 credit hours of course work. The University of Southern Maine employs the most Part-Time Faculty with 346 (39.9%), followed by the University of Maine with 216 (24.9%) and then the University of Maine at Augusta with 148 (17%).



### Category Definitions

All UMS positions are categorized as administrator, faculty, salaried, or hourly depending upon the primary type of work performed. The categories, as defined by the IPEDS (Integrated Postsecondary Education Data System) Fall Staff Survey submitted biennially by colleges and universities to the National Center for Education Statistics, U.S. Department of Education, are defined below.

#### **Administrators**

All employees whose assignments require management of the institution, or a customarily recognized department or subdivision. Assignments require the performance of work directly related to management policies or general business operations of the institution, department or subdivision. Assignments in this category customarily and regularly require the incumbent to exercise discretion and independent judgment. This category includes employees holding the following titles who meet the above criteria: president, vice president (including assistant and associate), dean (including assistant and associate if their only activity is administrative and does not include a faculty workload), director (including assistant and associate), department head (including assistant and associate if their only activity is administrative and does not include a faculty workload). Employees in this category are in the management group.

#### **Faculty**

All individuals employed for the primary purpose of instruction, research, and/or public service and who hold academic rank of professor, associate professor, assistant professor, instructor, lecturer or the equivalent. These individuals may also hold titles such as associate dean, assistant dean, chairperson, and director if they also have a faculty work assignment. This report includes faculty in Cooperative Extension; the Tenure Report excludes faculty in this department.

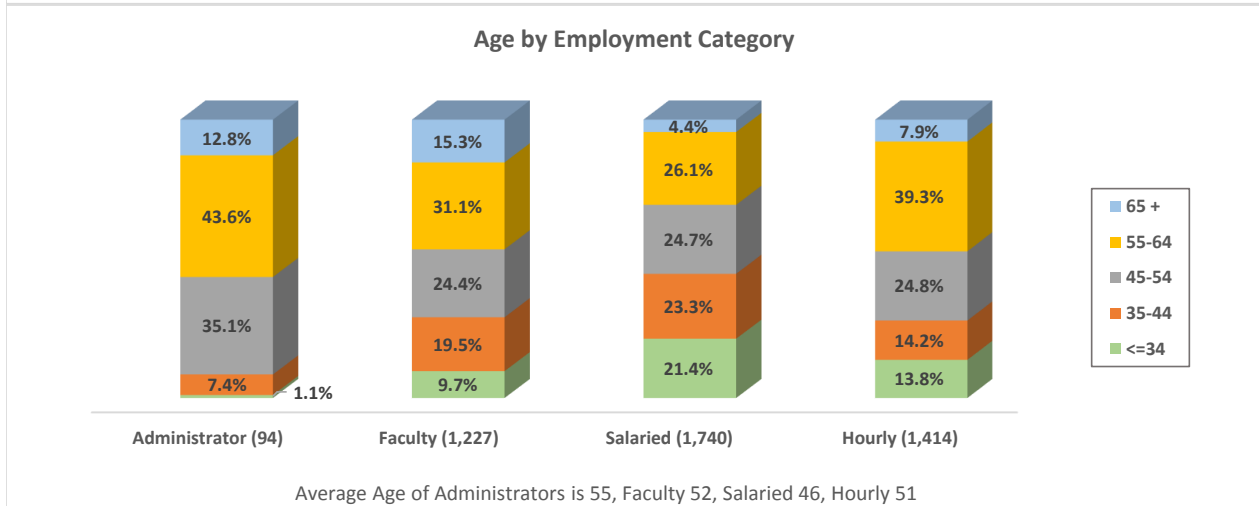
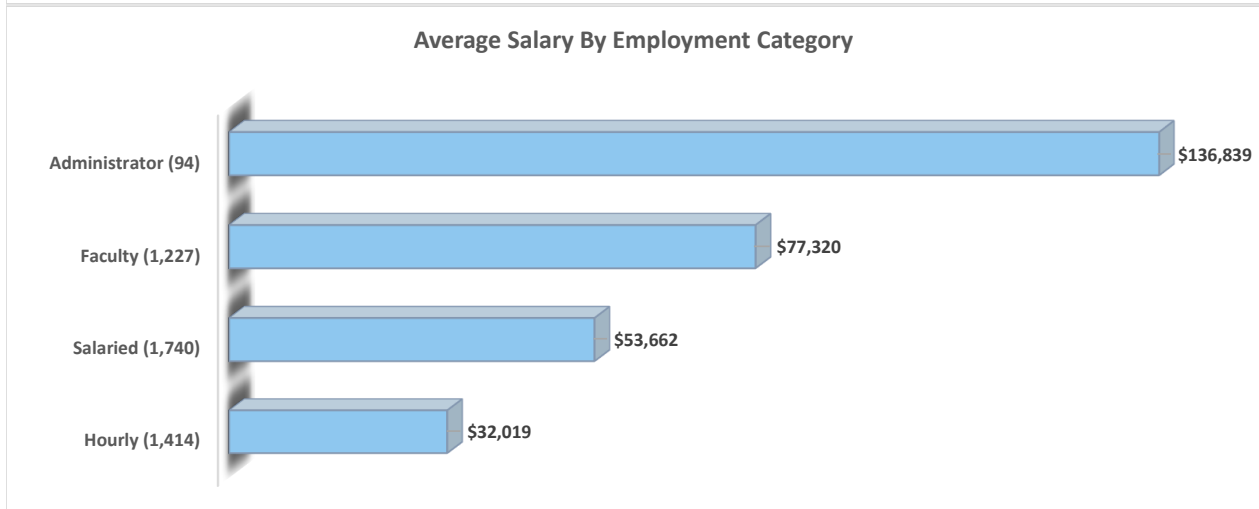
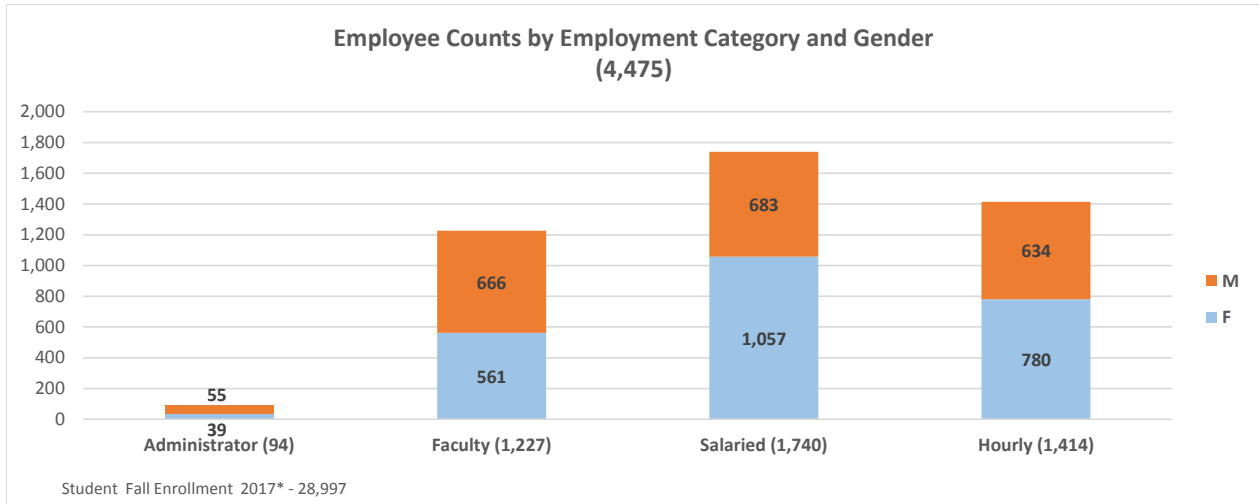
#### **Salaried**

All individuals employed for the primary purpose of performing academic support, student service and institutional support, whose assignments require either a baccalaureate degree or higher or experience of such kind and amount as to provide a comparable background. Includes employees with job titles such as: Business Operations Specialist, Financial Specialist, Accountant, Budget Analyst, Admissions or Financial Aid Counselor, Computer Specialist, Computer Analyst, Database Administrator, Librarian, Resident Director.

## Hourly Staff

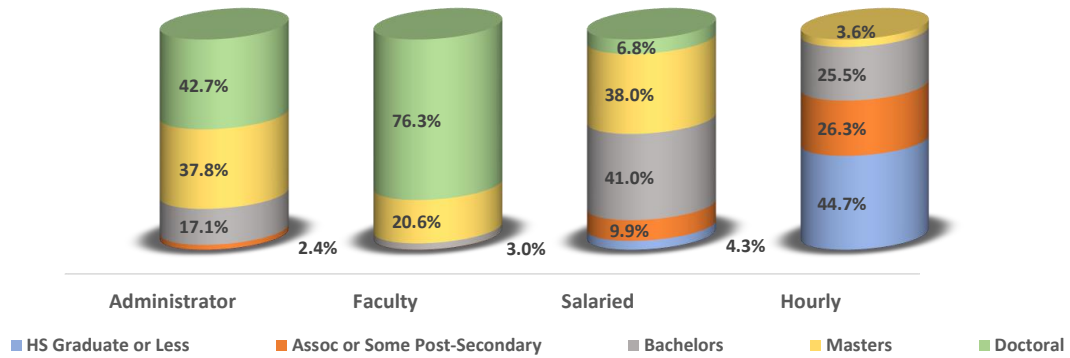
All employees whose assignments:

- Are technical or paraprofessional in nature (requires specialized knowledge or skills which may be acquired through experience, apprenticeship, on-the-job training or academic work in occupationally specific programs that result in a 2-year degree or other certificate or diploma). Includes such titles as Research or Laboratory Technician, Audiovisual Technician, Personnel Assistant. Or;
- Are associated with clerical or secretarial activities (responsible for internal and external communications, recording and retrieving data and/or information, and other paperwork required in an office). Includes such titles as Secretary, Administrative Assistant, Records Technician, Bookkeeper, Library Assistant. Or;
- Involve skilled crafts work (typically requires special manual skills and a thorough and comprehensive knowledge of the processes involved in the work, acquired through on-the-job-training and experience or through apprenticeship or other formal training programs). Includes such titles as Electrician, HVAC Technician, Printer, Garage Mechanic. Or;
- Involve service/maintenance work (requires limited degrees of previously acquired skills and knowledge, performs duties that result in or contribute to the comfort, convenience and hygiene of personnel and the student body or that contribute to the upkeep of the institutional property). Includes such titles as Custodian, Building & Grounds Maintenance Worker, Police Officer, Security Guard, Cook.



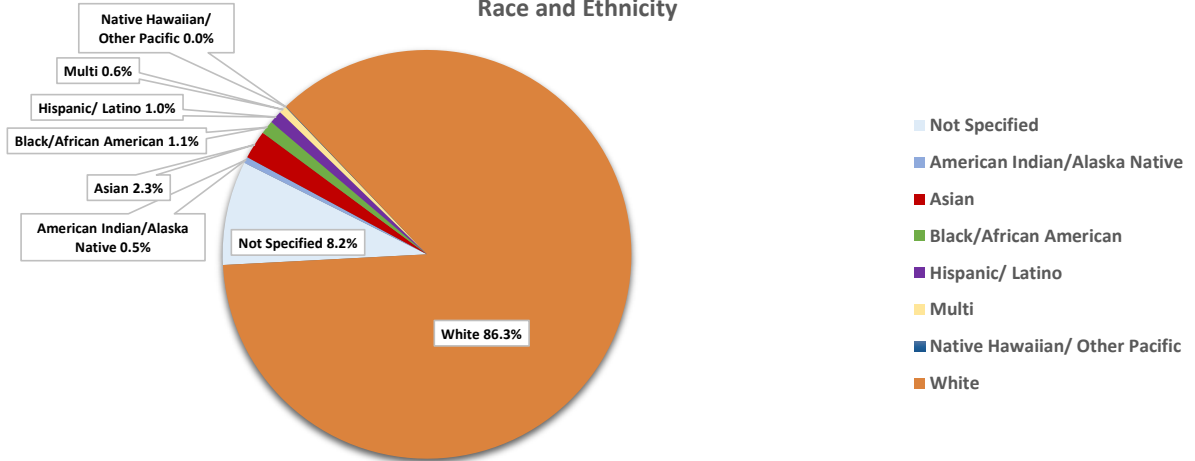
\* Student Fall Enrollment 2017 includes undergraduate and graduate students. The source is Fall 2017 Enrollment Report - The University of Maine System, Fall Semester Headcount by Campus

### Highest Degree by Employment Category \*

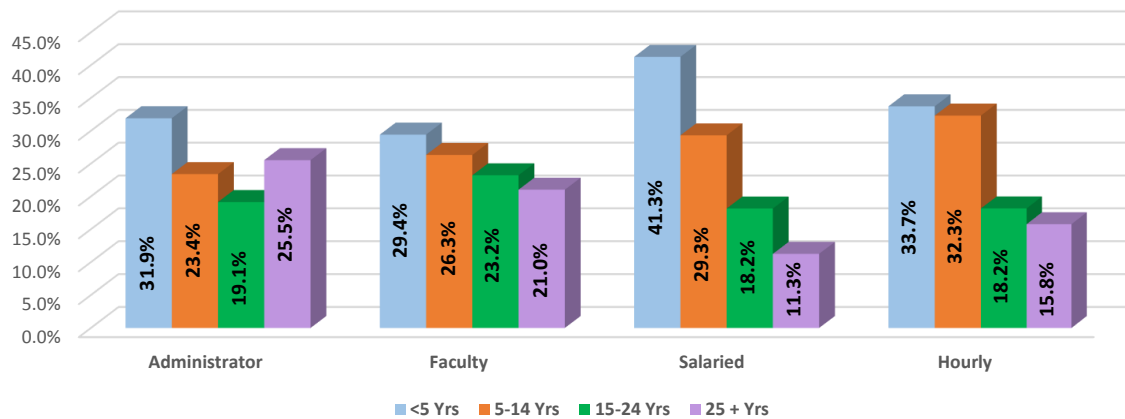


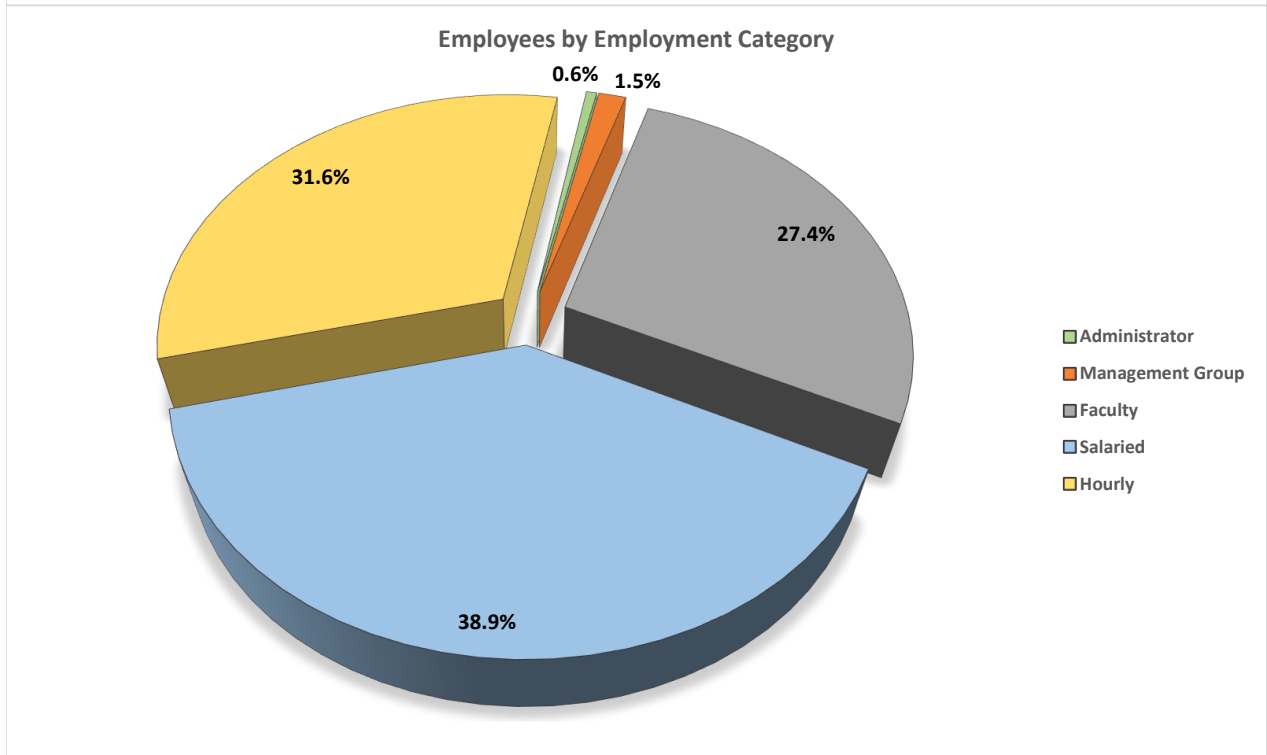
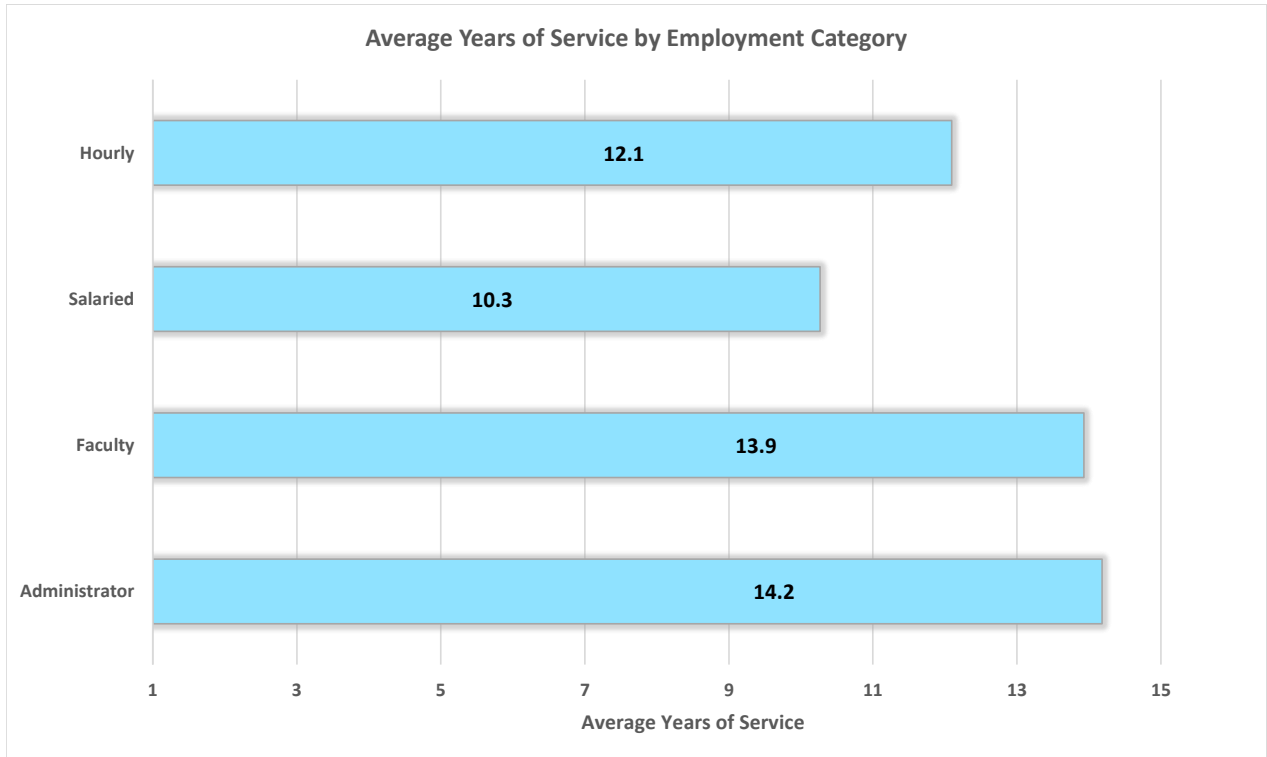
\* Percentage shown for Highest Degree is a percent of the total employees who reported education level; 1,236 employees did not indicate.

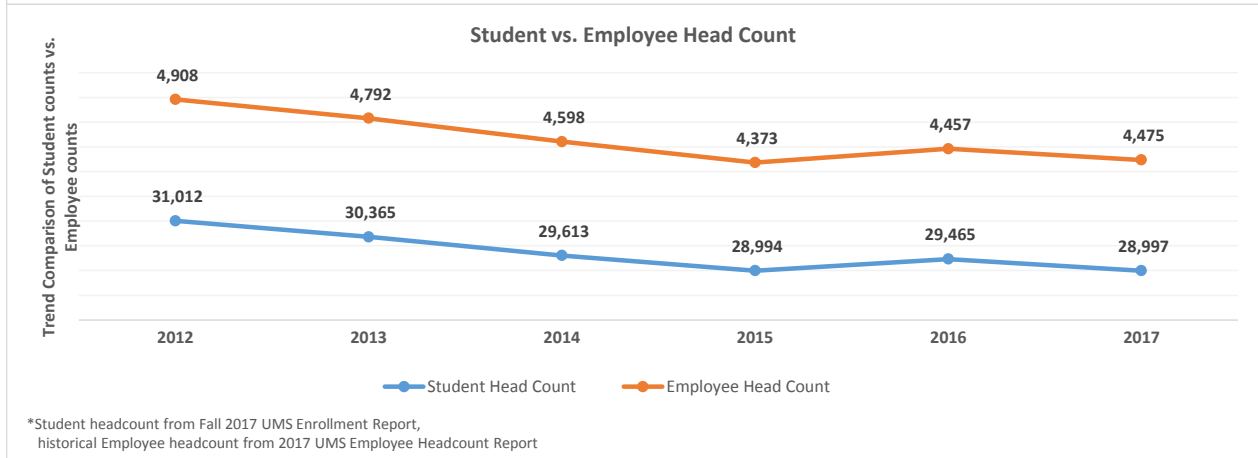
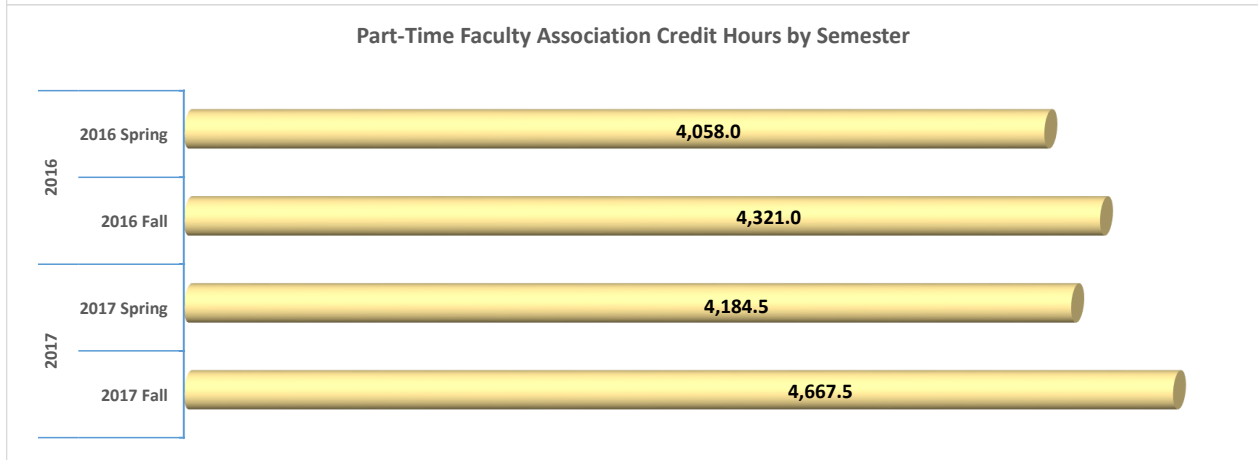
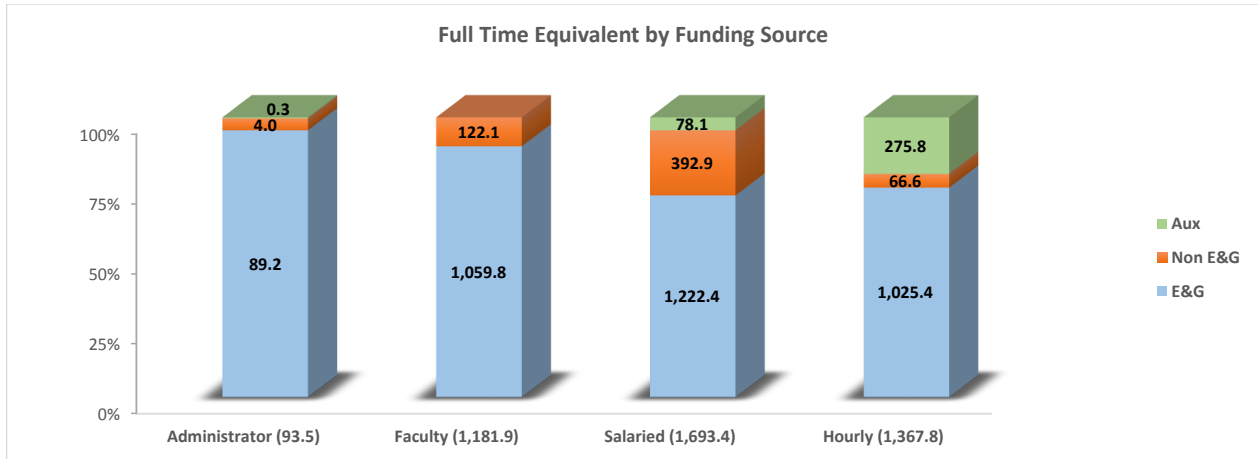
### Race and Ethnicity



### Years of Service by Employment Category







Counts by Employment Category and Gender

	University of Maine System			University of Maine			University of Maine at Augusta			University of Maine at Farmington			University of Maine at Fort Kent		
	F	M	Count	F	M	Count	F	M	Count	F	M	Count	F	M	Count
Administrators	39	55	94	8	18	26	6	3	9	4	5	9	2	2	2
Faculty	561	666	1,227	257	385	642	48	37	85	74	46	120	13	20	33
Salaried	1,057	683	1,740	392	317	709	77	30	107	61	33	94	21	16	37
Hourly	780	634	1,414	402	359	761	64	33	97	51	45	96	22	16	38
Total	2,437	2,038	4,475	1,059	1,079	2,138	195	103	298	190	129	319	56	54	110
Student Enrollment	28,997			11,240			4,014			2,080			1,760		

	University of Maine at Machias			University of Maine at Presque Isle			University of Southern Maine			University Governance			University Services		
	F	M	Count	F	M	Count	F	M	Count	F	M	Count	F	M	Count
Administrators	1		1	2	2	2	7	9	16	7	9	16	6	7	13
Faculty	11	18	29	17	22	39	141	138	279						
Salaried	18	7	25	35	19	54	327	106	433				126	155	281
Hourly	13	8	21	21	18	39	146	124	270				61	31	92
Total	43	33	76	73	61	134	621	377	998	7	9	16	193	193	386
Student Enrollment	701			1,408			7,794								

\* Student Enrollment counts from the University of Maine System - Fall 2017 Enrollment Report, Fall Semester Headcount by Campus.

Average Salary by Employment Category

	University of Maine System		University of Maine		University of Maine at Augusta		University of Maine at Farmington		University of Maine at Fort Kent	
	Count	Avg Salary	Count	Avg Salary	Count	Avg Salary	Count	Avg Salary	Count	Avg Salary
Administrators	94	136,839	26	142,821	9	115,201	9	108,249	2	137,500
Faculty	1,227	77,320	642	82,800	85	67,837	120	62,941	33	62,236
Salaried	1,740	53,662	709	53,145	107	50,021	94	46,075	37	43,119
Hourly	1,414	32,019	761	31,992	97	30,023	96	32,255	38	32,526
Total	4,475	55,057	2,138	55,611	298	50,562	319	50,015	110	46,911

	University of Maine at Machias		University of Maine at Presque Isle		University of Southern Maine		University Governance		University Services	
	Count	Avg Salary	Count	Avg Salary	Count	Avg Salary	Count	Avg Salary	Count	Avg Salary
Administrators	1	120,000	2	135,377	16	138,394	16	167,634	13	121,254
Faculty	29	57,053	39	61,338	279	79,906				
Salaried	25	39,179	54	42,978	433	55,052			281	61,476
Hourly	21	29,776	39	32,651	270	32,206			92	33,582
Total	76	44,465	134	46,695	998	57,156	16	167,634	386	56,841



Average Age by Employment Category

	University of Maine System		University of Maine		University of Maine at Augusta		University of Maine at Farmington		University of Maine at Fort Kent	
	Count	Avg Age	Count	Avg Age	Count	Avg Age	Count	Avg Age	Count	Avg Age
Administrators	94	55	26	56	9	55	9	55	2	63
Faculty	1,227	52	642	51	85	57	120	52	33	54
Salaries	1,740	46	709	45	107	49	94	45	37	45
Hourly	1,414	51	761	51	97	51	96	52	38	50
Total	4,475	49	2,138	49	298	52	319	50	110	50

	University of Maine at Machias		University of Maine at Presque Isle		University of Southern Maine		University Governance		University Services	
	Count	Avg Age	Count	Avg Age	Count	Avg Age	Count	Avg Age	Count	Avg Age
Administrators	1	67	2	55	16	55	16	53	13	53
Faculty	29	51	39	54	279	54				
Salaries	25	43	54	44	433	47			281	48
Hourly	21	51	39	54	270	50			92	46
Total	76	48	134	50	998	50	16	53	386	48

Age by Employment Category\*

University of Maine System	Age Group											
	<= 34		35 - 44		45 - 54		55 - 64		65 Plus		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Administrators	1	0.0%	7	0.2%	33	0.7%	41	0.9%	12	0.3%	94	2.1%
Faculty	119	2.7%	239	5.3%	299	6.7%	382	8.5%	188	4.2%	1,227	27.4%
Salaried	373	8.3%	406	9.1%	430	9.6%	454	10.1%	77	1.7%	1,740	38.9%
Hourly	195	4.4%	201	4.5%	351	7.8%	556	12.4%	111	2.5%	1,414	31.6%
<b>Total</b>	<b>688</b>	<b>15.4%</b>	<b>853</b>	<b>19.1%</b>	<b>1,113</b>	<b>24.9%</b>	<b>1,433</b>	<b>32.0%</b>	<b>388</b>	<b>8.7%</b>	<b>4,475</b>	<b>100.0%</b>
<b>University of Maine</b>												
	<= 34		35 - 44		45 - 54		55 - 64		65 Plus		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Administrators	0	0.0%	1	0.0%	7	0.3%	16	0.7%	2	0.1%	26	1.2%
Faculty	90	4.2%	141	6.6%	131	6.1%	190	8.9%	90	4.2%	642	30.0%
Salaried	190	8.9%	147	6.9%	165	7.7%	180	8.4%	27	1.3%	709	33.2%
Hourly	97	4.5%	106	5.0%	203	9.5%	298	13.9%	57	2.7%	761	35.6%
<b>Total</b>	<b>377</b>	<b>17.6%</b>	<b>395</b>	<b>18.5%</b>	<b>506</b>	<b>23.7%</b>	<b>684</b>	<b>32.0%</b>	<b>176</b>	<b>8.2%</b>	<b>2,138</b>	<b>100.0%</b>
<b>University of Maine at Augusta</b>												
	<= 34		35 - 44		45 - 54		55 - 64		65 Plus		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Administrators	0	0.0%	1	0.3%	5	1.7%	1	0.3%	2	0.7%	9	3.0%
Faculty	3	1.0%	12	4.0%	16	5.4%	29	9.7%	25	8.4%	85	28.5%
Salaried	13	4.4%	26	8.7%	28	9.4%	33	11.1%	7	2.3%	107	35.9%
Hourly	14	4.7%	11	3.7%	22	7.4%	43	14.4%	7	2.3%	97	32.6%
<b>Total</b>	<b>30</b>	<b>10.1%</b>	<b>50</b>	<b>16.8%</b>	<b>71</b>	<b>23.8%</b>	<b>106</b>	<b>35.6%</b>	<b>41</b>	<b>13.8%</b>	<b>298</b>	<b>100.0%</b>
<b>University of Maine at Farmington</b>												
	<= 34		35 - 44		45 - 54		55 - 64		65 Plus		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Administrators	0	0.0%	1	0.3%	2	0.6%	4	1.3%	2	0.6%	9	2.8%
Faculty	8	2.5%	24	7.5%	40	12.5%	37	11.6%	11	3.4%	120	37.6%
Salaried	23	7.2%	24	7.5%	20	6.3%	20	6.3%	7	2.2%	94	29.5%
Hourly	6	1.9%	17	5.3%	26	8.2%	40	12.5%	7	2.2%	96	30.1%
<b>Total</b>	<b>37</b>	<b>11.6%</b>	<b>66</b>	<b>20.7%</b>	<b>88</b>	<b>27.6%</b>	<b>101</b>	<b>31.7%</b>	<b>27</b>	<b>8.5%</b>	<b>319</b>	<b>100.0%</b>
<b>University of Maine at Fort Kent</b>												
	<= 34		35 - 44		45 - 54		55 - 64		65 Plus		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Administrators	0	0.0%	0	0.0%	0	0.0%	1	0.9%	1	0.9%	2	1.8%
Faculty	2	1.8%	3	2.7%	12	10.9%	14	12.7%	2	1.8%	33	30.0%
Salaried	9	8.2%	9	8.2%	9	9.1%	10	9.1%	0	0.0%	37	33.6%
Hourly	6	5.5%	5	4.5%	10	9.1%	15	13.6%	2	1.8%	38	34.5%
<b>Total</b>	<b>17</b>	<b>15.5%</b>	<b>17</b>	<b>15.5%</b>	<b>31</b>	<b>28.2%</b>	<b>40</b>	<b>36.4%</b>	<b>5</b>	<b>4.5%</b>	<b>110</b>	<b>100.0%</b>

Age by Employment Category\*

	Age Group												Total	
	<= 34		35 - 44		45 - 54		55 - 64		65 Plus		Total			
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
<b>University of Maine at Machias</b>														
Administrators	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.3%	1	1.3%	1	1.3%
Faculty	1	1.3%	9	11.8%	7	9.2%	8	10.5%	4	5.3%	29	38.2%	29	38.2%
Salaried	10	13.2%	3	3.9%	6	7.9%	5	6.6%	1	1.3%	25	32.9%	25	32.9%
Hourly	3	3.9%	2	2.6%	5	6.6%	9	11.8%	2	2.6%	21	27.6%	21	27.6%
<b>Total</b>	<b>14</b>	<b>18.4%</b>	<b>14</b>	<b>18.4%</b>	<b>18</b>	<b>23.7%</b>	<b>22</b>	<b>28.9%</b>	<b>8</b>	<b>10.5%</b>	<b>76</b>	<b>100.0%</b>	<b>76</b>	<b>100.0%</b>
<b>University of Maine at Presque Isle</b>														
Administrators	0	0.0%	0	0.0%	1	0.7%	1	0.7%	0	0.0%	2	1.5%	2	1.5%
Faculty	0	0.0%	7	5.2%	16	11.9%	9	6.7%	7	5.2%	39	29.1%	39	29.1%
Salaried	14	10.4%	17	12.7%	9	6.7%	9	6.7%	5	3.7%	54	40.3%	54	40.3%
Hourly	2	1.5%	4	3.0%	11	8.2%	18	13.4%	4	3.0%	39	29.1%	39	29.1%
<b>Total</b>	<b>16</b>	<b>11.9%</b>	<b>28</b>	<b>20.9%</b>	<b>37</b>	<b>27.6%</b>	<b>37</b>	<b>27.6%</b>	<b>16</b>	<b>11.9%</b>	<b>134</b>	<b>100.0%</b>	<b>134</b>	<b>100.0%</b>
<b>University of Southern Maine</b>														
Administrators	0	0.0%	1	0.1%	6	0.6%	7	0.7%	2	0.2%	16	1.6%	16	1.6%
Faculty	15	1.5%	43	4.3%	77	7.7%	95	9.5%	49	4.9%	279	28.0%	279	28.0%
Salaried	82	8.2%	109	10.9%	99	9.9%	123	12.3%	20	2.0%	433	43.4%	433	43.4%
Hourly	47	4.7%	30	3.0%	61	6.1%	106	10.6%	26	2.6%	270	27.1%	270	27.1%
<b>Total</b>	<b>144</b>	<b>14.4%</b>	<b>183</b>	<b>18.3%</b>	<b>243</b>	<b>24.3%</b>	<b>331</b>	<b>33.2%</b>	<b>97</b>	<b>9.7%</b>	<b>998</b>	<b>100.0%</b>	<b>998</b>	<b>100.0%</b>
<b>University Governance</b>														
Administrators	1	6.3%	1	6.3%	7	43.8%	6	37.5%	1	6.3%	16	100.0%	16	100.0%
Faculty	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Salaried	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Hourly	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
<b>Total</b>	<b>1</b>	<b>6.3%</b>	<b>1</b>	<b>6.3%</b>	<b>7</b>	<b>43.8%</b>	<b>6</b>	<b>37.5%</b>	<b>1</b>	<b>6.3%</b>	<b>16</b>	<b>100.0%</b>	<b>16</b>	<b>100.0%</b>
<b>University Services</b>														
Administrators	0	0.0%	2	0.5%	5	1.3%	5	1.3%	1	0.3%	13	3.4%	13	3.4%
Faculty	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Salaried	32	8.3%	71	18.4%	94	24.4%	74	19.2%	10	2.6%	281	72.8%	281	72.8%
Hourly	20	5.2%	26	6.7%	13	3.4%	27	7.0%	6	1.6%	92	23.8%	92	23.8%
<b>Total</b>	<b>52</b>	<b>13.5%</b>	<b>99</b>	<b>25.6%</b>	<b>112</b>	<b>29.0%</b>	<b>106</b>	<b>27.5%</b>	<b>17</b>	<b>4.4%</b>	<b>386</b>	<b>100.0%</b>	<b>386</b>	<b>100.0%</b>

\* Note - Due to rounding the % of Total in the Total column may not equal the sum of the percents in each age category.

Highest Degree by Employment Category

University of Maine System		Degree													
		Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total	
Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
12	0.3%	0	0.0%	2	0.0%	14	0.3%	31	0.7%	35	0.8%	94	2.1%		
52	1.2%	0	0.0%	2	0.0%	35	0.8%	242	5.4%	896	20.0%	1,227	27.4%		
512	11.4%	53	1.2%	121	2.7%	503	11.2%	467	10.4%	84	1.9%	1,740	38.9%		
660	14.7%	337	7.5%	198	4.4%	192	4.3%	27	0.6%	0	0.0%	1,414	31.6%		
1,236	27.6%	390	8.7%	323	7.2%	744	16.6%	767	17.1%	1,015	22.7%	4,475	100.0%		
University of Maine		Degree													
Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total			
Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent		
1	0.0%	0	0.0%	0	0.0%	1	0.0%	11	0.5%	13	0.6%	26	1.2%		
39	1.8%	0	0.0%	2	0.1%	23	1.1%	106	5.0%	472	22.1%	642	30.0%		
233	10.9%	27	1.3%	44	2.1%	181	8.5%	185	8.7%	39	1.8%	709	33.2%		
369	17.3%	196	9.2%	110	5.1%	76	3.6%	10	0.5%	0	0.0%	761	35.6%		
642	30.0%	223	10.4%	156	7.3%	281	13.1%	312	14.6%	524	24.5%	2,138	100.0%		
University of Maine at Augusta		Degree													
Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total			
Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent		
0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	1.7%	4	1.3%	9	3.0%		
1	0.3%	0	0.0%	0	0.0%	2	0.7%	36	12.1%	46	15.4%	85	28.5%		
33	11.1%	2	0.7%	9	3.0%	27	9.1%	29	9.7%	7	2.3%	107	35.9%		
75	25.2%	4	1.3%	8	2.7%	10	3.4%	0	0.0%	0	0.0%	97	32.6%		
109	36.6%	6	2.0%	17	5.7%	39	13.1%	70	23.5%	57	19.1%	298	100.0%		
University of Maine at Farmington		Degree													
Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total			
Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent		
0	0.0%	0	0.0%	0	0.0%	2	0.6%	3	0.9%	4	1.3%	9	2.8%		
1	0.3%	0	0.0%	0	0.0%	1	0.3%	22	6.9%	96	30.1%	120	37.6%		
11	3.4%	4	1.3%	9	2.8%	31	9.7%	33	10.3%	6	1.9%	94	29.5%		
20	6.3%	41	12.9%	20	6.3%	13	4.1%	2	0.6%	0	0.0%	96	30.1%		
32	10.0%	45	14.1%	29	9.1%	47	14.7%	60	18.8%	106	33.2%	319	100.0%		
University of Maine at Fort Kent		Degree													
Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total			
Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent		
1	0.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.9%	2	1.8%		
1	0.9%	0	0.0%	0	0.0%	4	3.6%	10	9.1%	18	16.4%	33	30.0%		
8	7.3%	1	0.9%	2	1.8%	15	13.6%	11	10.0%	0	0.0%	37	33.6%		
7	6.4%	13	11.8%	10	9.1%	8	7.3%	0	0.0%	0	0.0%	38	34.5%		
17	15.5%	14	12.7%	12	10.9%	27	24.5%	21	19.1%	19	17.3%	110	100.0%		

Highest Degree by Employment Category

University of Maine at Machias	Degree													
	Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Administrators	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.3%	1	1.3%
Faculty	4	5.3%	0	0.0%	0	0.0%	0	0.0%	6	7.9%	19	25.0%	29	38.2%
Salaried	7	9.2%	0	0.0%	2	2.6%	7	9.2%	9	11.8%	0	0.0%	25	32.9%
Hourly	5	6.6%	9	11.8%	6	7.9%	1	1.3%	0	0.0%	0	0.0%	21	27.6%
Total	16	21.1%	9	11.8%	8	10.5%	8	10.5%	15	19.7%	20	26.3%	76	100.0%

University of Maine at Presque Isle	Degree													
	Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Administrators	0	0.0%	0	0.0%	0	0.0%	1	0.7%	0	0.0%	1	0.7%	2	1.5%
Faculty	2	1.5%	0	0.0%	0	0.0%	0	0.0%	16	11.9%	21	15.7%	39	29.1%
Salaried	14	10.4%	1	0.7%	1	0.7%	18	13.4%	18	13.4%	2	1.5%	54	40.3%
Hourly	9	6.7%	18	13.4%	8	6.0%	4	3.0%	0	0.0%	0	0.0%	39	29.1%
Total	25	18.7%	19	14.2%	9	6.7%	23	17.2%	34	25.4%	24	17.9%	134	100.0%

University of Southern Maine	Degree													
	Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Administrators	1	0.1%	0	0.0%	0	0.0%	1	0.1%	7	0.7%	7	0.7%	16	1.6%
Faculty	4	0.4%	0	0.0%	0	0.0%	5	0.5%	46	4.6%	224	22.4%	279	28.0%
Salaried	94	9.4%	4	0.4%	15	1.5%	136	13.6%	157	15.7%	27	2.7%	433	43.4%
Hourly	117	11.7%	45	4.5%	24	2.4%	70	7.0%	14	1.4%	0	0.0%	270	27.1%
Total	216	21.6%	49	4.9%	39	3.9%	212	21.2%	224	22.4%	258	25.9%	998	100.0%

University Governance	Degree													
	Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Administrators	7	43.8%	0	0.0%	1	6.3%	3	18.8%	2	12.5%	3	18.8%	16	100.0%
Faculty	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Salaried	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Hourly	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	7	43.8%	0	0.0%	1	6.3%	3	18.8%	2	12.5%	3	18.8%	16	100.0%

University Services	Degree													
	Not Indicated		HS Graduate		Associates		Bachelor's		Master's		Doctoral		Total	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Administrators	2	0.5%	0	0.0%	1	0.3%	6	1.6%	3	0.8%	1	0.3%	13	3.4%
Faculty	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Salaried	112	29.0%	14	3.6%	39	10.1%	88	22.8%	25	6.5%	3	0.8%	281	72.8%
Hourly	58	15.0%	11	2.8%	12	3.1%	10	2.6%	1	0.3%	0	0.0%	92	23.8%
Total	172	44.6%	25	6.5%	52	13.5%	104	26.9%	29	7.5%	4	1.0%	386	100.0%

Race and Ethnicity by Employment Category

	University of Maine System			University of Maine			University of Maine at Augusta			University of Maine at Farmington			University of Maine at Fort Kent		
	Minority %	Non Minority %	Not Specified %	Minority %	Non Minority %	Not Specified %	Minority %	Non Minority %	Not Specified %	Minority %	Non Minority %	Not Specified %	Minority %	Non Minority %	Not Specified %
Administrators	0.1%	1.9%	0.2%	0.0%	1.2%	0.0%	0.0%	3.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.9%	0.9%
Faculty	2.2%	23.0%	2.2%	2.6%	23.9%	3.6%	0.7%	28.5%	1.9%	35.1%	0.6%	0.6%	4.5%	25.5%	0.0%
Salaries	1.9%	34.0%	2.9%	2.1%	27.0%	4.1%	0.7%	33.2%	0.9%	28.5%	0.0%	0.0%	1.8%	27.3%	4.5%
Hourly	1.3%	27.4%	2.9%	1.1%	30.3%	4.2%	0.3%	35.6%	0.3%	29.2%	0.6%	0.6%	1.8%	30.9%	1.8%
Total	5.5%	86.3%	8.2%	5.8%	82.3%	11.9%	1.7%	100.0%	3.1%	95.6%	1.3%	100.0%	8.2%	84.5%	7.3%

	University of Maine at Machias			University of Maine at Presque Isle			University of Southern Maine			University Governance			University Services		
	Minority %	Non Minority %	Not Specified %	Minority %	Non Minority %	Not Specified %	Minority %	Non Minority %	Not Specified %	Minority %	Non Minority %	Not Specified %	Minority %	Non Minority %	Not Specified %
Administrators	0.0%	1.3%	0.0%	0.0%	1.5%	0.0%	0.2%	1.2%	0.2%	1.6%	6.3%	25.0%	0.0%	3.1%	0.3%
Faculty	1.3%	32.9%	3.9%	2.2%	26.9%	0.0%	2.7%	23.6%	1.6%	28.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Salaries	0.0%	27.6%	5.3%	0.7%	38.1%	1.5%	2.3%	39.4%	1.7%	43.4%	0.0%	0.0%	2.3%	67.1%	3.4%
Hourly	0.0%	22.4%	5.3%	0.7%	27.6%	0.7%	2.5%	23.4%	1.1%	27.1%	0.0%	0.0%	1.0%	19.7%	3.1%
Total	1.3%	84.2%	14.5%	3.7%	94.0%	2.2%	7.7%	87.7%	4.6%	100.0%	6.3%	68.8%	3.4%	89.9%	6.7%

Years of Service by Employment Category

University of Maine System	Years of Service					Total Count
	< 5 Years Svc Count	5 - 14 Yrs Count	15 - 24 Yrs Count	25 Plus Yrs Count	94	
Administrators	30	22	18	24	94	
Faculty	361	323	285	258	1,227	
Salaried	718	510	316	196	1,740	
Hourly	477	457	257	223	1,414	
<b>Total</b>	<b>1,586</b>	<b>1,312</b>	<b>876</b>	<b>701</b>	<b>4,475</b>	
University of Maine	Years of Service					Total Count
< 5 Years Svc Count	5 - 14 Yrs Count	15 - 24 Yrs Count	25 Plus Yrs Count	26		
Administrators	5	5	6	10	26	
Faculty	210	145	138	149	642	
Salaried	304	197	122	86	709	
Hourly	226	253	147	135	761	
<b>Total</b>	<b>745</b>	<b>600</b>	<b>413</b>	<b>380</b>	<b>2,138</b>	
University of Maine at Augusta	Years of Service					Total Count
< 5 Years Svc Count	5 - 14 Yrs Count	15 - 24 Yrs Count	25 Plus Yrs Count	9		
Administrators	2	2	2	3	9	
Faculty	18	26	14	27	85	
Salaried	37	33	21	16	107	
Hourly	40	35	15	7	97	
<b>Total</b>	<b>97</b>	<b>96</b>	<b>52</b>	<b>53</b>	<b>298</b>	
University of Maine at Farmington	Years of Service					Total Count
< 5 Years Svc Count	5 - 14 Yrs Count	15 - 24 Yrs Count	25 Plus Yrs Count	9		
Administrators	1	4	1	3	9	
Faculty	32	40	31	17	120	
Salaried	42	31	10	11	94	
Hourly	21	37	18	20	96	
<b>Total</b>	<b>96</b>	<b>112</b>	<b>60</b>	<b>51</b>	<b>319</b>	
University of Maine at Fort Kent	Years of Service					Total Count
< 5 Years Svc Count	5 - 14 Yrs Count	15 - 24 Yrs Count	25 Plus Yrs Count	2		
Administrators	2	0	0	0	2	
Faculty	4	15	9	5	33	
Salaried	19	10	7	1	37	
Hourly	10	11	9	8	38	
<b>Total</b>	<b>35</b>	<b>36</b>	<b>25</b>	<b>14</b>	<b>110</b>	

Years of Service by Employment Category

	Years of Service					Total Count
	< 5 Years Svc Count	5 - 14 Yrs Count	15 - 24 Yrs Count	25 Plus Yrs Count	Total Count	
<b>University of Maine at Machias</b>						
Administrators	0	0	1	0	1	
Faculty	8	9	6	6	29	
Salaried	19	3	0	3	25	
Hourly	10	5	4	2	21	
<b>Total</b>	<b>37</b>	<b>17</b>	<b>11</b>	<b>11</b>	<b>76</b>	
<b>University of Maine at Presque Isle</b>						
Administrators	0	0	1	1	2	
Faculty	8	12	15	4	39	
Salaried	23	26	3	2	54	
Hourly	10	13	9	7	39	
<b>Total</b>	<b>41</b>	<b>51</b>	<b>28</b>	<b>14</b>	<b>134</b>	
<b>University of Southern Maine</b>						
Administrators	6	5	3	2	16	
Faculty	81	76	72	50	279	
Salaried	168	137	89	39	433	
Hourly	111	73	48	38	270	
<b>Total</b>	<b>366</b>	<b>291</b>	<b>212</b>	<b>129</b>	<b>998</b>	
<b>University Governance</b>						
Administrators	8	4	2	2	16	
Faculty	0	0	0	0	0	
Salaried	0	0	0	0	0	
Hourly	0	0	0	0	0	
<b>Total</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>16</b>	
<b>University Services</b>						
Administrators	6	2	2	3	13	
Faculty	0	0	0	0	0	
Salaried	106	73	64	38	281	
Hourly	49	30	7	6	92	
<b>Total</b>	<b>161</b>	<b>105</b>	<b>73</b>	<b>47</b>	<b>386</b>	



Average Years of Service by Employment Category

	University of Maine System	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	University Governance	University Services
Administrators	14.2	18.0	16.7	17.8	1.0	18.0	26.0	10.5	8.1	14.3
Faculty	13.9	14.1	17.0	12.8	14.4	13.1	12.4	13.4	0.0	0.0
Salaried	10.3	10.3	11.6	9.4	8.4	5.8	6.9	10.0	0.0	11.7
Hourly	12.1	13.1	8.7	14.1	14.9	8.9	13.9	10.9	0.0	7.2
Average Yrs Srvc	11.9	12.5	12.3	12.3	12.3	9.6	10.8	11.2	8.1	10.7

Count of Employment Category with Management Group

	University of Maine System	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	University Governance	University Services
Administrators	26	9	1	3	-	-	1	8	-	4
Management Grp	68	17	8	6	2	1	1	8	16	9
Faculty	1,227	642	85	120	33	29	39	279	-	-
Salaried	1,740	709	107	94	37	25	54	433	-	281
Hourly	1,414	761	97	96	38	21	39	270	-	92
Total	4,475	2,138	298	319	110	76	134	998	16	386

Full Time Equivalent by Funding Source

	University of Maine System			University of Maine			University of Maine at Augusta			University of Maine at Farmington			University of Maine at Fort Kent			
	E&G	Non E&G	Aux	Total	E&G	Non E&G	Aux	Total	E&G	Non E&G	Aux	Total	E&G	Non E&G	Aux	Total
Administrators	89.2	4.0	0.3	93.5	24.3	1.7	0.0	26.0	8.0	1.0	0.0	9.0	9.0	0.0	0.0	2.0
Faculty	1,059.8	122.1	0.0	1,181.9	506.3	111.2	0.0	757.9	82.4	1.0	0.0	140.2	114.0	1.2	0.0	133.8
Salaried	1,025.4	66.6	275.8	1,367.8	490.5	38.1	212.3	747.3	84.7	4.3	2.4	93.1	64.7	1.3	24.8	90.7
Hourly	1,222.4	392.9	78.1	1,693.4	454.8	185.0	57.1	699.0	74.3	23.7	2.0	99.9	75.9	8.5	5.5	90.8
<b>Total</b>	<b>3,396.8</b>	<b>585.6</b>	<b>354.2</b>	<b>4,336.6</b>	<b>1,475.9</b>	<b>336.0</b>	<b>269.4</b>	<b>2,230.3</b>	<b>249.4</b>	<b>30.0</b>	<b>4.4</b>	<b>342.2</b>	<b>263.6</b>	<b>10.9</b>	<b>30.3</b>	<b>124.8</b>

	University of Maine at Machias			University of Maine at Presque Isle			University of Southern Maine			University Governance			University Services			
	E&G	Non E&G	Aux	Total	E&G	Non E&G	Aux	Total	E&G	Non E&G	Aux	Total	E&G	Non E&G	Aux	Total
Administrators	1.0	0.0	0.0	1.0	2.0	0.0	0.0	2.0	14.4	1.3	0.3	16.0	15.5	0.0	0.0	15.5
Faculty	28.9	0.1	0.0	37.7	38.2	0.2	0.0	55.5	259.4	7.4	0.0	388.2	0.0	0.0	0.0	0.0
Salaried	14.5	0.0	4.1	18.6	34.5	2.0	2.5	39.0	218.8	16.7	24.8	264.3	0.0	0.0	0.0	0.0
Hourly	20.8	0.8	1.0	22.6	37.6	11.4	1.0	50.0	255.5	152.3	10.0	417.9	0.0	0.0	0.0	0.0
<b>Total</b>	<b>65.3</b>	<b>0.8</b>	<b>5.1</b>	<b>79.9</b>	<b>112.3</b>	<b>13.6</b>	<b>3.5</b>	<b>146.5</b>	<b>748.2</b>	<b>177.6</b>	<b>35.1</b>	<b>1,086.3</b>	<b>15.5</b>	<b>0.0</b>	<b>0.0</b>	<b>15.5</b>
																<b>382.8</b>

Part-Time Faculty by University

	University of Maine System			University of Maine			University of Maine at Augusta			University of Maine at Farmington			University of Maine at Fort Kent			
	Count	Credit Hrs	Courses Taught	Count	Credit Hrs	Courses Taught	Count	Credit Hrs	Courses Taught	Count	Credit Hrs	Courses Taught	Count	Credit Hrs	Courses Taught	
Spring 2016	806	4,058.0	1,453	190	1,056.0	378	156	762.0	270	50	309.0	88	27	159.0	59	
Fall 2016	842	4,321.0	1,548	210	1,101.0	393	159	763.0	270	41	287.0	75	43	237.0	93	
Spring 2017	814	4,184.5	1,487	210	1,116.0	404	147	724.0	250	44	345.0	89	32	157.0	61	
Fall 2017	867	4,667.5	1,635	216	1,117.0	412	148	769.0	258	45	338.0	90	47	380.0	105	
				University of Maine at Presque Isle			University of Southern Maine									
	Count	Credit Hrs	Courses Taught	Count	Credit Hrs	Courses Taught	Count	Credit Hrs	Courses Taught							
Spring 2016	36	153.5	61	47	260.0	88	307	1,358.5	509							
Fall 2016	38	139.0	57	47	259.0	91	319	1,535.0	569							
Spring 2017	44	184.5	69	40	234.0	80	308	1,424.0	534							
Fall 2017	36	157.0	61	42	248.0	85	346	1,658.5	624							



# TURNOVER ANALYSIS

## SEPARATIONS, RETENTION, AND HIRING STATISTICS

FOR  
REGULAR EMPLOYEES

November 1, 2016 - October 31, 2017

April 3, 2018  
UMS Office of Human Resources

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### Methodology

This report includes only regular staff and primary position records for employees in an active, leave with pay or leave without pay status. Regular staff in the Part-Time Faculty bargaining unit are included; temporary staff in the Part -Time Faculty unit are excluded.

The report covers the period from November 1, 2016 through October 31, 2017.

The population is determined by averaging the number of staff active, on leave, or on leave without pay on October 31, 2016 and October 31, 2017.

Resignations, voluntary retirements, failure to return from leave, death, and disability are considered voluntary separations.

All other separation reasons are considered involuntary separations.

Separations due to death or disability were included with involuntary terminations Turnover Analysis reports prior to 2014.

New hires are hired from outside the University and do not include staff who are already employees.

The new hire and rehire statistics do not include employees who have taken a secondary job or transferred within the University System. Rehires include employees moving from temporary to regular positions and/or have had a separation from the University of Maine System.

#### Key to bargaining groups:

AFUM - Associated Faculties of the Universities of Maine,MEA/NEA

UMPSA - Universities of Maine Professional Staff Association,MEA/NEA

COLT - Associated C.O.L.T. (Clerical, Office,Laboratory and Technical)Staff of the Universities of Maine, MEA/NEA

Service & Maintenance - Teamsters Union Local #340

University Supervisors

Police - Teamsters Union Local #340

Non-Represented Hourly

Non-Represented Salaried

Non-Represented Faculty - Includes Law Faculty, Chairs at some Universities

PATFA - Part-Time Faculty Association , MFT/AFT, AFL-CIO

### Turnover Highlights

- From November 1, 2016 through October 31, 2017 the number of employee separations for all reasons was 16.2% of the average population of regular employees. Of this, voluntary resignations made up 9.6%, and retirements accounted for 3.8%. The remaining 2.8% involuntary separations resulted from end of term appointments, layoff, and termination.
- The turnover rate reported for all education services by the Bureau of Labor Statistics shows an increasing trend of total annual separations levels. The University of Maine System separations trend is very similar to this national trend.
- The number of separations due to position elimination/staff reduction is 20. This is 2 more than last year for the same period.
- The rate of voluntary separations as a percent of the total University of Maine System population is 13.4%.
- 82.9% of the 726 total separations are due to voluntary resignations and retirements. Retirements alone account for 23.4% of the 726 total separations.
- Separation rates vary among universities from a high of 27.0% for University of Maine Machais to 13.9% at the University of Maine at Augusta.
- The average years of service for resignation is 4.9 years, 25.8 years for voluntary retirements, and 4.3 years for involuntary separations. The highest number of resignations occur during an employee's first and second year of service.
- The average years of service for voluntary separations in the UMPSA unit is 4.0 years, and in the COLT, unit 3.5 years. The average years of service for retirements in the UMPSA unit is 21.0 years, and in the COLT unit, 21.2 years.
- The percent of separations for the represented and non-represented as a percentage of the bargaining unit vary with a high of 25.0% in the NR Hrly & PATFA units to 9.6% in the University Supervisors Unit. Separation rates in other represented bargaining units are: AFUM -13.2%, UMPSA - 18.6%, COLT - 17.3%, S&M - 13.9%, Police - 10.9%, NR Sal - 19.0%, NR Fac - 11.1%, Law Fac - 11.1%
- The UMPSA bargaining unit is 31.2% of the population and accounts for 28.4% of the voluntary separations; 79.2% of UMPSA separations are voluntary resignations.
- The percent of new hires/rehires at Universities as a percent of Campus population varies among the campuses with a high of 27% at University of Maine Machias to 8.6% at UMA.
- The percent of new hires/rehires in represented and non-represented units vary from a high of 26.7% in NonRep Hourly to a low of 4.4% in the University Supervisors Unit.
- Retention of employees at all Universities is 83.8%, the lowest retention rate among bargaining groups is PATFA at 75.0%.



**Average Headcount - Regular Staff  
by University**

UM	UMA	UMF	UMFK	UMM	UMPI	USM	U GOV	U SERV	TOTAL
Num	Num	Num	Num	Num	Num	Num	Num	Num	Num
2,151	302	320	109	74	138	1,001	15	382	4,490

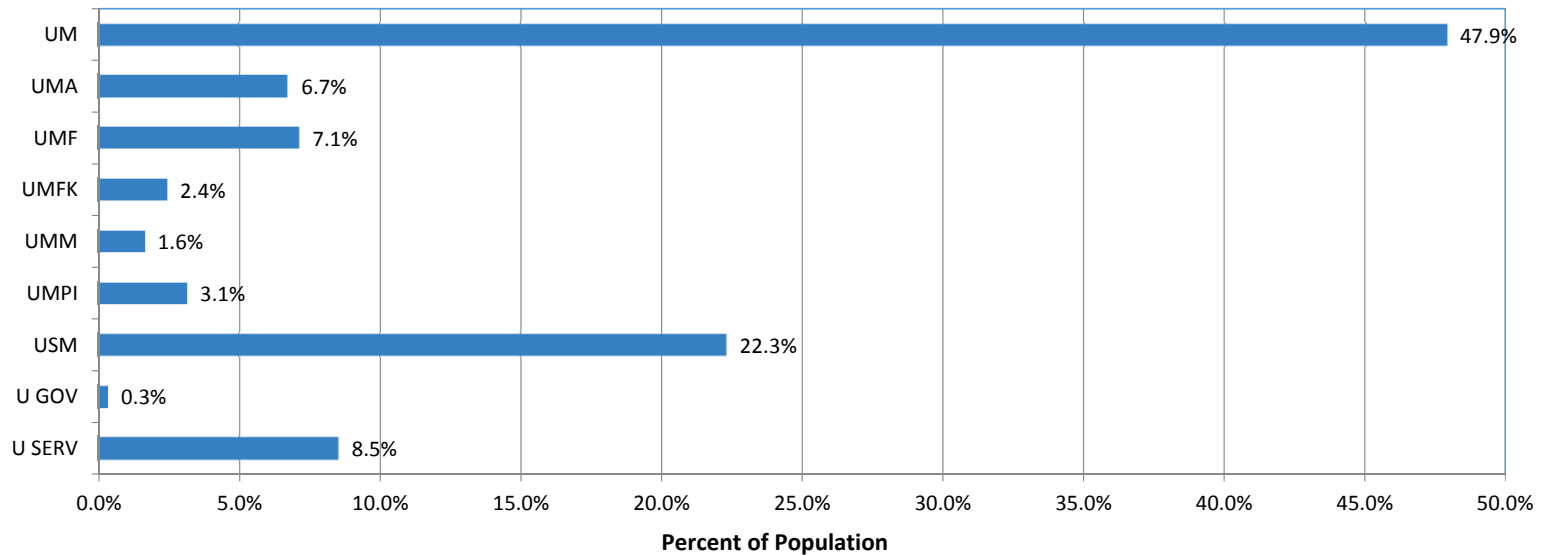
Headcount is an average of the number of regular staff on October 31, 2016 and October 31, 2017.

**Turnover Formula**

(# of separations during the measurement period /  
average # of employees during the measurement period) X 100

**726 / 4490 = 16.2%**

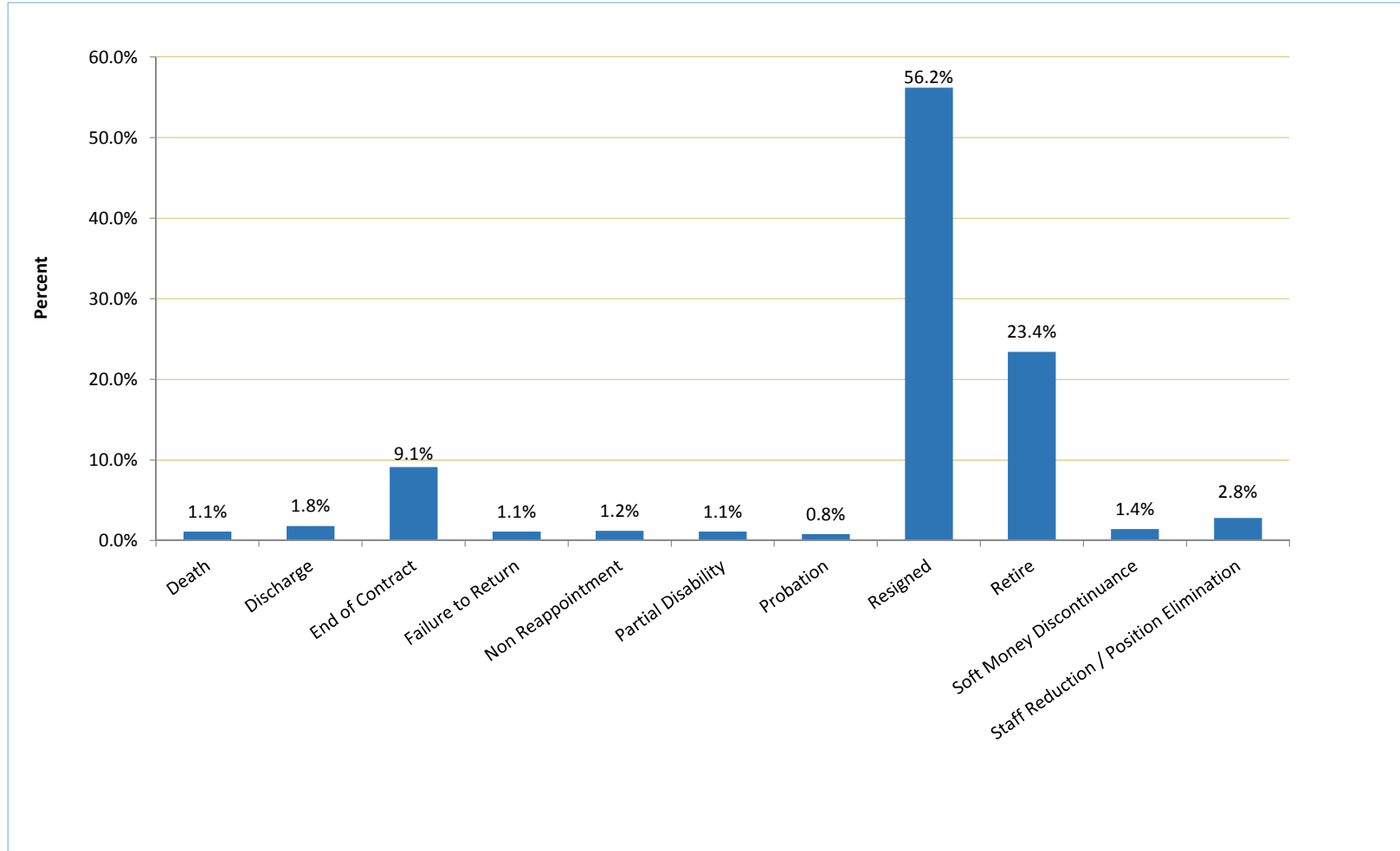
**Employees by University - Percent of Population**

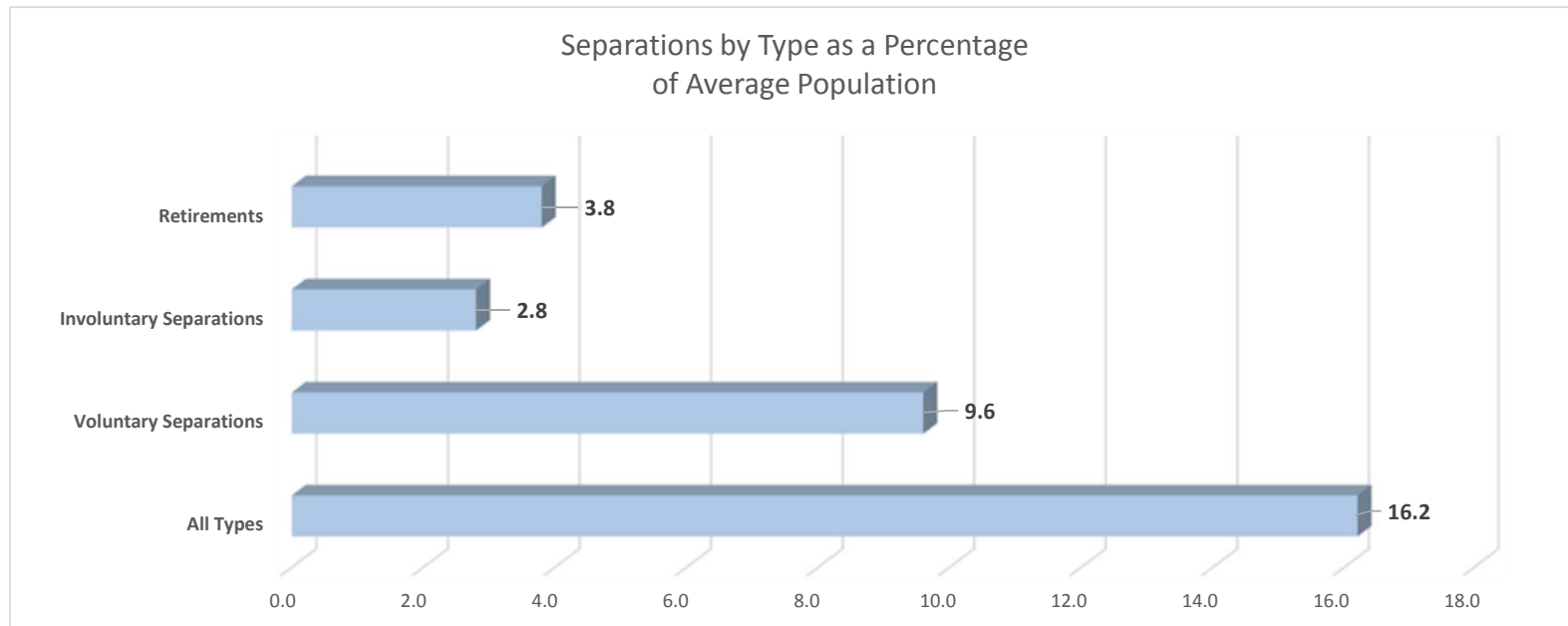
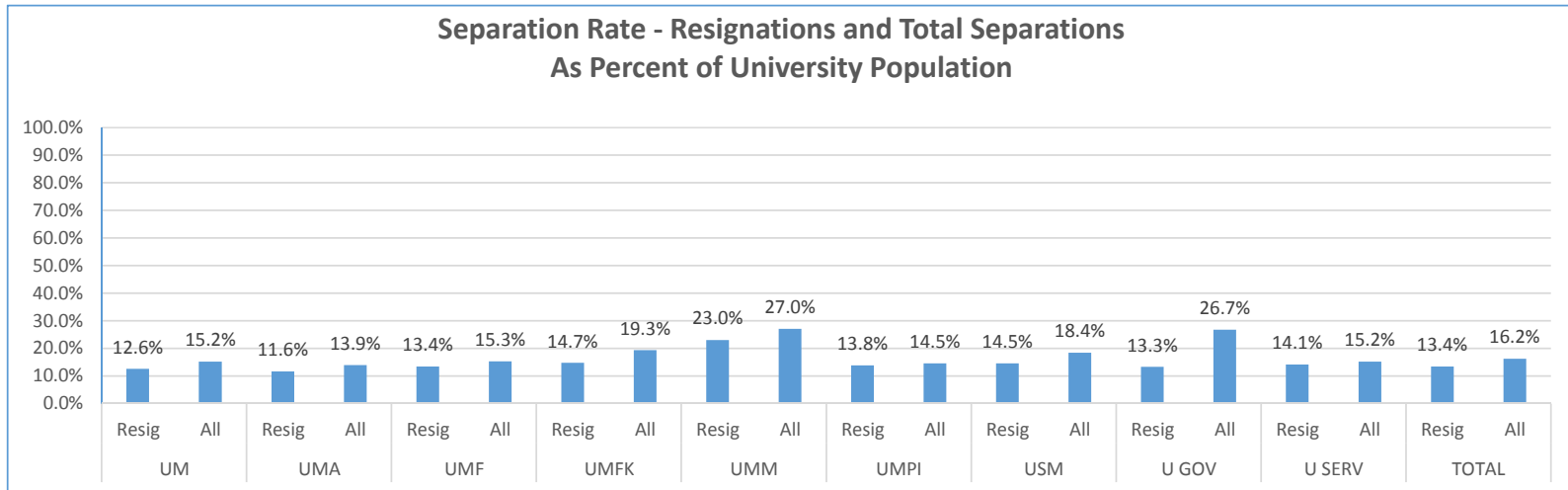


**Separations by Reason  
by University**

	Death	Discharge	End of Appointment / Contract	Failure to Return from Leave	Non-Reappointment	Partial/Total Disability	Probationary Period	Resignation	Retire	Soft Money Discontinuance	Staff Reduction / Position Elimination	Total
<b>UM</b>	5	4	37	4	4	5	2	178	79	4	6	<b>328</b>
<b>UMA</b>		1	2	1	2		1	26	8		1	<b>42</b>
<b>UMF</b>		1	1		2	2		29	12	2		<b>49</b>
<b>UMFK</b>			4					12	4		1	<b>21</b>
<b>UMM</b>			1					13	4		2	<b>20</b>
<b>UMPI</b>						1		10	8		1	<b>20</b>
<b>USM</b>	2	7	19		1		3	102	41	4	5	<b>184</b>
<b>U GOV</b>								3	1			<b>4</b>
<b>U SERV</b>	1		2	3				35	13		4	<b>58</b>
<b>TOTAL</b>	<b>8</b>	<b>13</b>	<b>66</b>	<b>8</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>408</b>	<b>170</b>	<b>10</b>	<b>20</b>	<b>726</b>

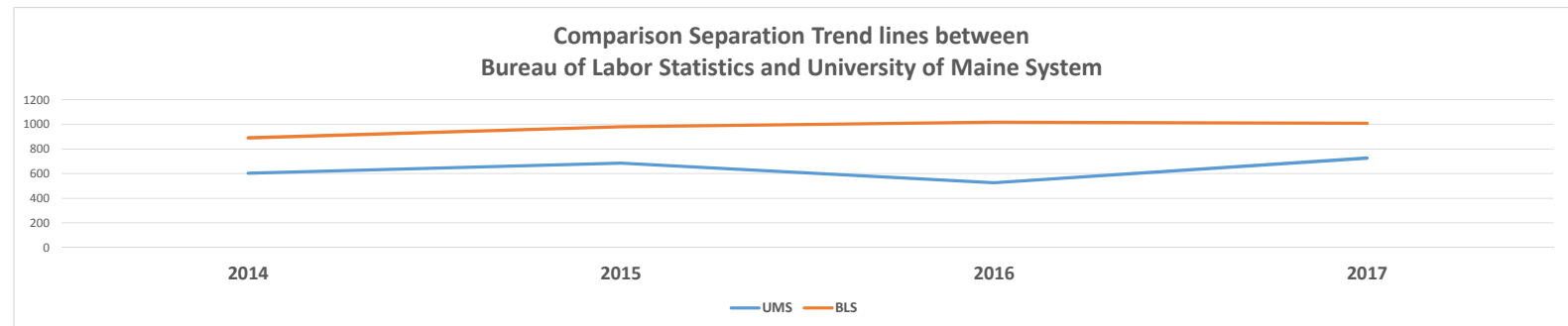
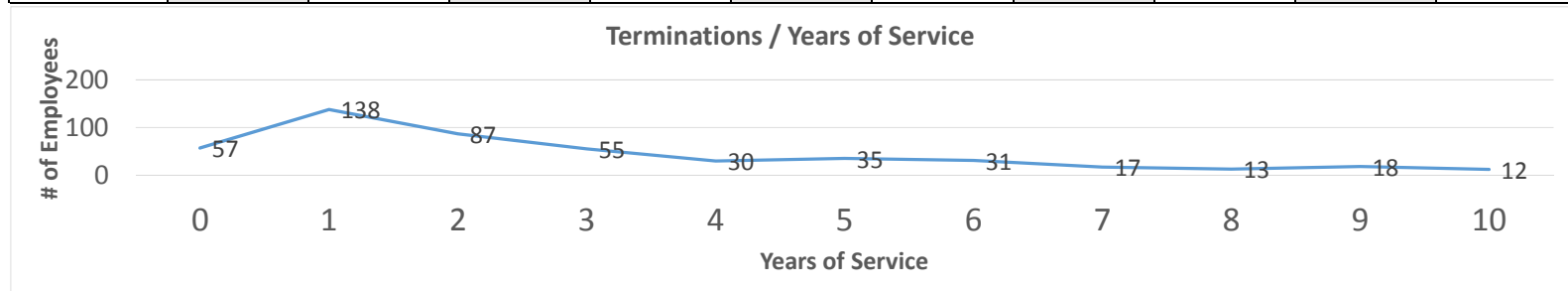
**Separations by Reason as Percent of Total Separations**





Average Years Service Prior to Separation  
by University

	UM	UMA	UMF	UMFK	UMM	UMPI	USM	U GOV	U SERV	Total
	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs
<b>Involuntary Separation</b>	3.1	1.4	5.1	6.5	2.0	8.3	6.1	0.0	5.7	4.3
<b>Retirement</b>	26.5	25.8	20.0	26.3	24.3	26.8	26.1		24.1	25.8
<b>Voluntary Separation</b>	4.9	4.0	5.4	7.1	3.3	4.6	4.4	5.2	5.7	4.9
<b>Total</b>	9.8	7.7	8.9	10.6	7.3	13.7	9.6	14.7	9.8	9.7



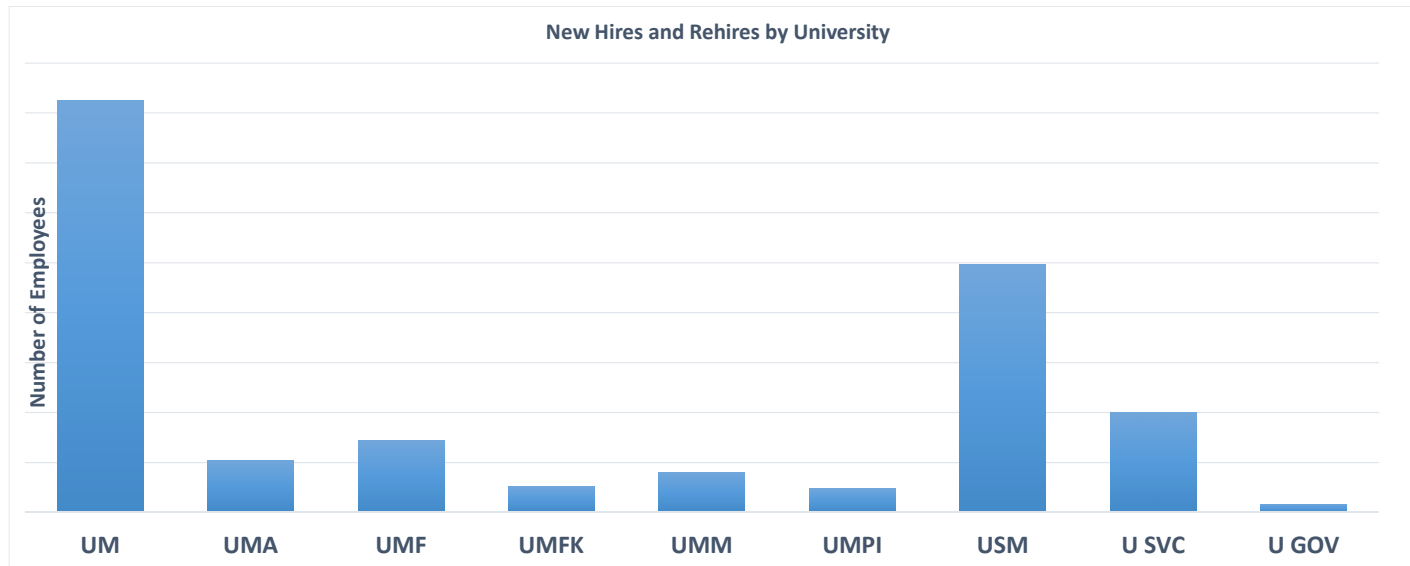
**Retention:**  
 (# of individual employees who remained employed for entire measurement period /  
 # of employees at start of measurement period) X100

**Retention by University**  
 as Percent of Campus Population

UM		UMA		UMF		UMFK		UMM		UMPI		USM		U GOV		U SERV		TOTAL	
Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
1,827	84.8%	262	86.2%	270	84.6%	86	80.4%	51	71.8%	121	85.8%	815	81.6%	9	69.2%	317	84.5%	3,758	83.8%

**New Hires and Rehires**  
 by Number and Percent of Camus Population

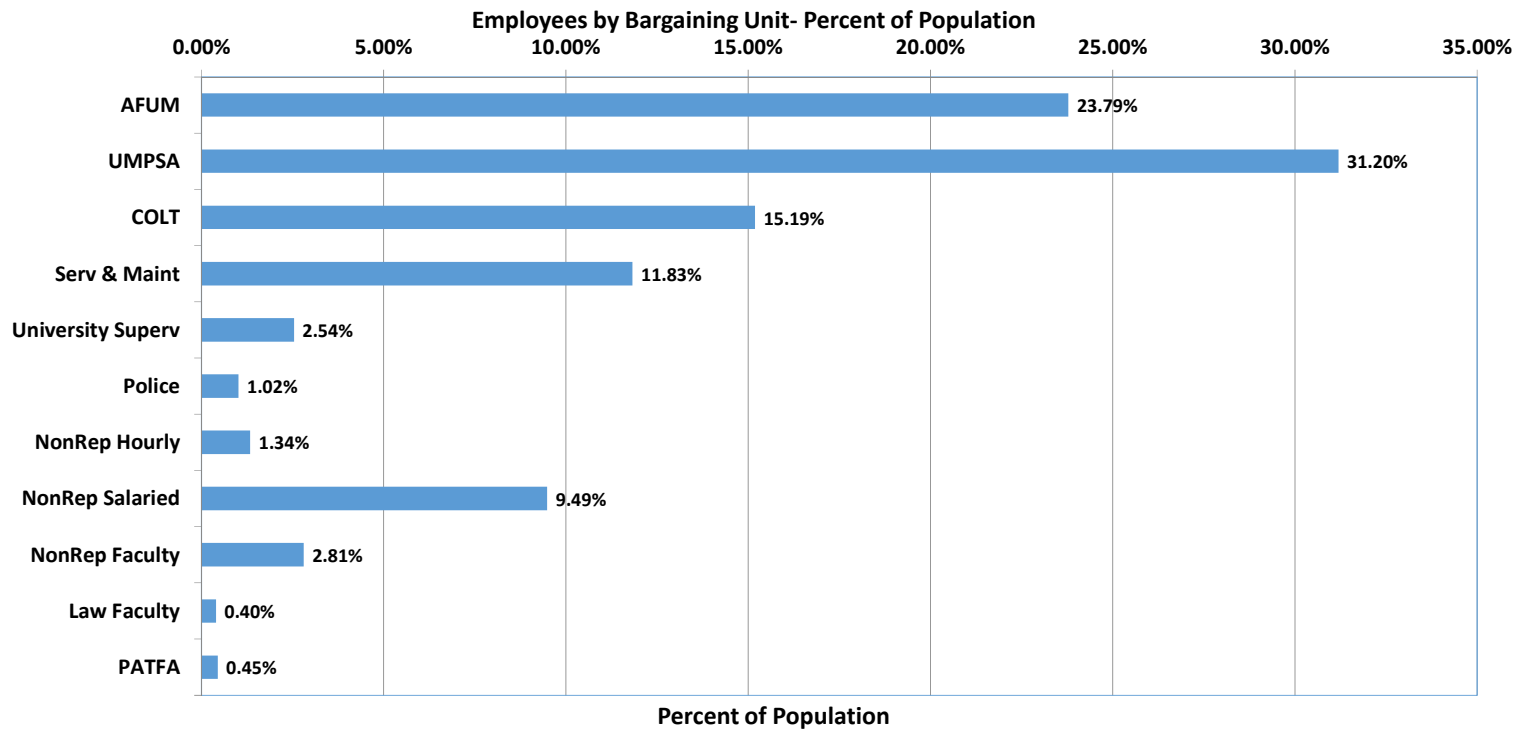
UM		UMA		UMF		UMFK		UMM		UMPI		USM		U GOV		U SERV		Total	
Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
206	9.6%	26	8.6%	36	11.3%	13	11.9%	20	27.0%	12	8.7%	124	12.4%	4	26.7%	50	13.1%	491	10.9%



**Average Headcount - Regular Staff  
By Bargaining Unit**

AFUM	UMPSA	COLT	Serv & Maint	University Superv	Police	NonRep Hourly	NonRep Salaried	NonRep Faculty	Law Faculty	PATFA	Total
Num	Num	Num	Num	Num	Num	Num	Num	Num	Num	Num	Num
1,068	1,401	682	531	114	46	60	426	126	18	20	4,492

Headcount is an average of the number of regular staff on October 31, 2016 and October 31, 2017.



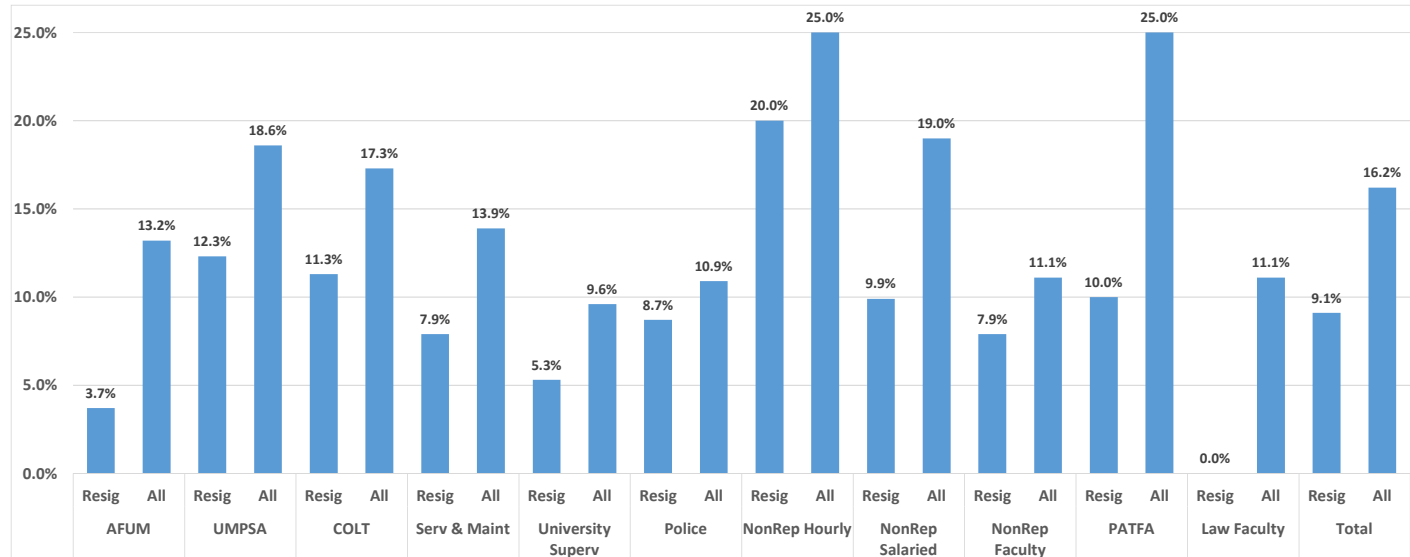
Board of Trustees Meeting - Reports:

Separations by Reason  
By Bargaining Unit

	Death	Discharge	End of Appointment / Contract	Failure to Return from Leave	Non-Reappointment	Partial/Total Disability	Probationary Period	Resignation	Retirement	Soft Money Discontinuance	Staff Reduction	Total
AFUM	3		24		5	1		40	67		1	141
UMPSA	3	3	29	2	2		3	173	28	8	9	260
COLT		3	4	2		1	1	77	26	1	3	118
Service & Maint	1	7	1	1		4		42	18			74
University Supervisor				3				6	2			11
Police	1							4				5
Non-Rep Hourly						2		12	1			15
Non-Rep Salaried			5		1		2	42	23	1	7	81
Non-Rep Faculty			2		1			10	1			14
PATFA			1					2	2			5
Law Faculty									2			2
<b>Total</b>	<b>8</b>	<b>13</b>	<b>66</b>	<b>8</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>408</b>	<b>170</b>	<b>10</b>	<b>20</b>	<b>726</b>

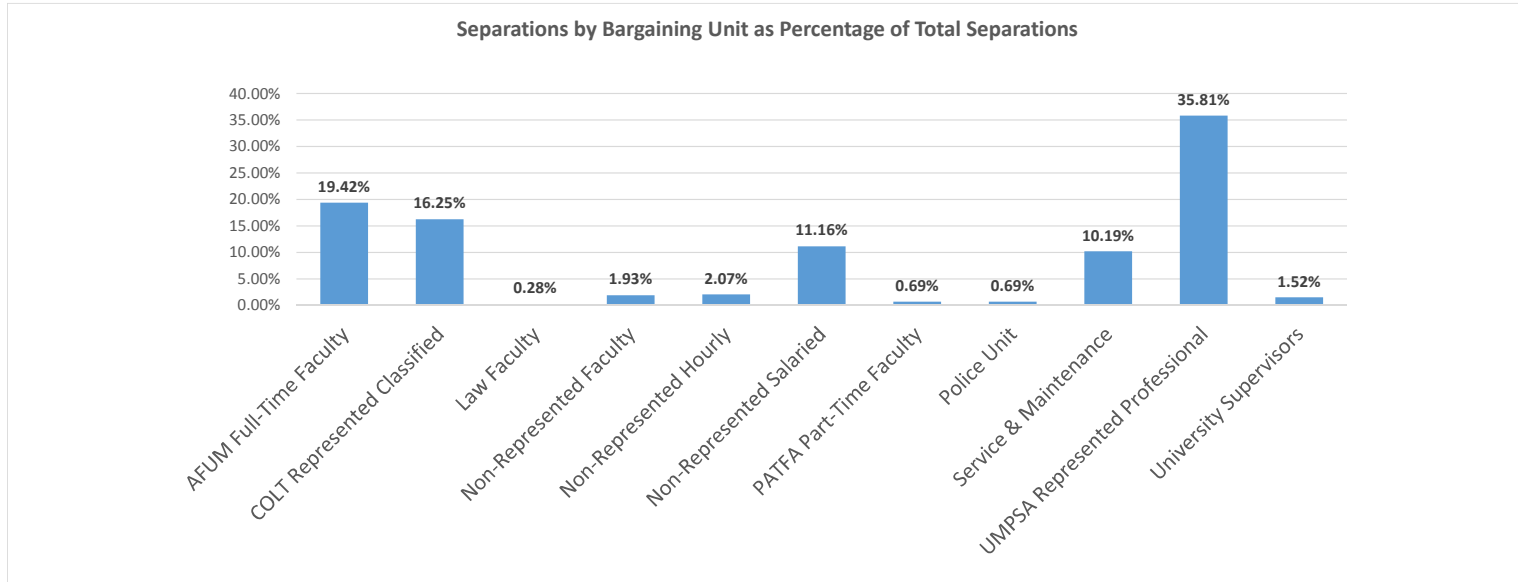


**Separation Rate - Resignations and Total Separations  
As Percent of Average Bargaining Unit Population**



**Average Years of Service by Separation Reason  
by Bargaining Unit**

	AFUM	UMPSA	COLT	Serv & Maint	University Superv	Police	NonRep Hourly	NonRep Salaried	NonRep Faculty	PATFA	Law Faculty
	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs	Yrs
<b>Involuntary</b>	3.1	3.9	4.9	10.2	0.0	0.0	0.0	5.0	3.4	1.0	0.0
<b>Retire</b>	28.7	21.0	21.2	27.2	30.0	0.0	48.5	25.0	32.0	14.5	44.1
<b>Voluntary Separation</b>	7.6	4.0	3.5	4.8	9.9	8.3	6.9	6.1	4.8	7.0	0.0



**Retention by Bargaining Unit  
by Number and Percent**

AFUM		UMPSA		COLT		Serv & Maint		University Superv		Police		NonRep Hourly		NonRep Salaried		NonRep Faculty		Law Faculty		PATFA		Total	
Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT
924	86.8%	1,122	81.2%	570	82.8%	456	86.0%	104	90.4%	42	89.4%	44	74.6%	351	81.3%	114	89.1%	16	88.9%	15	75.0%	3758	83.8%

**New Hires and Rehires  
by Number and Percent of Bargaining Unit Population**

AFUM		UMPSA		COLT		Serv & Maint		University Superv		Police		NonRep Hourly		NonRep Salaried		NonRep Faculty		Law Faculty		PATFA		Total	
Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT	Num	PCT
84	7.9%	198	14.1%	87	12.8%	58	10.9%	5	4.4%	4	8.7%	16	26.7%	29	6.8%	7	5.6%	1	5.6%	2	10.0%	491	10.9%

# Growing Engineering to Grow Maine's Economy

*Five-Year Plan to Build Up Engineering in the University of  
Maine System*

**Prepared for the University of Maine System Board of Trustees**

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By the UMaine-USM Engineering Planning Team with assistance from 45 North Research, LLC  
February 2018

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## Executive Summary

Professionals in knowledge-intensive fields such as engineering drive economic growth and increase opportunities for all Maine workers. However, the supply of engineers in Maine is growing slower than demand, and over the next decade more than one-quarter (28%) of the state's engineers will reach retirement age. Addressing this impending shortage must be a priority for Maine to continue growing economically.

The University of Maine System (UMS) is uniquely positioned to address this engineering workforce shortage, meeting the needs of both Maine businesses and aspiring Maine students. The engineering faculties of the University of Maine (UMaine) and the University of Southern Maine (USM) share a **unified vision** of UMS as a **national leader** in engineering research and education, and a **driver of economic growth** in Maine.

To achieve this, UMaine and USM propose to:

- **Increase the number of job-ready engineering undergraduates by 60%** within a decade (1,200 more undergraduates enrolled in engineering compared to today) through expanded as well as new programs at both UMaine and USM;
- **Target the unmet needs of Southern Maine businesses** by building or expanding three new programs at USM: Industrial Engineering (creating the only program of its kind in northern New England); Engineering Science; and Electrical and Computer Engineering (an expansion of the existing Electrical Engineering program);
- Build a robust **K-12 pipeline** of Maine students interested in engineering and ready to succeed at the post-secondary level;
- Expand **pathways for Maine community college students** to easily transition into UMaine's and USM's undergraduate engineering programs; and
- Help more engineering graduates launch their careers in Maine through **internships and co-ops**.

Working **together**, UMaine's and USM's engineering programs will meet the needs of Maine businesses, support the aspirations of Maine students, and play a key role in UMS's ongoing efforts to push Maine's economy onto a higher growth path. The total operational cost is estimated at \$16 million for the first five years. Initial funding will come from multiple sources. Over time, higher revenue from tuition derived from enrollment growth will strengthen the finances of both institutions. The following table details those costs.

OPERATING COSTS	Year 1	Year 2	Year 3	Year 4	Year 5	Total
New faculty and staff (USM)	\$126,000	\$257,000	\$371,000	\$518,000	\$730,000	\$2,002,000
New faculty and staff (UMaine)	\$417,000	\$833,000	\$1,250,000	\$1,667,000	\$2,083,000	\$6,250,000
K-12/community college pipeline (UMaine and USM)	\$982,000	\$982,000	\$982,000	\$982,000	\$982,000	\$4,910,000
Internships and co-ops (UMaine and USM)	\$560,000	\$560,000	\$560,000	\$560,000	\$560,000	\$2,800,000
<b>TOTAL</b>	<b>\$2,084,000</b>	<b>\$2,632,000</b>	<b>\$3,163,000</b>	<b>\$3,727,000</b>	<b>\$4,355,000</b>	<b>\$15,962,000</b>

In addition to these operating costs, the capital investment needed for USM's expanded academic program offerings is estimated at \$5 million. At UMaine, investment is needed in the near-term for the Engineering Education and Design Center (EEDC). This project has partial funding of about \$50 million from debt service authorized by the legislature and an internal commitment by UMaine. An additional \$30 million is needed to complete this project, which is now in the design phase. Starting in FY23, this must be followed by a \$70 million investment to renovate five existing UMaine engineering education buildings.

This plan builds on successful initiatives and investments already underway at both institutions, such as the Maine Engineering Pathways Program and the EEDC. It lays out the complementary investments needed to ensure the continued success of UMS's flagship engineering program at UMaine, and targeted investments in Southern Maine needed to create a **truly comprehensive, statewide system of engineering education.**

#### Next Steps

Following the March 18-19, 2018 meeting of the UMS Board of Trustees, the Planning Committee will begin the process of developing an implementation plan. This process will include refining the academic programming, final costing, identification of funding sources, and pursuing, as appropriate, each campus's internal procedures for academic and budget planning and approvals. In Summer 2018, the final implementation plan will be submitted for review and approvals to the Chief Academic Officers Council, the Academic and Student Affairs Committee, and the Board of Trustees in that order.

## Background

In February 2017, USM administrators and engineering faculty convened a group of Southern Maine's largest employers of engineers, including Bath Iron Works, Pratt & Whitney, IDEXX, and S. D. Warren. They asked about the companies' current and future workforce needs, and how USM could help meet them. The feedback was clear: **"There is a lack of qualified people."** The employers reported taking months to find the right job candidates and recruiting out-of-state at places such as the Massachusetts Institute of Technology (MIT) and Northeastern University.

Several months later, Maine State Senator Amy Volk presented a draft resolve directing UMS to develop a plan to strengthen engineering-related programs across all UMS campuses, but especially at USM (see Appendix J). Although not voted affirmatively out of committee, the Maine legislature's Joint Standing Committee on Education signaled its expectation that UMS follow the spirit of the resolve and develop a plan.

At the same time, the legislature approved \$50 million of financing for a new Engineering Education and Design Center at UMaine. An additional \$30 million is still needed for this project. When combined with increases in engineering faculty, it will expand UMaine's undergraduate engineering capacity by 1,000 students. While this investment is a necessary first step, UMaine's College of Engineering has identified another \$70 million in renovations and upgrades needed to extend the life of several engineering education buildings that range in age from 47 to 90 years old and have had no significant upgrades since construction.

In response to these events, USM formed a planning committee with representatives of UMaine's College of Engineering (see Appendix K). They met five times over six months to determine how best to strengthen engineering across UMS, but especially at USM. This five-year plan is the result of that partnership. It details five years of collaborative work between UMaine and USM to grow engineering system-wide. It includes estimates of the cost of that work for the first five years and it projects the outcomes of the plan over the next decade. It also incorporates the suggestions of industry leaders who provided feedback to an initial draft of the plan in February 2018.

This plan builds on the intercampus collaboration documented in 2015 by the Academic Program Review and Integration Process (APRIP) engineering team, which also included representatives from both UMaine and USM. That report described the history of alliance between the two campuses and proposed increasing access by allowing students to start their engineering degree at any UMS campus and easily transfer to UMaine or USM. It also promoted transfers between the two institutions.

This plan is the logical next step of these activities; it builds on today's intercampus collaborations and legislative support for making UMS's engineering programs even more powerful drivers of economic growth.

## Institution Roles

UMaine's and USM's engineering programs each have a unique, vital role to play in creating a truly comprehensive, statewide system of engineering education. Indeed, they believe the only way to achieve this vision is for UMS to have two strong engineering programs working toward coordinated, complementary goals. Together, UMaine and USM propose the following roles:

**UMaine's College of Engineering** is the heart of UMS's engineering vision and its research powerhouse. It has world-class research facilities, industry ties cultivated over decades, and an outstanding reputation that lets it compete nationally for students, faculty, and research funding. UMaine draws students from across Maine's community college system and every high school in the state. Its nationally recognized K-12 outreach and technical assistance programs have benefited all of Maine.

**USM's Department of Engineering** is dedicated to meeting the workforce needs of Greater Portland, Maine's largest and fastest growing metropolitan area. It is nimble and responsive. Its location gives it unique access to businesses and place-bound students who otherwise would be unable to study engineering. It cultivates students from Southern Maine Community College and other local sources.



## The Big Picture: A Multi-Part Investment Strategy

This plan builds on initiatives and investments already underway at UMaine and USM, including the Maine Engineering Pathways Program and UMaine's Engineering Education and Design Center (EEDC). This plan proposes the next phase of investment to ensure the continued success of UMaine's flagship program and to address specific unmet needs in Southern Maine, thereby creating a **truly comprehensive, statewide system of engineering education**.

### UNDERWAY: Maine Engineering Pathways Program

Beginning in Fall 2018, Maine students will be able to take the first year of their engineering education at UMS campuses in Augusta, Bangor, Farmington, Machias, and Presque Isle, plus several outreach centers, and then transfer to UMaine or USM to complete their degrees. The Maine Engineering Pathways Program will be a gateway into engineering for Maine students who want to begin their post-secondary studies close to home.

### UNDERWAY: UMaine Engineering Education and Design Center

The design of UMaine's new EEDC is underway. This building, estimated to cost \$80 million, will expand UMaine's undergraduate engineering capacity by an additional 1,000 students. The state legislature and UMaine have committed about \$50 million to the project. The remainder will be raised from private giving and other sources, including a possible need for additional state bond funding. Design is expected to be completed in late 2019, with construction beginning in early 2020. The center is scheduled to open in 2022.

### PENDING: Five-Year Plan to Build-Up Engineering in the UMS

This plan proposes complementary strategies and investments to further expand the pipeline of engineering students in Maine, target the workforce needs of Southern Maine businesses, ensure UMaine's continued success, and make UMS a national leader in connecting students with industry. The table below shows the estimated operational costs for the first five years. They include four new engineering faculty at USM, sixteen new faculty and staff at UMaine, and five years of programming costs for the K-12 pipeline and internships initiatives. The potential cost of additional non-engineering faculty to accommodate increased student enrollment are not included.

OPERATING COSTS	Year 1	Year 2	Year 3	Year 4	Year 5	Total
New faculty and staff (USM)	\$126,000	\$257,000	\$371,000	\$518,000	\$730,000	\$2,002,000
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Revenue projections in Appendix H show how rising student enrollment will generate new tuition revenue that exceeds these costs.

In addition to operating expenses, there is an estimated \$30 million of additional funding needed to complete UMaine's EEDC, \$70 million needed to renovate five existing UMaine engineering education buildings, and \$5 million needed for renovations and upgrades at USM. (There is currently \$1.5 million for USM engineering capital needs included in the project list associated with a potential General Obligation bond being considered in the Maine legislature, unrelated to this plan).

**CAPITAL COSTS**

<b>UMaine</b>	
Additional capital to complete EEDC	\$30,000,000
Renovation of five existing buildings	\$70,000,000
<b>USM</b>	\$5,000,000
<b>TOTAL</b>	<b>\$105,000,000</b>

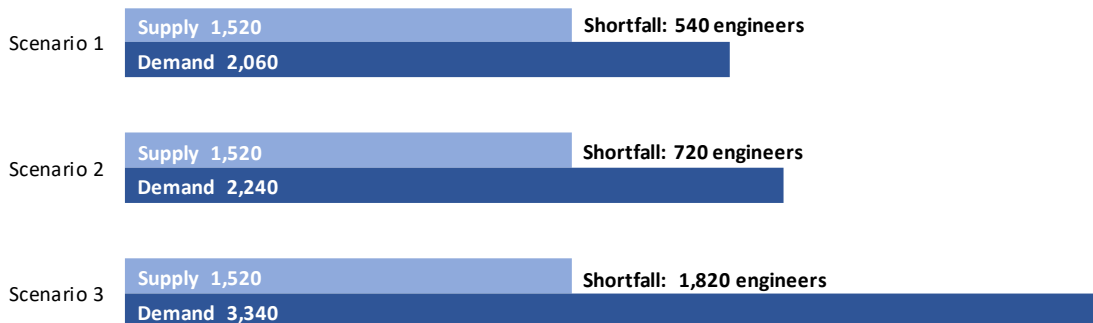
## Maine Needs Engineers

The UMaine-USM engineering team began by assessing the current and future demand for engineers in Maine. Its research confirmed reports by Maine businesses of shortages across many disciplines. It also revealed engineering’s unique potential to drive economic growth and increase opportunities for all Maine workers.

### Projections

Appendix A contains detailed projections of Maine’s need for engineers. The overall picture suggests the current supply of engineers is insufficient to meet future demand. Two forces contribute to the imbalance: the aging of Maine’s engineering workforce and the growth of the profession. Census data indicate that 28% of Maine engineers are age 55 and older, meaning they will become eligible to retire in the next ten years. At the same time, recent job-posting data suggests the demand for engineers is growing faster than previously projected. Taken together, even conservative scenarios suggest Maine’s engineering shortfall could range from 540 to 1,820 over the next decade (below). Looking regionally, New England is projected to have almost 40,000 job openings for engineers over the coming decade.

**All projection scenarios show a shortage of engineers in Maine in next ten years.**



Source: 45 North Research. See Appendix \_\_ for detail and methodology.

Projected shortages are particularly high in four engineering disciplines: civil, mechanical, industrial, and electrical. Of these, industrial engineering stands out as having the highest unmet demand. The U.S. Department of Labor projects 450 annual openings in that field throughout New England, more than double the annual number of degrees awarded (211 in 2014-2015). This creates a potential opportunity for UMS because there are just seven industrial engineering programs in New England, none of which are in Maine, Vermont, or New Hampshire (by comparison, there are 29 mechanical and 21 civil engineering programs in New England).

### Role of Engineers in Economic Development

Maine’s need for engineers is twofold. The above projections show the need generated by the field’s steady expansion and the state’s aging workforce. Maine’s other need is for economic

development. This plan proposes increasing UMS’s engineering capacity to push the state onto a higher growth path.

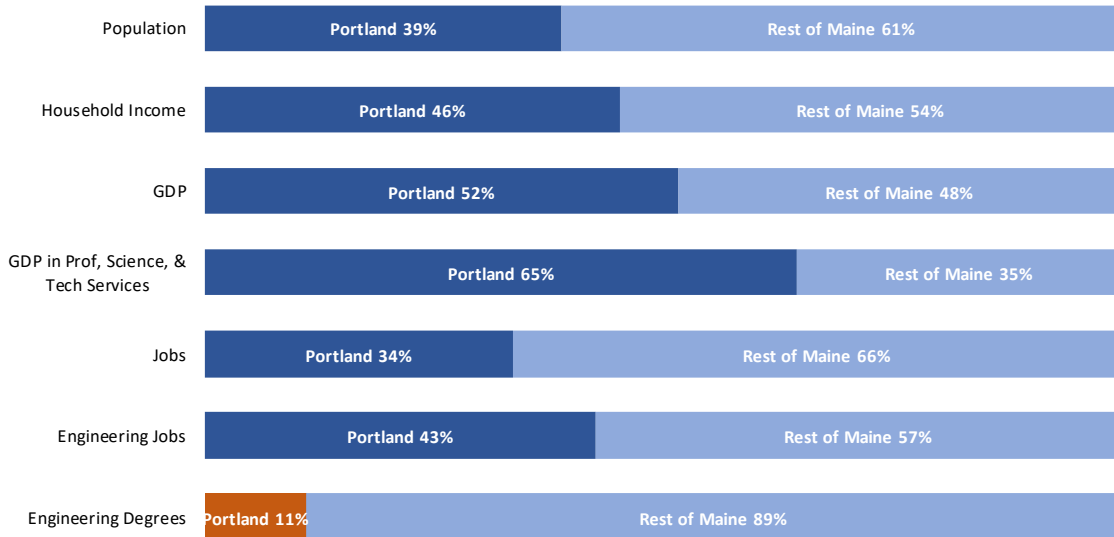
A large body of academic research suggests that having a higher share of professionals in knowledge-intensive fields such as engineering can drive economic growth. UMaine economist Todd Gabe recently published an extensive analysis of the factors that have influenced the growth of U.S. cities and states since 1990 [Gabe, T. M. (2017). *The Pursuit of Economic Development: Growing Good Jobs in US Cities and States*. Springer.] Gabe finds that having a critical mass of professionals with specialized skills and knowledge in certain fields generates benefits that ripple through the broader economy. Writing about these “high-knowledge” fields such as engineering, Gabe finds, “...[P]eople with knowledge about these topics are rewarded in the labor market (i.e., private returns to human capital) and their activities improve the productivity of others around them (i.e., human capital externalities).” (Gabe, 2017, p. 99). In other words, there are social, as well as private returns to increasing educational attainment in fields such as engineering. **Maine needs engineers not just to replace retiring Baby Boomers but to increase the productivity of its entire workforce.**

#### Role of Southern Maine in Economic Development

Southern Maine businesses that employ engineers have repeatedly expressed to USM their need for more workers; their inability to find them may be affecting the pace of growth in the region. That has implications for all of Maine. Greater Portland is Maine’s urban economic engine, generating over half of the state’s gross domestic product (GDP). By nearly every measure, this geographically small region generates an outsized amount of activity. The chart below shows the economic size of the Portland-South Portland Metropolitan Statistical Area (MSA) by several measures, including population, jobs, and income.

Two measures highlight the level of engineering activity in Greater Portland. GDP from engineering establishments alone is not available (and does not include the contributions of engineers in other industries) but is available for professional, scientific, and technical services, where 40% of engineers work. The table below shows that two-thirds (65%) of Maine’s activity in that broad industry occurs in Greater Portland. Additionally, **43% of engineering jobs are in Greater Portland and just 11% of engineering degrees are awarded there.**

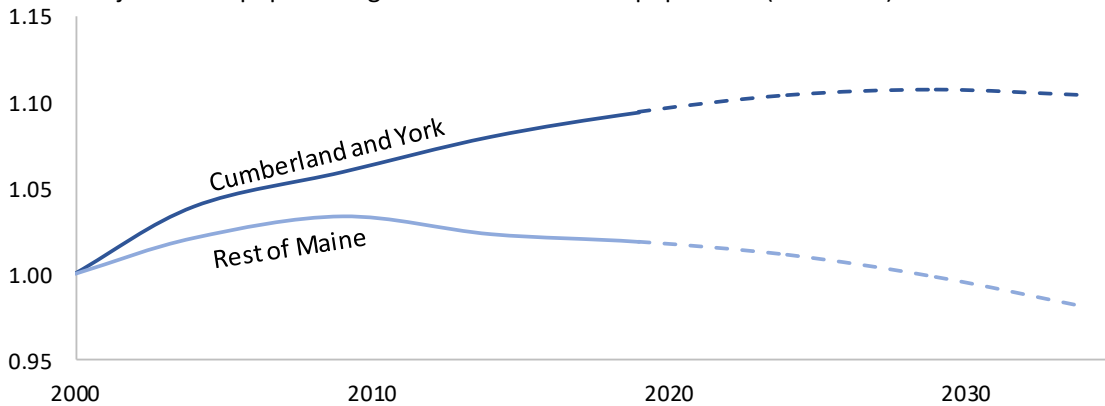
**Greater Portland has a large share of Maine's economy and a small share of engineering degrees.**



Sources: U.S. Census Bureau, American Community Survey, 2011-2015 five-year average population for Maine and Portland-South Portland MSA; U.S. Bureau of Economic Analysis, Personal Income (2015) and Gross Domestic Product (2016) for Maine and Portland-South Portland MSA; U.S. Bureau of Labor Statistics, Occupational Employment Statistics jobs by occupation in Maine and Portland-South Portland MSA (May 2016); National Center for Education Statistics, engineering bachelor's and graduate degrees conferred (2015-2016)

**Greater Portland's contribution to Maine's economy is becoming more critical as other regions face population decline and the loss of traditional industries.** The State of Maine's current population projections show Cumberland and York counties growing 2.2% from 2014 to 2034 and the rest of Maine declining 4.2%.<sup>1</sup>

**The populations of Cumberland and York counties are growing; Maine's population is falling.**  
 Projections of population growth indexed to 2000 population (2000=1.00)

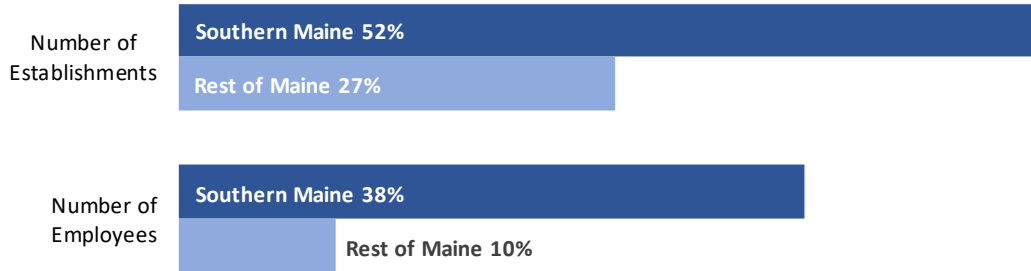


Source: U.S. Census Bureau (historical estimates); Maine Office of Policy and Management (projections)

<sup>1</sup> State of Maine, Office of Policy and Management, population projections through 2034, released November 2016.

Diving deeper into engineering, we find that both the number of engineering establishments in Southern Maine (defined as Cumberland and York counties) and the number of people they employ is growing faster than elsewhere in the state.<sup>2</sup> This finding illustrates both the trajectory of the Southern Maine economy and how a critical mass of high-knowledge professionals can spur economic growth.

**Engineering establishments are growing faster in Southern Maine than in the rest of the state.**  
 Percentage growth from 2001 to 2016



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, "Southern Maine" is Cumberland and York counties

Overall, these statistics suggest there is a strong need for engineering in Maine, that it is concentrated in the southern part of the state, and that increasing the number of professionals in this field could benefit the broader Maine economy.

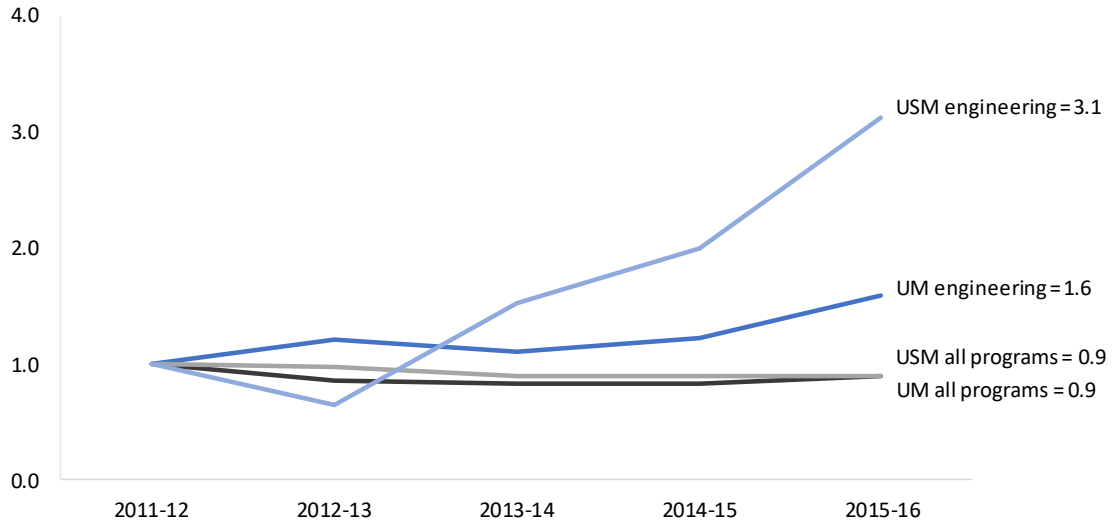
#### Student Demand

Enrollment trends show rising interest in engineering among undergraduates at UMaine and USM. From 2011-12 to 2015-16, the number of engineering bachelor's degrees awarded by these institutions increased 60% and 210% respectively, even as the total bachelor's degrees at both institutions fell 10%.<sup>3</sup> High growth at USM highlights the extent of unmet need for engineering education in Southern Maine. In this new market, serving mostly place-bound students, USM's growth appears to be complementing, rather than competing with UMaine. UMaine's engineering program has continued to grow even as USM expands. In fact, because of its limited space, UMaine's College of Engineering has had to limit enrollment in its most popular programs for the past three years due to capacity constraints.

<sup>2</sup> These statistics include only engineering firms. They do not include engineers working at companies in other industries, such as manufacturing.

<sup>3</sup> National Center for Education Statistics, Integrated Postsecondary Education Data System, accessed 11/15/17. First-major bachelor's degrees awarded by program. USM awarded 17 engineering bachelor's degrees in 2011-2012 and 53 in 2015-2016. UMaine awarded 161 engineering bachelor's degrees in 2011-2012 and 255 in 2015-2016.

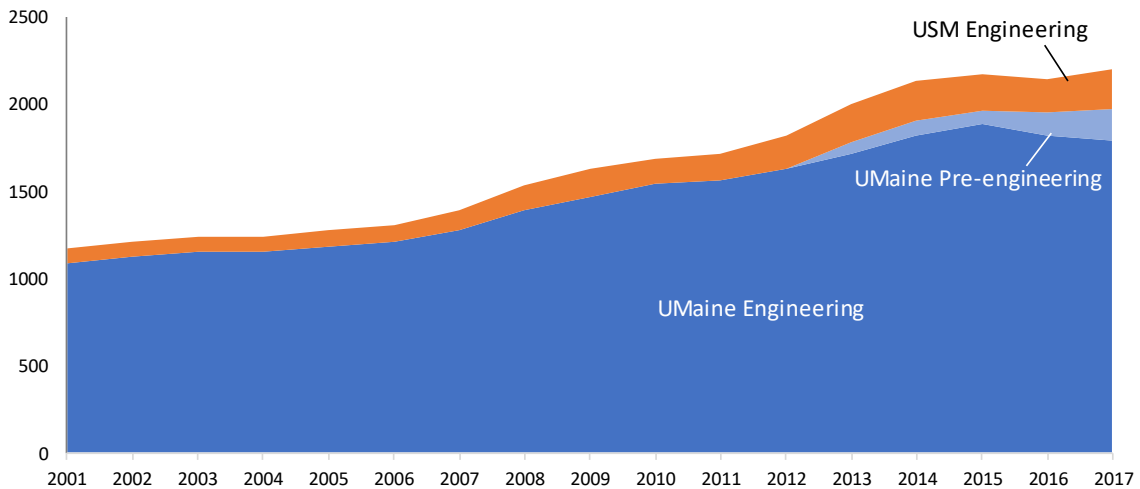
**The number of engineering bachelor's degrees awarded by UM and USM is rising; growth is outpacing other programs.**  
 The chart below shows the indexed growth rate of bachelor's degrees by program area (2011-12 = 1.0).



Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, degrees by first major

**Enrollment in engineering programs at UMaine and USM is growing.**

Note: UMaine had to cap enrollment in four popular programs in 2016 and 2017.



Source: UMaine and USM

Outreach to Maine high school students could further increase the number pursuing engineering degrees in the UMS, creating a greater pool of applicants for both UMaine and USM. In 2016, UMaine and USM were the 1st and 3rd highest recipients of SAT scores from Maine high school seniors, but other top recipients included Worcester Polytechnic Institute (16), Wentworth Institute of Technology (22), Rensselaer Polytechnic Institute (28), the

Massachusetts Institute of Technology (38), and Rochester Institute of Technology (40).<sup>4</sup> While the intended major of these students is unavailable, it is likely that students applying to those out-of-state institutions were interested in engineering or an engineering-related field. Increasing outreach to Maine high schools through programming and networking, as recommended in this plan, could further increase the number of students selecting UMaine and USM for their engineering education.

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<sup>4</sup> The College Board, "2016 College-Bound Seniors State Profile Report: Maine," 2016.



## Five-Year Plan

### Summary

UMaine and USM propose **strategic, coordinated investments** to meet Maine’s engineering workforce needs. This plan proposes four initiatives to magnify the impact of current investments and create a truly comprehensive, statewide system of engineering education: ensure the continued success and growth of UMaine’s nationally recognized engineering program; grow USM’s capacity to address the specific needs of Southern Maine businesses; expand Maine’s K-12 and community college engineering pipeline; and integrate more real-world experiences into the training of new engineers through internships and co-ops.

While this is a five-year plan, its full impact will unfold over about ten years. The following table shows the estimated ten-year cumulative impact of these proposed and ongoing investments. Projections show that new revenue from tuition and other sources significantly exceed operational expenses over the next decade. For more details, see the “Enrollment and Budget Projections” section and Appendix H.

### *Estimated Ten-Year Cumulative Operating Revenue and Expenses*

	UMAINE	USM
<b>NEW UNDERGRAD ENGINEERING STUDENTS</b>	5,500	1,100
<b>NEW TUITION REVENUE</b>	\$127.6 million	\$10.0 million
<b>NEW FACULTY</b>	45	8
<b>NEW PERSONNEL EXPENSES</b>	\$55.6 million	\$8.1 million
<b>TOTAL AVAILABLE FOR INVESTMENT (REVENUE MINUS EXPENSES)</b>	\$72.0 million	\$1.9 million

Capital improvements at both UMaine and USM are critical to the full implementation at this plan. Today, there is no mechanism for on-going state financial support for capital expenditures except through voter-approved bonds or other one-time funding. This makes funding the infrastructure investments associated with this plan, as well as the UMS as a whole, challenging. It further suggests that the current discussion in the legislature of a general obligation bond may play a potentially important role in this plan.

### UMaine: Building on Success

The UMaine College of Engineering currently offers eleven bachelor’s degrees, eight master’s degrees, and four PhD degrees, and enrolls approximately 2,000 undergraduate and graduate students. Faculty positions are being added to permit growth of the program. Continued growth will require additional faculty positions. However, the primary constraint to growth is now lack of adequate facilities. As faculty and facility needs are addressed, UMaine will continue to add capacity in existing programs and offer additional programs to respond to student demand and the changing needs of the businesses and institutions who employ

engineers. With the following infrastructure investments, UMaine projects that its undergraduate student body will grow by 1,000 over a ten-year period, and eventually generate over \$21 million net revenue annually compared to today.

### *Capital Investment*

Undergraduate enrollment in the UMaine College of Engineering has grown from 1,088 in 2001 to 1,800 in the fall of 2017, an increase of more than 65%. In addition, enrollment in its Pre-Engineering program has grown from zero in 2012 to 181 in Fall 2017. This growth is despite the fact that for the last three years enrollment in UMaine's most popular engineering programs has been curtailed due to lack of space and faculty. UMaine has begun to address the latter need by hiring ten additional faculty members in the last two years. This leaves lack of facilities as the major impediment to growth.

Design of a new Engineering Education and Design Center (EEDC) is underway. This building is envisioned to be up to 113,000 square feet with an estimated cost of \$80 million. In July 2017, the state legislature approved \$50 million in debt service, yielding \$43 million in spendable money for the building. UMaine has committed \$5 million to the project, bringing the total currently available to \$48 million. As of February 2018, approximately \$1 million has been raised through private fundraising. An additional \$10 million of bond funding is essential to completing this project in a timely manner. The remaining balance will be raised from private giving and other sources. In December 2017, the team of WBRC Architects/Engineers, headquartered in Bangor, and Boston-based Ellenzweig were hired to begin design. Groundbreaking is targeted for early 2020 with completion in 2022. This project, coupled with continued increases in engineering faculty, will expand UMaine's undergraduate engineering capacity by an additional 1,000 students.

After completion of the EEDC, five existing engineering education buildings at UMaine require renovation, including Boardman Hall, Barrows Hall, Jenness Hall, Crosby Laboratory, and Machine Tool Laboratory. These buildings range in age from 47 to 90 years old and have had no significant upgrades since construction. Their key heating and electrical systems are beyond the end of their useful life. Major upgrades are needed to improve energy efficiency, such as replacement of single pane, wood-framed windows with double pane windows. Classrooms and laboratories need to be reconfigured to meet modern educational standards. These estimated to cost of these upgrades is \$70 million.

### *Outcomes*

The above investments will generate the following outcomes:

- UMaine's enrollment will grow by **1,000 engineering undergraduates** within a decade, growing its program by more than 50%, from 1,800 undergraduates today to approximately 2,800 within a decade.
- **The state's engineering workforce will increase significantly**, allowing Maine businesses to reduce out-of-state recruitment, fill more job openings, and expand their Maine-based operations.

- **Student and faculty research and development efforts will increase**, resulting in new technologies that will further drive economic growth in Maine.

### USM: Targeting Southern Maine's Workforce Shortage

USM's location near many of the state's largest employers of engineers makes it uniquely suited to help address the industry's workforce shortage. It can help the place-bound employees of these firms acquire new skills and it can coordinate high-quality internships and co-ops that help both students and businesses.

To realize these opportunities, USM will build or expand three degree programs - Industrial Engineering, Electrical and Computer Engineering, and Engineering Science - and explore growth of a fourth: Biomedical Engineering. USM will seek accreditation for all new programs from the Accreditation Board for Engineering and Technology (ABET).

These programs will allow USM to increase its undergraduate enrollment by 200 over ten years. Consistent with its focus on Greater Portland, USM will tailor these programs to the needs of local businesses and workers. This will require USM to work closely with local employers of engineers. It will also require USM to design programs that increase access to engineering education for non-traditional students, such as incumbent workers and new Americans.

**Industrial Engineering** is a field with a particularly high unmet need in New England. Industrial engineers focus on efficiency in production and design processes that connect workers, materials, technology, and information in cost-effective and sophisticated ways. They are versatile engineers with the ability to work in a variety of industries. Maine industry leaders say they highly value the skills of industrial engineers and some report strong demand in their sectors, although not as high as for electrical and mechanical engineers. The Maine Manufacturers Association reports that the most common request they receive for consulting services is for industrial engineers. This demand may grow as new companies build new processing facilities and as sectors outside of manufacturing, such as health care or food retail, seek greater efficiency in their systems. USM will monitor and evaluate the demand for industrial engineers among Southern Maine businesses as it builds this program.

The U.S. Department of Labor projects 450 annual openings in the field in New England, more than double the annual number of degrees awarded (which was 211 in 2014-2015). There are just seven industrial engineering programs in New England (compared to 29 mechanical and 21 civil engineering programs), none of which are in the Northern New England states of Maine, Vermont, and New Hampshire. (See Appendix B for a review of regional engineering programs.)

The curriculum for an industrial engineering program fits well with USM's existing electrical and mechanical programs, making the addition relatively cost efficient.

Next, USM will change its B.S. in Electrical Engineering to a B.S. in **Electrical and Computer Engineering**. This change recognizes the synergy between electrical and computer engineering, the national and local demand for computer engineers, and the breadth of computer engineering courses already offered at USM. This change will require one additional tenure-track faculty member in computer engineering to accommodate increased enrollment. Maine

industry leaders have also expressed need for software engineers, which USM will keep in mind as it designs this new program.

USM will also create a B.S. degree in **Engineering Science** for students who want a foundation in engineering before pursuing graduate studies in education, business, medicine, or law. This new program will leverage existing courses in engineering, biology, chemistry, and physics; it will not require any new courses or faculty. Engineering Science will play an important role in increasing the diversity of students entering USM's engineering program and the industry.

Finally, USM will continue exploring a **Biomedical Engineering** program offered in partnership with UMaine. Both institutions recognize the importance of this growing field and are committed to exploring innovative ways to increase access to this degree in Maine. UMaine has proposed a joint program offered at both locations. UMaine and USM looks forward to continued discussions about this collaborative approach.

### *Capital Investment*

For USM to achieve the financial projections associated with adding programs in Industrial Engineering and Engineering Science, and expanding Electrical Engineering to include Computer Engineering, a capital investment of roughly \$5 million is needed. This investment will fund capital improvements to renovate and upgrade the John Mitchell Center (JMC) to house all engineering programs and to accommodate more students and faculty. Renovations, upgrades, and equipment purchases will include the following, at a cost of \$3.5 million:

- "Smart" classroom (JMC 252)
- "Remote/Streaming" classroom (bidirectional) (JMC 217).
- Computer/simulation laboratory (JMC 265)
- Computer classroom (JMC 270)
- Electrical and computer engineering laboratory (JMC 184)
- Microprocessors/embedded systems/networks laboratory (JMC 241)
- Machine shop, "Skunks Works" prototyping laboratory, technology sandbox (JMC 173/183/185)

In addition, USM's Department of Technology will need to be relocated at an estimated cost of \$1.5 million. The total capital expenses required for USM of \$5 million lays the foundation for increased revenue that fully offsets additional personnel costs. (There is currently \$1.5 million for USM engineering capital needs included in the project list associated with a potential General Obligation bond being considered in the Maine legislature, unrelated to this plan).

### *Outcomes*

The above investment will generate the following outcomes:

- USM's enrollment will grow by **200 engineering undergraduates** within a decade, nearly doubling its program from 232 students in 2018 to approximately 432 in 2028.

- The **number of engineering degrees offered at USM will double** from two to four: Industrial Engineering, Electrical and Computer Engineering, Mechanical Engineering, and Engineering Science.
- USM will attract more **out-of-state students** in part by offering the only industrial engineering bachelor's degree program in Northern New England, increasing out-of-state enrollment from 29 students today to a projected 62 within a decade.
- USM will significantly **increase the supply of engineers to Southern Maine businesses**, allowing these businesses to reduce out-of-state recruitment, fill more job openings, and expand their Maine-based operations.
- USM will continue discussing innovative ways to offer **Biomedical Engineering** in Southern Maine in partnership with UMaine, eventually expanding UMS's presence in this growing field.

### K-12 and Community College Pipeline

Increasing the number of Maine college students pursuing engineering degrees requires increasing the number of Maine high school graduates interested in, and prepared for, the field. This in turn requires more K-12 teachers versed in engineering. UMaine and USM support developing a strong K-12 engineering pipeline that increases interest and competency in science, technology, engineering, and mathematics (STEM), especially among female and underserved rural and minority students. This will build on the UMaine-led National Science Foundation EPSCOR and INCLUDES projects that are already working with twelve high schools in Maine and five high schools in other states.<sup>5</sup>

Today, there are several grand challenges in K-12 engineering education, including: (1) early exposure to engineering and creative problem solving, (2) teacher training, (3) exposing teachers and students to real-world engineering practices, (4) curriculum development, and (5) integrating training opportunities at higher education institutions and industries. UMaine and USM propose the following strategies to address these challenges in Maine (see Appendix G for more detail).

#### *Strategy 1: INSPIRE (Outreach to K-12 schools)*

The goal of this strategy is to inspire Maine students to become engineers by introducing them to the creativity and innovation inherent in engineering, and increasing their knowledge of engineering principles and professions. This will be achieved through coordinated, statewide outreach by Maine's post-secondary engineering programs that builds on existing initiatives, such as Engineering Expo, tours of UMS engineering facilities, and tours of engineering companies.

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<sup>5</sup> Lori Valigra, 9/13/16, "[UMaine one of 37 nationwide STEM projects to get NSF grant](#)," MaineBiz.

*Strategy 2: ENGAGE (Equip K-12 schools)*

This strategy seeks to engage K-12 students in hands-on learning with 3D printers installed at every K-12 school in Maine through a collaborative effort between Maine's post-secondary engineering and education programs, the Maine Department of Education, and K-12 schools. A pilot study will be conducted to train teachers and students from 60 schools in a newly designed engineering module centered around 3D printing. Specific teacher training needs and curriculum will be identified and developed, and the program will expand until every Maine school has trained teachers and grade-appropriate curriculum to support 3D printing and student innovation.

*Strategy 3: PREPARE (Educate K-12 teachers)*

Improving engineering knowledge among K-12 teachers will improve Maine students' overall STEM proficiency and encourage more of them to seek professions in these fields.

UMaine and USM propose creating four post-secondary credential programs to increase engineering literacy among Maine's K-12 educators:

- 4+1 Engineering/Education B.S./M.S. that pairs engineering education with teacher training
- Certificate in Education for practicing engineers interested in entering K-12 education
- Certificate in Engineering Education for current teachers
- Minor in Engineering for graduates of other disciplines (e.g. science or math) to learn about engineering while pursuing an M.S. in education

By creating four pathways for aspiring engineering educators, UMaine and USM seek to foster a cadre of teachers with demonstrated knowledge of both engineering and education. The Maine Department of Education's *Statewide Strategic Plan for STEM*, released in 2010, calls for eight regional STEM coordinators and research centers to increase student achievement. Graduates of the above programs would be well-suited to fill those roles and others.

*Strategy 4: ENABLE (Engineering teaching certificate)*

Building on the credentials outlined above, UMaine and USM will work with the Maine Department of Education to develop a teaching certificate that enables engineering professionals to teach in K-12 schools. The real-world knowledge and experiences these individuals bring into the classroom are invaluable tools to inspire, engage, and inform students about engineering.

*Strategy 5: SUPPORT (Community colleges pathways)*

Maine's community colleges can be gateways for students from diverse backgrounds to enter the engineering field. These institutions can foster their interest and prepare them to enter a bachelor's degree program with a solid academic foundation. To build this pathway, UMaine and USM will partner with Maine's community colleges to develop instructional modules and courses tailored to their students' needs and interests, likely incorporating both on-line and on-

site components. Collaborative A.A./B.S. programs will allow students to transition easily from community college into bachelor’s degree programs at UMaine and USM.

*Strategy 6: PRE-ENGINEERING high school programs*

UMaine and USM will work together to build an immersive, summer pre-engineering (“Step Up”) program with local school districts to further increase the pipeline of engineering students, particularly in Southern Maine. This residential program will offer a specialized, innovative, interdisciplinary curriculum in engineering, science, and mathematics designed to improve students’ competence in these fields. The program will also seek to engage parents so that they see the opportunity that engineering holds for their children.

The curriculum will consist of industry-defined engineering applications in multiple fields. A key component of the program will be hands-on activities and inquiry-based exploration, an approach proven to enhance students’ enthusiasm for engineering, science, and mathematics. Math and engineering concepts will be reinforced and used to analyze and interpret the data obtained from the research projects. Students will also learn scientific writing and oral presentations skills. Having increased students' competence and interest in engineering, science and mathematics, the program will encourage students to pursue engineering careers by connecting them with role models and mentors in engineering-related fields, and increasing their awareness of exciting opportunities for postsecondary education and engineering related careers. Students also will participate in sessions on leadership development, interview skills, and resume writing.

This initiative will increase interest among the many place-bound students in Southern Maine. Growing the number of Maine students pursuing engineering degrees will ensure there are enough students to fill programs at both UMaine and USM, even as demographic trends shrink the overall number of high school graduates. Required resources will include a program coordinator, administrative support, operating funds, and scholarships for participating students. Corporate sponsorships will be sought to partially support program expenses.

*Timeline and Investment*

UMaine and USM propose launching this initiative as soon as funds become available. The estimated cost of the above activities is \$982,000 per year for staff coordinators, faculty training and program development, technical assistance, and equipment; costs that over time will be offset by corporate sponsorships, grants, and other institutional revenue sources.

	<b>ANNUAL COST</b>
<b>K-12 OUTREACH MANAGER</b>	\$100,000
<b>PRE-ENGINEERING SUMMER PROGRAM COORDINATOR (ALSO SERVES AS USM LIAISON WITH K-12 OUTREACH MANAGER)</b>	\$80,000
<b>TECHNICIAN</b>	\$90,000
<b>FACULTY FOR TRAINING AND PROGRAM DEVELOPMENT</b>	\$270,000
<b>FACULTY SUMMER SALARIES</b>	\$22,000

<b>PRE-ENGINEERING SUMMER PROGRAM OPERATING FUNDS AND STUDENT SCHOLARSHIPS</b>	\$250,000
<b>GRADUATE STUDENTS</b>	\$50,000
<b>UNDERGRADUATE STUDENTS</b>	\$40,000
<b>3D PRINTERS (60)</b>	\$30,000
<b>PROGRAM EXPENSES</b>	\$50,000
<b>TOTAL</b>	<b>\$982,000</b>

### *Outcomes*

The above investment will achieve the following outcomes over ten years:

- Every Maine high school graduate will be “engineering literate” – fluent in basic principles and aware of the high-quality careers available in engineering.
- Five hundred K-12 teachers will be specially trained to lead their school districts in developing STEM programs.
- There will be a vibrant pre-engineering high school pathways program in partnership with local school districts.
- The percentage of Maine high school seniors pursuing engineering (reported on the SAT) will consistently exceed the national average.
- Transfers from the Maine Community College System into engineering programs at UMaine and USM will increase.

### *Internships and Co-ops*

UMaine and USM already are providing many undergraduates with real-world experiences in their field of study. Through internships, students can work either full- or part-time for an employer while continuing their studies. Internships can be paid or unpaid, and can occur in summer or during the academic year. Co-ops allow students to temporarily stop taking classes while working full-time for an employer. Both co-ops and internships create invaluable opportunities for students to gain professional skills and learn about their field of interest.

At UMaine, approximately 80% of engineering students have at least one internship, co-op, or major research experience prior to graduation. UMaine has longstanding relationships with a wide range of partners including Bath Iron Works, Pratt & Whitney, Texas Instruments, General Electric, IDEXX, Maine Medical Center, TRC, Woodard and Curran, and the Maine Department of Transportation. Each year over 100 companies and agencies seek UMaine undergraduate engineers for these opportunities.

USM also leverages its ties with local employers to create opportunities for students. Each year on average, over 30 third- and fourth-year USM engineering students intern with local



businesses. Often, these experiences lead to employment. In the past three years alone, 55 companies have employed one or more of USM's engineering interns. Portsmouth Naval Shipyard, IDEXX, Lanco, Texas Instruments, and Pratt and Whitney are among the Southern Maine businesses with the largest number of interns from USM's engineering programs.

Engineering faculty at both institutions recognize the importance of these experiences in fostering understanding of modern technology and practices, developing professional skills, networking, and increasing employability. Indeed, many engineering students are already having these experiences through internships, co-ops, and research projects. This component of the growth plan makes them universal, ensuring that every UMS engineering undergraduate has at least one real-world work experience prior to graduation. Industry feedback reinforced the need for students to receive instruction on the "soft" skills required in a professional work environment, and for UMaine and USM to create a clear, streamlined process that makes finding and hiring a qualified student easy for businesses.

USM and UMaine will work collaboratively to build their respective internship and co-op programs in complementary ways to avoid duplication, using Innovate for Maine Fellows program as a model. USM's short-term focus will be improving its systems for coordinating, monitoring, and evaluating internships as it seeks to expand student opportunities in Southern Maine. USM's medium-term focus will be engineering co-ops in Southern Maine. This plan calls for engineering internship coordinators as USM and UMaine to help expand engineering internships through partnerships between UMS and the Southern Maine businesses that employ engineers. It also calls for financial support for student stipends to pay for their internships. A sliding scale model will be developed to ensure businesses pay their fair share of student stipends and accommodate those businesses that want interns but financially are unable to fully or partially support students.

#### *Timeline and Investment*

UMaine and USM propose launching this initiative as soon as funds become available. The estimated cost of the above activities is \$560,000 per year for staff coordinators, operating funds, faculty and student training and program development, and student stipends.

	<b>ANNUAL COST</b>
<b>TWO INTERNSHIP COORDINATORS</b>	\$160,000
<b>FACULTY AND STUDENT TRAINING AND PROGRAM DEVELOPMENT</b>	\$100,000
<b>STUDENT STIPENDS</b>	\$200,000
<b>PROGRAM EXPENSES</b>	\$100,000
<b>TOTAL</b>	<b>\$560,000</b>

*Outcomes*

- All UMS engineering graduates will have at least one real-world work experience that gives them the professional skills to succeed in a modern workplace, contacts within the industry, and firsthand understanding of modern engineering practices.
- UMS will be a national leader in connecting students with industry and integrating real-world experiences into academic programs.

Enrollment and Budget Projections

The initiatives described above – additional engineering programs, the K-12 and community college pipeline, internships, and co-ops – are new undertakings proposed by UMaine and USM in this five-year plan. In addition, UMaine and USM will continue growing existing programs and pursuing new opportunities as they arise. UMaine and USM project that these new and existing initiatives together will increase enrollment at both campuses and attract new tuition revenue that more than covers new personnel costs. The projections below (and in Appendix H) are intended to illustrate the additional revenue and costs that result from the full implementation of the five-year plan, and from additional capital expenditures at UMaine. They are dependent on substantial funding from the State of Maine for capital expenses as well as funding from a multitude of sources for operational expenses. While the timeline may shift depending on when funding is realized, the projections show that the additional revenue from more students and tuition significantly exceeds the associated operational costs over a ten-year period.

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
<b>UNIVERSITY OF MAINE</b>											
Total enrollment	1,819	1,919	2,019	2,119	2,219	2,319	2,419	2,519	2,619	2,719	2,819
New tuition revenue	---	\$2,928,348	\$6,197,794	\$8,296,985	\$10,018,263	\$11,790,524	\$13,665,155	\$15,595,017	\$17,580,112	\$19,678,198	\$21,835,765
New personnel costs	---	\$781,881	\$1,959,566	\$2,803,179	\$3,877,061	\$4,720,788	\$5,863,540	\$6,992,045	\$8,270,835	\$9,349,485	\$10,963,918
Total available for investment	---	\$2,146,467	\$4,238,228	\$5,493,806	\$6,141,202	\$7,069,736	\$7,801,615	\$8,602,972	\$9,309,277	\$10,328,713	\$10,871,847
<b>UNIVERSITY OF SOUTHERN MAINE</b>											
Total enrollment	232	252	272	292	312	332	352	372	392	412	432
New tuition revenue	---	\$139,880	\$284,046	\$432,498	\$712,096	\$885,832	\$1,064,888	\$1,249,264	\$1,548,892	\$1,751,709	\$1,968,595
New personnel costs	---	\$125,697	\$257,146	\$370,732	\$518,398	\$730,024	\$1,021,855	\$1,055,772	\$1,243,576	\$1,284,645	\$1,489,772
Total available for investment	---	\$14,183	\$26,900	\$61,766	\$193,698	\$155,808	\$43,033	\$193,492	\$305,316	\$467,064	\$478,823

## Outcomes

This *Five-Year Plan to Build Up Engineering in the UMS* will achieve the following outcomes over the next decade:

### The Maine Economy

- Maine's supply of **new engineers** will grow dramatically, allowing businesses to reduce out-of-state recruitment, fill more job openings, and expand their Maine-based operations.
- A higher-skilled workforce will push Maine onto a **higher growth** path.

### The University of Maine System

- UMaine and USM will have an even **stronger partnership** built on mutual support and collaboration.
- Enrollment in UMS's engineering programs will increase 60%, including almost **doubling at USM**, from 232 today to 432 within a decade, and **increasing more than 50% at UMaine**, from 1,800 today to 2,800 within a decade. New degree programs and concentrations at both institutions will bolster this growth.
- USM will attract **more out-of-state students** in part by offering the only **Industrial Engineering** undergraduate program in Northern New England, increasing out-of-state enrollment from 29 today to 62 in ten years.
- USM and UMaine will continue discussing innovative ways to offer **Biomedical Engineering** in Southern Maine, eventually expanding UMS's presence in this growing field.
- Maine people will see **UMS as the gateway** to well-paying careers in engineering.

### K-12 and Community College Pipeline

- Every Maine high school graduate will be "**engineering literate**" – fluent in basic principles and aware of the high-quality careers available in engineering.
- Five hundred **K-12 teachers** will be specially trained to lead their school districts in developing STEM programs.
- There will be vibrant **pre-engineering high school pathways** in partnership with local school districts.
- The percentage of Maine **high school seniors** pursuing engineering will consistently exceed the national average.
- Transfers from the **Maine Community College System** into engineering programs at UMaine and USM will increase.

### Real World Experience and Employment

- Through **internships and co-ops**, all UMS engineering graduates will have at least one **real-world work experience** that gives them the **professional skills** to succeed in a

modern workplace, **contacts** within the industry, and firsthand **understanding** of modern engineering practices.

- UMS will be a **national leader** in connecting students with industry and integrating real-world experiences into academic programs.

## Appendix A: Market Demand Assessment

This appendix addresses three questions:

- ⇒ *What is the demand for engineers in Maine and New England today, and over the next 10 years?*
- ⇒ *How many engineers are Maine and New England universities graduating?*
- ⇒ *What engineering disciplines will be most in demand?*

Maine's labor market for engineers is complex, and multiple data sources are required to assess real-time demand for engineers. This market demand analysis uses four data sources, each with strengths and weaknesses: the Bureau of Labor Statistics (BLS) Occupational Employment Statistics provides data on the number of engineers currently working in Maine; BLS Employment Projections forecast the number of job openings for engineers over the next ten years; Burning Glass Technologies complements the BLS jobs data with the number of online job postings for engineers; and the National Center for Education Statistics provides the number of post-secondary degree completions by institution and major. The picture that emerges is one in which the supply of engineers is generally insufficient to meet demand, with shortages varying significantly between specific occupations.

### 1. Engineering Jobs

In 2016, there were approximately 6,600 engineers working in Maine. Within the engineering field, civil engineers are the most common (including the occupations of civil engineers and construction managers). Mechanical engineers are the second most common, followed by industrial engineers. BLS recommends against directly comparing occupations over time because of changes in sampling methods and occupation definitions.<sup>6</sup> While keeping with the spirit of that caveat, a rough comparison between 2006 and 2016 can be made: there is considerably more demand today for engineers than ten years ago, and most of the increase was for marine, civil, mechanical, industrial, and electrical engineers.

Two primary forces affect the future of Maine's engineering workforce: an aging workforce and slow economic growth. This results in significant demand for replacement workers but very little growth in new job openings. The Maine Department of Labor projects more than 2,000 job openings for engineers over the next ten years, almost all of which (+1,910) will be from replacing older workers. Very little growth (+150) is projected to come from new job growth.<sup>7</sup> However, it is important to note that the low projected growth in new job openings is inconsistent with the past ten years, when engineering occupations grew steadily.

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<sup>6</sup> [https://www.bls.gov/oes/oes\\_ques.htm](https://www.bls.gov/oes/oes_ques.htm)

<sup>7</sup> This estimate is consistent with an estimate of growth in the Professional and Technical Services industry, which makes up 41% of engineering occupations. Growth in this sector is projected to grow 5.7%. Multiplying .7% times 41% of the 6,600 engineers results in a projected growth of 155

*Engineering Jobs and Projections*

	Jobs			Projections			
	2006	2016	LQ, 2016	New Jobs	Annual Replacements	Annual Openings	10-Year Total
<b>Engineering Managers</b>	750	570	0.75	0	20	20	200
<b>Construction Managers</b>	1,030	1,120	1.05	0	46	46	460
<b>Aerospace Engineers</b>				0	1	1	10
<b>Biomedical Engineers</b>		40	0.49	7	3	10	100
<b>Chemical Engineers</b>	190	60	0.46	1	5	6	60
<b>Civil Engineers</b>	810	1,060	0.87	4	32	36	360
<b>Computer Engineers</b>							
<b>Electrical Engineers</b>	290	430	0.55	2	11	13	130
<b>Electronics Engineers</b>	150	210	0.38	0	5	5	50
<b>Enviro Engineers</b>	310	200	0.91	1	5	6	60
<b>Health/Safety Engineers</b>	110	80	0.76	0	2	2	20
<b>Industrial Engineers</b>	440	690	0.63	0	20	20	200
<b>Marine Engineers</b>	50	350	10.20				
<b>Materials Engineers</b>	50	80	0.67	0	3	3	30
<b>Mechanical Engineers</b>	620	920	0.75	0	24	24	240
<b>Nuclear Engineers</b>							
<b>Engineers, All Other</b>	270	610	1.16	0	9	9	90
<b>Sales Engineers</b>	80	180	0.56	0	6	6	60
<b>TOTAL</b>	<b>5,150</b>	<b>6,600</b>		<b>15</b>	<b>191</b>	<b>206</b>	<b>2,060</b>

*Maine Department of Labor Statistics, Occupational Projections*

*LQ = Location Quotient, a measure of how concentrated an occupation is in Maine compared to the rest of the nation; a value greater than 1.00 indicates a higher concentration of jobs in this occupation*

## 2. Age of Maine's Engineers

To deepen the understanding of the need for replacement engineers, data on the age of the workforce was compiled from the U.S. Census Bureau Longitudinal Employer-Household Dynamics program. Data is not available for engineers by themselves, but it is available for employees in the Professional, Scientific, and Technical Services industry, where 40% of engineers work. In that industry, 26% of workers are 55 or older in Cumberland County, and 28% are 55 or older across Maine. If we assume engineers in other industries follow the same general age trend, then it is likely about 1,800 engineers in Maine will reach retirement age (65) in the next ten years. This result is broadly consistent with the MDOL's projection of 1,910 replacement workers over the next ten years.

## 3. New England

The story is similar across New England. Demand for engineers has grown over time, and is highest for civil engineers (including construction managers), followed by mechanical engineers and industrial engineers. Compared to Maine, there is stronger demand for electrical engineers and engineering managers<sup>8</sup> in New England. Looking ahead to the next ten years, New England is projected to have almost 40,000 job openings for engineers. The highest demand is projected to be for mechanical engineers and civil engineers, followed by industrial engineers.

### *Engineering Jobs in New England*

	Jobs		Projections	
	2006	2016	Annual Openings	10-Year Total
<b>Engineering Managers</b>	12,200	13,080	400	4,000
<b>Construction Managers</b>	9,560	12,510	410	4,100
<b>Aerospace Engineers</b>	1,810	2,930	100	1,000
<b>Biomedical Engineers</b>	1,760	3,180	100	1,000
<b>Chemical Engineers</b>	1,980	1,480	50	500
<b>Civil Engineers</b>	12,800	14,580	510	5,100
<b>Computer Engineers</b>	4,770	3,790	110	1,100
<b>Electrical Engineers</b>	10,200	13,750	280	2,800
<b>Electronics Engineers</b>	7,790	5,720	180	1,800
<b>Enviro Engineers</b>	3,250	3,960	160	1,600

<sup>8</sup> Includes architectural managers



<b>Health/Safety Engineers</b>	1,570	1,000	30	300
<b>Industrial Engineers</b>	13,470	16,050	450	4,500
<b>Marine Engineers</b>	50	840	0	00
<b>Materials Engineers</b>	1,530	1,660	80	800
<b>Mechanical Engineers</b>	16,110	19,450	780	7,800
<b>Nuclear Engineers</b>	270	340	20	200
<b>Engineers, All Other</b>	7,360	5,420	150	1,500
<b>Sales Engineers</b>	3,830	5,380	170	1,700
<b>TOTAL</b>	<b>110,310</b>	<b>125,120</b>	<b>3980</b>	<b>39,800</b>

*U.S. Department of Labor, Bureau of Labor Statistics*

#### **4. Job Postings**

The labor market information company Burning Glass Technologies provides an alternative view of demand for engineers through its compilation of online job postings. Like the BLS data, there are caveats – for example, job postings do not always directly translate to job openings, and job postings in Maine do not necessarily mean that the job itself is in Maine. It is also not possible to differentiate between a replacement job and a “new” job.

From January 1, 2015 to January 1, 2017, there were over 2,000 job postings for engineers. Five occupations accounted for two-thirds of the postings: civil, mechanical, electrical, industrial, and chemical engineers.

#### *Online Job Postings for Engineers, 2015-2016*

	<b>Online Jobs Postings 2015-2016</b>
<b>Civil Engineers</b>	416
<b>Mechanical Engineers</b>	370
<b>Electrical Engineers</b>	349
<b>Engineers, All Other</b>	214
<b>Industrial Engineers</b>	109
<b>Chemical Engineers</b>	106
<b>Manufacturing Engineers</b>	91
<b>Industrial Safety and Health Engineers</b>	87
<b>Environmental Engineers</b>	66

<b>Materials Engineers</b>	41
<b>Transportation Engineers</b>	31
<b>Nuclear Engineers</b>	30
<b>Electronics Engineers, Except Computer</b>	28
<b>All other</b>	85
<b>Total</b>	2,023

*Burning Glass Technologies*

### 5. Engineering Degrees

For the 2014-15 academic year, institutions in Maine awarded 333 bachelor degrees in engineering, of which the University of Maine awarded 196 (59%) and USM awarded 34 (10%). USM awarded a majority of electrical engineering degrees (20 of 33) and 14 of the 78 mechanical engineering degrees. Maine Maritime awarded all 101 Naval/Marine and systems engineering degrees. The University of Maine awarded all 34 graduate degrees.

For the 2015-16 academic year, 425 bachelor degrees in engineering were awarded, of which the University of Maine awarded 255 (60%) and USM awarded 53 (12%). USM awarded roughly half of electrical engineering degrees and 28% of mechanical engineering degrees. Maine Maritime awarded 117 degrees. The University of Maine awarded 49 graduate degrees.

Across New England, over 5,800 bachelor degrees and 4,300 graduate degrees were awarded in 2014-15, and 6,400 bachelor degrees and 4,700 graduate degrees were awarded in 2015-16.

#### *Engineering Degrees in New England and Maine, 2014-2016*

	2014-15		2015-16	
	Bachelor	Graduate	Bachelor	Graduate
<b>New England</b>	5,800	4,300	6,400	4,700
<b>Maine Maritime</b>	101		117	
<b>U Maine</b>	196	34	255	49
<b>USM</b>	34		53	
<b>Total Maine</b>	333	34	425	49
<b>% Maine</b>	6%	1%	7%	1%

*National Center for Education Statistics*

The most common disciplines for new engineering graduates of Maine colleges and universities are mechanical engineering and marine engineering, followed by civil engineering.

*Engineering Degree Majors at Maine Colleges and Universities, 2014/2015-2015/2016*

	2014-15		2015-16	
	Bachelor	Graduate	Bachelor	Graduate
<b>Agricultural Engineering</b>	0	1		1
<b>Biomedical/Medical Engineering</b>	28		24	1
<b>Chemical Engineering</b>	29	6	40	5
<b>Civil Engineering</b>	49	8	64	13
<b>Computer Engineering</b>	9	2	13	6
<b>Electrical/Electronics/Communications</b>	33 (20, USM)	5	44 (21, USM)	4
<b>Engineering General</b>	2			
<b>Engineering Physics</b>	4	2	10	4
<b>Mechanical Engineering</b>	78 (14, USM)	8	113 (32, USM)	6
<b>Naval Architecture and Marine Eng.</b>	86		107	0
<b>Surveying Engineering</b>		2		9
<b>Systems Engineering</b>	15		10	0
<b>TOTAL</b>	<b>333</b>	<b>34</b>	<b>425</b>	<b>49</b>

*National Center for Education Statistics*

## 6. Supply vs. Demand

Estimating how well the supply of new engineers matches with employer demand is complex. If we assume perfect matches between recent college graduates and BLS projected job openings, Maine's 300-400 annual engineering graduates are more than enough to fill the projected 200+ job openings. In reality, the situation is more complicated. For example, a recent survey of University of Maine engineering graduates found that only 40% were working in an engineering field in Maine.<sup>9</sup> Further, many job openings require experience, particularly when replacing older workers, and there are other employment-related issues that may not be attractive to the pool of graduates.<sup>10</sup> Occupational projections may also under-estimate demand in these fields. For example, if we assume just half of the Burning Glass job postings translate to engineering jobs in Maine, the annual projected job openings are more than double the BLS projections.

<sup>9</sup> Presentation by Dana Humphrey

<sup>10</sup> [http://www.urban.org/research/publication/eye-storm/view/full\\_report](http://www.urban.org/research/publication/eye-storm/view/full_report)

In this analysis, several scenarios with different assumptions about the supply of engineering graduates and the demand for new engineers are presented. Consistent with the recent survey of engineering graduates, we first assume that just 40% of engineering graduates remain in Maine and work in an engineering field. We then compare that supply to three scenarios for demand: a scenario where we take the BLS projections as given; a scenario where new engineering jobs increase 5% over the next ten years (and replacement jobs remain as projected by BLS); and a scenario where one-third of the annual job postings aggregated by Burning Glass translate to a job opening in Maine.

*Supply and Demand for Engineers, Maine*

		All Engineers
<b>Supply</b>		
Annual Degrees (avg. 2014/2015-2015/2016)		380
40% Placement		152
<b>Demand</b>		
Scenario 1: BLS projections		206
Scenario 2: BLS Projections + 5% Growth in New Jobs		224
Scenario 3: 1/3 Burning Glass Job Openings		334
<b>Shortage</b>		Over 10 Years
Scenario 1: BLS projections	-54	-540
Scenario 2: BLS Projections + 5% Growth in New Jobs	-72	-720
Scenario 3: 1/3 Burning Glass Job Openings	-182	-1,818

*Maine Department of Labor, National Center for Education Statistics, 45North Research*

## 7. Occupations of Focus

There will always be uncertainty about which occupations will offer the most job opportunities in the future. Four occupations, however, jump out as solid bets. Jobs in each of these occupations increased significantly over the last ten years, are projected by BLS to have almost 200 job openings in the next ten years, are ranked in the top four job postings by Burning Glass, are suitable for recent graduates, and have a location quotient less than 1. These occupations are civil engineers, mechanical engineers, industrial engineers, electrical and electronics engineers (combined).

Industrial engineering, with no program in Maine or northern New England, has the largest gap between supply and demand in two of the three scenarios.

*Supply and Demand for Occupations of Focus, Maine*

	<b>Civil</b>	<b>Electrical + Electronics</b>	<b>Industrial + Manufacturing</b>	<b>Mechanical</b>
<b>Supply</b>				
Annual Degrees (avg. 2014/2015-2015/2016)	56	39	0	96
40% Placement	22	16	0	38
<b>Demand</b>				
Scenario 1: BLS projections	36	18	19	24
Scenario 2: BLS Projections + 5% Growth in New Jobs	37	20	23	29
Scenario 3: 1/3 Burning Glass Job Openings	69	62	33	61
<b>Shortage</b>				
Scenario 1: BLS projections	-14	-2	-19	n/a
Scenario 2: BLS Projections + 5% Growth in New Jobs	-15	-4	-23	n/a
Scenario 3: 1/3 Burning Glass Job Openings	-47	-46	-33	-23

*Maine Department of Labor, National Center for Education Statistics, 45 North Research*

Looking across New England, 450 job opening in industrial engineering are projected over the next ten years. Only mechanical and civil engineering are projected to have more. However, New England's universities supply a large number of both of these disciplines: there are 29 mechanical engineering programs and 21 civil engineering programs, graduating 2,633 and 1,148 new engineers annually, respectively. There are just seven industrial engineering programs, none of which are in Maine, Vermont, or New Hampshire, with just 211 graduates in 2014-15. Industrial engineering is the only discipline to have more projected job openings than annual degree completers.

*Supply and Demand for Engineers, New England*

	<b>Projected Annual Openings</b>	<b>Annual Degrees, 2014-15</b>
<b>Engineering Managers</b>	400	--
<b>Construction Managers</b>	410	--
<b>Aerospace Engineers</b>	100	188
<b>Biomedical Engineers</b>	100	825
<b>Chemical Engineers</b>	50	741
<b>Civil Engineers</b>	510	1,148
<b>Computer Engineers</b>	110	658
<b>Electrical Engineers</b>	280	1,594
<b>Electronics Engineers</b>	180	
<b>Environmental Engineers</b>	160	186
<b>Industrial Engineers</b>	450	211
<b>Marine Engineers</b>	0	154
<b>Materials Engineers</b>	80	191
<b>Mechanical Engineers</b>	780	2,633
<b>Nuclear Engineers</b>	20	45

*Maine Department of Labor, National Center for Education Statistics*

## Appendix B: Review of Regional Engineering Programs

This appendix presents a high-level overview of New England’s engineering landscape and Maine’s place within it. Each year, New England colleges and universities with ABET accredited programs award approximately 12,000 bachelor’s and graduate degrees in engineering and engineering technology. (In 2015-2016, 94.0% were in engineering and 6.0% were in engineering technology.) That number is growing rapidly, up 35% in the last five years.<sup>11</sup> The heart of degree production is Massachusetts, with Maine and the other New England states contributing smaller but significant numbers of graduates to the field.

The growth of the University of Southern Maine’s (USM) engineering program is helping to increase the state’s production of bachelor’s degrees. Collectively, USM and UM offer many of the most popular, high-growth engineering majors in New England. Environmental and industrial engineering are two popular fields in which Maine does not have stand-alone degree programs.

The following tables provide an overview of Maine’s position within New England’s engineering landscape. All data are from the National Center for Education Statistics’ Integrated Postsecondary Education Data System, the ABET accrediting organization, and individual institutions’ engineering websites. “ABET accredited” means the institution has at least one academic program accredited by ABET. For instance, Maine Maritime Academy offers five engineering and engineering technology majors, three of which are accredited by ABET. Therefore, MMA and all the degrees it awards are included.

- **Three of New England’s 37 institutions with ABET-accredited programs are in Maine.**

There are currently 37 institutions in New England with bachelor’s- and graduate-degree programs accredited by the Engineering Accreditation Commission of ABET, engineering’s national accreditation body (excluding terminated and terminating programs). Fifteen are in Massachusetts, ten are in Connecticut, and the rest are scattered throughout Rhode Island (4), Maine (3), Vermont (3), and New Hampshire (2).

<b>Bachelor-and-above ABET accredited institutions</b>			
(as of June 2017, excludes terminated or terminating programs)		<u>Number</u>	<u>Share of NE total</u>
1	Massachusetts	15	41%
2	Connecticut	10	27%
3	Rhode Island	4	11%
<b>4</b>	<b>Maine</b>	<b>3</b>	<b>8%</b>
5	Vermont	3	8%
6	New Hampshire	2	5%

<sup>11</sup> Academic year 2010/11 compared to 2015/16 as reported by the National Center for Education Statistics, Integrated Postsecondary Education Data System, accessed June 2017.

- **Maine is New England's fourth largest producer of engineering undergraduate degrees.**

In 2015-2016, New England's engineering programs awarded approximately 6,500 engineering bachelor's degrees (excluding engineering technology). More than three-quarters came from Massachusetts and Connecticut. Maine was the fourth largest contributor at 7%, up from 6% in 2010-2011.

<b>Engineering bachelor's degrees per year</b>			
(by 2015/16 bachelor's degrees conferred)			
	<u>Number</u>	<u>Share of NE total</u>	
1	Massachusetts	3,882	60%
2	Connecticut	1,115	17%
3	Rhode Island	463	7%
<b>4</b>	<b>Maine</b>	<b>425</b>	<b>7%</b>
5	New Hampshire	375	6%
6	Vermont	224	3%

- **Maine is the third largest contributor to the growth of undergraduate degrees.**

The number of undergraduate engineering degrees awarded in New England increased 39% from 2010-2011 to 2015-2016. Again, most of the growth occurred in Massachusetts (65%) and Connecticut (19%), followed by Maine (8%) and the rest of New England.

<b>Contribution to regional growth of engineering bachelor's degrees</b>			
(by share of New England's growth of bachelor's degrees 2010/11 to 2015/16)			
	<u>Number</u>	<u>Percentage</u>	
New England total	1,835	100%	
1	Massachusetts	1,195	65%
2	Connecticut	357	19%
<b>3</b>	<b>Maine</b>	<b>141</b>	<b>8%</b>
4	Rhode Island	93	5%
5	New Hampshire	38	2%
6	Vermont	11	1%



- **Collectively, UM and USM offer most common undergraduate programs.**

A review of program websites shows the two most common undergraduate offerings are mechanical and electrical engineering, each available at nearly thirty institutions throughout New England, including UM and USM. UM also offers the next most common programs: civil, computer, and chemical engineering. Common undergraduate majors not offered in Maine include environmental and industrial engineering. UM appears to be the only institution in New England with undergraduate programs in construction engineering and survey engineering technology.

<b>Ten most common bachelor's degree programs</b>		
(by number of institutions offering the program)		
1	Mechanical engineering*†	29
2	Electrical engineering*†	28
3	Civil engineering†	21
3	Computer engineering†	21
5	Chemical engineering†	13
6	Biomedical engineering†	12
7	Engineering sciences/general engineering†	10
7	Environmental engineering	10
8	Industrial engineering	7
8	Bioengineering	7

\* Offered at USM, † Offered at UM

- **Collectively, UM and USM offer most popular undergraduate programs.**

In 2014-2015, half of the engineering bachelor's degrees awarded in New England were in mechanical engineering, civil engineering, and electrical, electronics, and communications engineering. USM offers the first two majors and UM offers all three. UM also offers other popular majors such as civil, chemical, and computer engineering, and electrical and mechanical engineering technologies. Biomedical/medical engineering, the fifth most popular major (8% of all bachelor's degrees in 2014-2015), is offered by UM. UM also offers engineering physics, which is accredited as an engineering science program.

**Most popular bachelor's degree programs in New England**

(by number of degrees conferred in 2014/15)

	<u>Number</u>	<u>Share of total</u>
1 Mechanical Engineering*†	1,879	28%
2 Civil Engineering†	741	11%
3 Electrical*†, Electronics and Communications Engineering	702	11%
4 Chemical Engineering†	570	9%
5 Biomedical/Medical Engineering†	533	8%
6 Computer Engineering†	316	5%
7 Mechanical Engineering Related Technologies†	206	3%
8 Engineering - General	190	3%
9 Electrical Engineering Technologies†	181	3%
10 Naval Architecture and Marine Engineering	154	2%

\* Offered at USM, † Offered at UM

- **USM and UM offer some high-growth undergraduate majors.**

From 2009-2010 to 2014-2015, the number of bachelor's degrees awarded in New England increased 32%. However, that growth occurred unevenly across majors. High-growth fields include popular majors such as mechanical, biomedical/medical, chemical, and computer engineering and more specialized majors such as materials and environmental engineering.

**High-growth bachelor's degree programs in New England**

(by increase in number of degrees conferred 2009/10-2014/15)

	Number of degrees	Percentage growth
1 Mechanical Engineering**	693	58%
2 Biomedical/Medical Engineering	250	88%
3 Chemical Engineering†	216	61%
4 Computer Engineering†	121	62%
5 Civil Engineering†	82	12%
6 Electrical, Electronics and Communications Engineering**	81	13%
7 Electrical Engineering Technologies/Technicians†	68	60%
8 Engineering – Other	55	82%
9 Materials Engineering	48	171%
10 Environmental/Environmental Health Engineering†	46	90%

\* Offered at USM, † Offered at UM

- **Maine is New England’s sixth largest producer of engineering graduate degrees.**

In 2015-2016, New England’s engineering programs awarded approximately 5,000 graduate degrees (excludes engineering technology). Fully 90% came from Massachusetts and Connecticut. Maine was the sixth largest contributor of graduate degrees at 1%, unchanged from 2010-2011.

<b>Engineering graduate degrees per year</b>		
<small>(by 2015/16 graduate degrees conferred)</small>		
	<u>Number</u>	<u>Share of NE total</u>
1	Massachusetts	3247 68%
2	Connecticut	1043 22%
3	New Hampshire	181 4%
4	Rhode Island	177 4%
5	Vermont	100 2%
6	<b>Maine</b>	<b>49 1%</b>

- **UM offers most common masters programs.**

The five most common master’s programs in New England are electrical, mechanical, civil, computer, and chemical engineering, all of which are offered at UM. The next most common are environmental engineering, biomedical engineering and materials science. UM appears to be the only institution in New England offering a graduate certificate in aerospace engineering, and one of only two institutions offering a graduate certificate in innovation engineering. Both programs are offered through UMaine Online.

<b>Ten most common master’s degree programs</b>		
<small>(by number of institutions offering the program)</small>		
1	Electrical engineering†	20
2	Mechanical engineering†	19
3	Civil engineering†	17
4	Computer engineering†	14
5	Chemical engineering†	11
5	Environmental engineering	11
6	Biomedical engineering†	9
7	Materials Science	8
8	Engineering and Business/Management†	7
9	Biological Engineering	6

† Offered at UM

- **UM offers most popular graduate programs.**

In 2014-2015, more than half of graduate engineering degrees awarded in New England were in electrical, mechanical, civil, and computer engineering, all of which are offered at UM in some format. Popular programs not offered in Maine include systems and materials engineering.

<b>Most popular graduate degree programs</b>		
(by number of degrees conferred in 2014/15)		
	<u>Number</u>	<u>Share of total</u>
1	Electrical†, Electronics and Communications Engineering	892 20%
2	Mechanical Engineering†	754 17%
3	Civil Engineering†	405 9%
4	Computer Engineering†	337 8%
5	Engineering - General	314 7%
6	Systems Engineering	299 7%
7	Biomedical†/Medical Engineering	287 7%
8	Chemical Engineering†	171 4%
9	Engineering - Related Fields	124 3%
10	Materials Engineering	111 3%

† Offered at UM

- **UM offers some high-growth graduate majors.**

From 2009-2010 to 2014-2015, the number of graduate degrees awarded in New England increased 29%. As with bachelor's degrees, some majors grew more than others. High-growth sub-disciplines include popular fields such as mechanical, electrical, and computer engineering.

<b>High-growth graduate degree programs</b>		
(by change in number of degrees conferred 2009/10-2014/15)		
	<u>Number</u>	<u>Percentage</u>
1	Mechanical Engineering†	187 33%
2	Electrical, Electronics and Communications Engineering†	162 22%
3	Computer Engineering†	157 87%
4	Engineering – General	125 66%
5	Biomedical/Medical Engineering†	118 70%
6	Civil Engineering†	106 35%
7	Systems Engineering	88 42%
8	Engineering Physics	47 522%
9	Industrial Engineering	28 51%
10	Chemical Engineering†	26 18%

† Offered at UM

## Appendix C: Review of Best Practices and Innovation

Two fundamental challenges face today's engineering graduates: the exponential growth of knowledge and technology, and the globalization of the engineering workforce.<sup>12</sup> The quest to prepare students for these challenges is inspiring engineering educators across the country and around the world to become education innovators – questioning established practices, testing new pedagogies, and developing new programs.

This paper reviews some of the best practices and innovative techniques being developed throughout the U.S. It is not an exhaustive survey of the academic literature on engineering education. Rather, it highlights major trends and exemplary programs, reporting the results of rigorous evaluations were available.

### 1. Emphasizing cross-disciplinary learning

Some scholars argue that the growing number of engineering services being offered in developing countries at low cost presents a long-term challenge to the U.S. engineering community.<sup>13</sup> Future engineers, they argue, will have to justify higher wages with superior breadth of knowledge and capacity for innovation. Given this situation, a competitive advantage of U.S. engineering programs is their location within larger universities that allow learning and collaboration across disciplines.

Olin College of Engineering has quickly developed a reputation for innovative cross-disciplinary teaching since opening in 2002. Olin's educational philosophy emphasizes the role of engineering as a tool for solving societal challenges. "The traditional curriculum is too narrow; it teaches students how to solve problems, but not how to find the right problems to solve, or how to get their solutions out of the lab and into the world."<sup>14</sup> To address this shortcoming, Olin incorporates cross-disciplinary learning throughout its curriculum and programs. In their first-semester, Olin students take a foundations course in arts, humanities, and social science and a course in entrepreneurship. Although Olin is devoted entirely to engineering, its course catalogue is filled with titles such as "Engineering for Humanity;" "The Stuff of History: Materials, Culture in Ancient, Revolutionary, and Contemporary Times;" and "Identity from the Mind & the Brain: Who Am I and How Do I Know?"<sup>15</sup>

One example of Olin's unique approach is its collaboration with the nearby liberal-arts-oriented Wellesley College and business-oriented Babson College on an undergraduate Sustainability Certificate.<sup>16</sup> A core element of the program is a semester-long, project-based course in which teams of students from all three institutions design solutions for environmental problems utilizing the unique tools that engineering, business, and liberal arts bring to environmental issues.

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<sup>12</sup> James J. Duderstadt. "Engineering for a changing world." In *Holistic Engineering Education*, pp. 17-35. Springer New York, 2010.

<sup>13</sup> Ibid.

<sup>14</sup> Olin College of Engineering (Olin). "Curriculum." <http://www.olin.edu/academics/curriculum/>. Accessed July 9, 2017.

<sup>15</sup> Olin. "Course listing." <http://www.olin.edu/course-listing/>. Accessed July 9, 2017.

<sup>16</sup> Babson/Olin/Wellesley Three College Collaboration. "Babson-Olin-Wellesley Sustainability Certificate Program." Accessed July 9, 2017.

In 1993, Stanford University's Department of Civil and Environmental Engineering embraced cross-disciplinary learning when it founded the P<sup>5</sup>BL Laboratory (which stands for problem-, project-, product-, process-, people-based learning). P<sup>5</sup>BL coordinates year-long Architecture/Engineering/Construction (AEC) Global Teamwork challenges in which international teams of students design solutions for real clients.<sup>17</sup> Each team member has an assigned role, such as architect, structural engineer, construction manager, financial manager, or apprentice (undergraduates). The team has access to a large pool of faculty mentors and must manage their work over long distances and multiple time zones. AEC courses advance Stanford's belief that, "it is essential to educate engineers who possess not only deep technical excellence, but the creativity, cultural awareness and entrepreneurial skills that come from exposure to the liberal arts, business, medicine and other disciplines that are an integral part of the Stanford experience."<sup>18</sup>

## 2. Engaging students and industry in real-world problem-solving

Some engineering programs are promoting cross-disciplinary thinking through real-world problem solving. "Problem-based" or "challenge-based" learning presents students with difficult problems with no established solution, sometimes for the greater good and sometimes for an industry client.<sup>19</sup> These experiences seek to increase students' appreciation for the multi-dimensional nature of real-world challenges, including social, cultural, and financial considerations. While internships and co-ops can provide valuable real-world experiences, they are generally undertaken by individual students off-campus.<sup>20</sup> In contrast, having teams of students undertake real-world problems with the help of faculty and industry advisors can increase the complexity of the problem students address, create more opportunities for guided learning, and, consequently, increase the knowledge and skills students gain from the experience. Furthermore, these projects can generate explicit benefits for industry partners, a best practice for fostering long-lasting academic-industry partnerships.<sup>21</sup>

Some programs incorporate real-world problems in competitive challenges. The Massachusetts Institute of Technology's (MIT) IDEAS Global Challenge in an annual competition where students develop solutions to address problems facing underserved communities.<sup>22</sup> Successful teams receive grant money for research and prototypes and then enter a final competition for prizes of up to \$15,000 to implement their solution. Recent IDEAS teams have developed apps for recovering opioid addicts and designed ambulance carts that attach to motorcycles. Some challenges are issued and funded by corporate or philanthropic partners.

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<sup>17</sup> Renate Fruchter. "Dimensions of teamwork education." *International Journal of Engineering Education* 17, no. 4/5 (2001): 426-430.

<sup>18</sup> Stanford University College of Engineering. "About." <https://engineering.stanford.edu/about>. Accessed July 9, 2017.

<sup>19</sup> Geoff Mulgan, Oscar Townsley, and Adam Price. "The challenge-driven university: how real-life problems can fuel learning." Nesta (2016).

<sup>20</sup> Caleb Burns, and Shweta Chopra. "A meta-analysis of the effect of industry engagement on student learning in undergraduate programs." *Journal of Technology, Management, and Applied Engineering* 33, no. 1 (2017): 1.

<sup>21</sup> Garousi, Vahid, Kai Petersen, and Baris Ozkan. "Challenges and best practices in industry-academia collaborations in software engineering: A systematic literature review." *Information and Software Technology* 79 (2016): 106-127.

<sup>22</sup> Rob Matheson. "'IDEAS' to change the world." *MIT News*. <http://studentlife.mit.edu/news/%E2%80%9Cideas%E2%80%9D-change-world>. Accessed July 9, 2017.

At Olin College, every senior undertakes a year-long capstone project that addresses a real-world problem for a real client.<sup>23</sup> Students work in teams with a faculty mentor and industry advisors. There are two categories of projects – those undertaken for a sponsoring corporation and those that address a social challenge. In the SCOPE program, corporate partners provide \$55,000 and an engineering problem to be tackled by the Olin students.<sup>24</sup> Current projects include designing robots to sort and pack items in Amazon’s warehouses, helping Boston Scientific develop a new endoscope, and identifying new materials and processes to enhance Raytheon’s microwave board circuitry.<sup>25</sup> In the Affordable Design and Entrepreneurship program, student teams work with partners around the globe on challenges facing populations in developing countries, such as designing a low-cost baby-warmer to prevent infant deaths from hypothermia and improving cassava processing machines in Ghana.<sup>26</sup>

Project-based collaborations are some of the most substantive and fruitful partnerships between academia and industry. Other interactions include internships and co-ops, site tours, and guest speakers. A meta-analysis of thirty-three studies of academic-industry partnerships in software engineering synthesized the best practices of these programs. They include sustained interactions, engagement by top management and senior administrators, projects based on real-world problems, and explicit benefits to the industry partner.<sup>27</sup>

### 3. Fostering professional skills

Aligning the non-academic skills of engineering graduates with the realities of the modern workplace is another dimension of engineering education that has gained attention in recent years.<sup>28</sup> One analyst notes, “the engineering school accreditation process has ensured the acquisition of technical competencies. Rather, engineering majors who fail in industry are those who have all the right technical competencies but not the soft or people skills to be successful.”<sup>29</sup>

Workplace skills are both interpersonal and intrapersonal. Interpersonal skills – often called “soft skills” – are critical for building relationships and working in a team. These include knowing how to communicate effectively, interview well, and be culturally sensitive. Many of the team-based activities described above cultivate these skills. Intrapersonal skills like creativity and perseverance are harder to define but research suggests these traits are essential for students to succeed in college and the workplace.<sup>30</sup>

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<sup>23</sup> Olin. “Engineering capstone.” <http://www.olin.edu/academics/experience/engineering-capstone/>. Accessed July 9, 2017.

<sup>24</sup> Olin. “How SCOPE works.” [http://www.olin.edu/collaborate/scope/about/how\\_it\\_works/](http://www.olin.edu/collaborate/scope/about/how_it_works/). Accessed July 9, 2017.

<sup>25</sup> Olin. “2016-17 SCOPE Program.” [http://www.olin.edu/collaborate/scope/projects/2016\\_17/](http://www.olin.edu/collaborate/scope/projects/2016_17/). Accessed July 9, 2017.

<sup>26</sup> Olin. “Design that Matters joins global health track of Affordable Design & Entrepreneurship program at Olin College.” Accessed July 9, 2017.

<sup>27</sup> Garousi, Vahid, Kai Petersen, and Baris Ozkan. “Challenges and best practices in industry-academia collaborations in software engineering: A systematic literature review.” *Information and Software Technology* 79 (2016): 106-127.

<sup>28</sup> See for example: Rick Stephens. “Aligning engineering education and experience to meet the needs of industry and society.” *The Bridge* vol. 43, no. 2 (2013): 31-34.

<sup>29</sup> Rick Stephens. “Aligning engineering education and experience to meet the needs of industry and society.” *The Bridge* vol. 43, no. 2 (2013): 31-34.

<sup>30</sup> Karin Hess and Brian Gong. “Ready for college and career? Achieving the Common Core Standards and beyond through deeper, student-centered learning.” National Center for the Improvement of Educational Assessment and Nellie Mae Education Foundation (2014).

Iowa State University's engineering department determined that the best place to evaluate students' workplace skills is in co-ops and internships, and the best evaluators are the students and their supervisors.<sup>31</sup> Through a process that involved input from 212 employers, alumni, faculty, and students, they identified fourteen workplace competencies ranging from engineering knowledge and quality orientation to cultural adaptability and integrity. Following an internship or co-op, students and their supervisors complete an on-line evaluation that assesses students' mastery of the fourteen competencies (the evaluations are mandatory for students to receive credit).

The University of Texas at El Paso College of Engineering has elevated engineering leadership to an undergraduate major. Engineering students in the program develop skills and knowledge in the program's three pillars: character, competence, and capacity (adapted from the U.S. Military Academy at West Point).<sup>32</sup> One innovative aspect of the program is a required non-credit class for first-year students called Introduction to Engineering Leadership that is designed and taught by second-year students.<sup>33</sup> Putting students in charge of the course creates an opportunity for them to practice leadership skills, and faculty members credit student instruction with helping to increase the program's retention rate from 30% to 70%.<sup>34</sup>

Massachusetts Institute of Technology's Undergraduate Practice Opportunities Program (UPOP) is a year-long development program that helps sophomores hone the professional skills needed for career success.<sup>35</sup> It provides workshops and coaching on resumes and cover letters, interviewing, networking, negotiating, and communication. The program takes place during students' sophomore year so they can use those skills to acquire internships and other work experiences that will position them for career success by the time they graduate.

#### **4. Engaging first-year students**

##### **Research**

Historically, hands-on research often came at the end of a student's undergraduate career as a capstone experience that built on the foundational knowledge they had acquired during the first few years of study.<sup>36</sup> While this is a logical progression, engaging students in research experiences sooner has been found to increase retention. The University of Central Florida's Learning Environment and Academic Research Network (LEARN) program pairs first-year engineering students with graduate-student mentors to experience hands-on research for a minimum of 3-hours per week. The first two cohorts of LEARN students have exhibited long-

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<sup>31</sup> Thomas J. Brumm, Larry F. Hanneman, and Steven K. Mickelson. "Assessing and developing program outcomes through workplace competencies." *International Journal of Engineering Education* vol. 22, no. 1 (2006): 123.

<sup>32</sup> Yazmin Montoya, Aaron Eduardo Pacheco Rimada, Isaiah Nathaniel Webb, and Meagan R. Vaughan. "Developing leaders by putting students in the curriculum development driver seat." In *ASEE National Conference Proceedings, Seattle, WA*, (2015): 26.502.1-26.502.16.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

<sup>35</sup> Massachusetts Institute of Technology. "Undergraduate Practice Opportunities Program." <https://upop.mit.edu/>. Accessed July 9, 2017.

<sup>36</sup> Kimberly R. Schneider, Amelia Bickel, and Alison Morrison-Shetlar. "Planning and implementing a comprehensive student-centered research program for first-year STEM undergraduates." *Journal of College Science Teaching* 44, no. 3 (2015): 37-43.



term increases in retention and GPA. By the end of their second year, 75% of LEARN students remain in a STEM field compared to 49% of non-LEARN students in control groups.<sup>37</sup>

Olin College of Engineering has embraced first-year research by incorporating hands-on projects into three required courses that students take in their first semester. Likewise, MIT freshmen are immediately eligible for its Undergraduate Research Opportunities Program, which allows them to assist MIT faculty members conducting original research.

### **Learning Communities**

Many colleges are experimenting with “learning communities” – groups of first-year students who take two or more classes together, sometimes with the same instructors and/or support staff. The goal is to help students make strong social connections and engage more deeply with course material during their critical first semester of college. Research at the University of California Fullerton shows that students who participate in Freshman Learning Communities have higher retention and graduation rates than those who do not, even accounting for high school GPA, and the communities especially benefited minority students.<sup>38</sup> Olin requires all students to take the one-credit course “Olin Introductory Experience” aimed at ensuring their successful transition to the college.<sup>39</sup> Some engineering programs, such as Drexel University’s, offer living-learning communities where new engineering students can live in the same residence hall as other first-year students in their major.<sup>40</sup>

### **5. Re-examining classroom pedagogy**

In 2012, the American Society for Engineering Education (ASEE) noted the need for the engineering community “to raise its awareness of the considerable educational infrastructure that already exists, both within and outside engineering, and the substantive body of knowledge of proven principles and effective practices in teaching, learning, and educational innovation.”<sup>41</sup> ASEE called for engineers to value educational innovation within their field as much as technological innovation.<sup>42</sup>

In that spirit, the following section highlights some of the best pedagogical techniques being used by engineering programs across the country. Many of them focus on improving student outcomes in the introductory courses that often serve as gateways to the major. These new techniques are illuminating the role of pedagogy in student performance and retention.

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<sup>37</sup> Author’s calculations based on Scneider, Bickel, and Morrison-Shetlar (2015).

<sup>38</sup> Sunny Moon, et al. “High-impact educational practices as promoting student retention and success,” proceedings from The Ninth Annual National Symposium on Student Retention, University of Oklahoma, C-IDEA, 2013.

<sup>39</sup> Olin. “OIE1000: Olin Introductory Experience,” <http://www.olin.edu/course-listing/oie1000-olin-introductory-experience/>. Accessed July 9, 2017.

<sup>40</sup> Drexel University College of Engineering. “Engineering Learning Communities,” <http://drexel.edu/engineering/programs/undergraduate/engineering-learning-communities/>. Accessed July 8, 2017.

<sup>41</sup> Leah H. Jamieson, and Jack R. Lohmann. “Innovation with impact: Creating a culture for scholarly and systematic innovation in engineering education.” *American Society for Engineering Education, Washington* (2012): 77.

<sup>42</sup> Ibid.

## Active Learning

A large and growing body of research suggests that traditional college lectures are not the most effective way to increase student knowledge. In particular, researchers are comparing the results of traditional learning characterized by “continuous exposition by the teacher” and active learning that “emphasizes higher-order thinking and often involves group work.”<sup>43</sup> A recent meta-analysis of 225 studies compared the performance of college students in science, technology, engineering, and mathematics (STEM) courses that utilize those techniques.<sup>44</sup> The researchers found that students in traditional-learning classes are 55% more likely to receive failing grades or withdraw from the class than students in active-learning classes.<sup>45</sup> The findings held true across all STEM disciplines and class sizes.

## Flipped Classroom

The rise of active-learning techniques coincides with another new practice – the “flipped classroom.” The term generally refers to teachers delivering lectures via prerecorded videos that students watch as homework, which frees up class time for group- and discussion-based learning. While there is little rigorous, comparative research on flipped classrooms, what exists suggests the potential for positive effects on student performance and engagement.<sup>46</sup> In addition to increasing students’ content knowledge, this technique increases the need for them to come to class prepared. The University of Texas at El Paso’s Bachelor of Science in Engineering Leadership program uses this technique as “...one of the many ways the program promotes leadership of the self.”<sup>47</sup>

Peer instruction (PI) is a flipped-classroom technique popularized at Harvard University in the 1990s. Instructor uses real-time technology to gauge students’ responses to questions on the content of pre-class readings and assignments. If a concept is well understood the instructor moves on. If not, students have a few minutes to discuss the topic with each other and re-answer the question. This technique has been found to deepen students understanding and engagement with course material and their classmates. One study compared the results of PI and traditional instruction of a year-long introductory physics course. Students in the traditional course were twice as likely switch to a non-STEM major the following year as students in the PI course (11% versus 5%).<sup>48</sup>

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<sup>43</sup> Ibid.

<sup>44</sup> Scott Freeman, Sarah L. Eddy, Miles McDonough, Michelle K. Smith, Nnadozie Okoroafor, Hannah Jordt, and Mary Pat Wenderoth. "Active learning increases student performance in science, engineering, and mathematics." *Proceedings of the National Academy of Sciences* vol. 111, no. 23 (2014): 8410-8415.

<sup>45</sup> Ibid.

<sup>46</sup> Jacob Lowell Bishop, and Matthew A. Verleger. "The flipped classroom: A survey of the research." In *ASEE National Conference Proceedings, Atlanta, GA*, vol. 30, no. 9 (2013): 1-18.

<sup>47</sup> Montoya et al (2015).

<sup>48</sup> Jessica Watkins, and Eric Mazur. "Retaining Students in Science, Technology, Engineering, and Mathematics (STEM) Majors." *Journal of College Science Teaching* 42, no. 5 (2013): 36-41.

## Integrated Learning

Integrated learning seeks to increase student engagement and deepen content knowledge by teaching foundational engineering concepts in an integrated manner, rather than in isolation. Responding to low enrollment and retention rates, the Colorado State University's Department of Electrical and Computer Engineering embraced integrated learning during a comprehensive redesign of their pedagogy, curriculum, and organizational structure funded by a five-year grant from the National Science Foundation.<sup>49</sup> They concluded, "the crux of the problem [of high attrition rates] lies in the failings of the traditional course-centric structure wherein faculty function independently without demonstrating the connections between fundamental topics throughout the... curriculum."<sup>50</sup>

The department broke apart some of their core courses and rearranged them into "Learning Studio Modules" that teach concepts in an integrated manner using real-world engineering problems. The department incorporated flipped-classroom elements into its teaching; students must complete pre-work and online evaluations prior to beginning the modules. Finally, the department re-imagined faculty roles by assigning faculty members as "integration specialists" responsible for interweaving skills and concepts throughout the department's curriculum and activities, rather than delivering them as individual components taught in silos. The department is still implementing this redesign but early results are promising. From Fall 2015 to Fall 2016, the numbers of students receiving Ds or Fs in core classes fell by half.<sup>51</sup>

## Conclusion

There is ample innovation occurring within the U.S. engineering community to inspire and guide growing programs. While the long-term impact of some initiatives is impossible to know, studies of short-term impacts suggest that student-centric, project-based, real-world learning experiences have the potential to enhance student outcomes and retain more students in the field.

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<sup>49</sup> Anthony A. Maciejewski, Thomas W. Chen, Zinta S. Byrne, Michael A. De Miranda, Laura B. Sample McMeeking, Branislav M. Notaros, Ali Pezeshki et al. "A Holistic Approach to Transforming Undergraduate Electrical Engineering Education." *IEEE Access* 5 (2017): 8148-8161.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

## Appendix D: Engineering Enrollment Data

TO Terry Shehata, Maine Economic Improvement Fund Coordinator  
 FROM Nancy Davis Griffin, Vice President for Enrollment Management/Student Affairs  
 CC Jeannine Uzzi, Provost and Vice President for Academic Affairs  
 DATE July 24, 2017  
 RE Enrollment Data for Engineering

Below you will find data related to academic programs in Engineering. During our meeting this past spring you asked, what is the demand for engineering? It is my hope that this data answers this question for you. Please let me know if you have any questions regarding this information.

### University of Southern Maine Data:

#### Admissions Data for Engineering & Physical Sciences

Admissions Status	Fall 2015	Fall 2016
Applications	8	15
Admits	6	11
Enrolled	2	9

#### Overall Enrollment Data (Number of Students)

Academic Program	Fall 2014	Fall 2015	Fall 2016
Electrical Engineering	78	61	71
Mechanical Engineering	107	105	90
Transfers in Engineering	29	37	25

#### Fall 2016 Profile for Enrolled Engineering Students

Academic Program	FTE	GPA	Average Age	In-state
Electrical Engineering	60%	3.0	22	72%
Mechanical Engineering	72%	2.98	23	68%

#### Fall 2016 Retention & Persistence Data

Academic Program	1 <sup>st</sup> Year Fall to Spring	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year
Electrical Engineering	100%	46%	56%
Mechanical Engineering	85.6%	80.5%	70%

In looking at the National Clearing House data for USM students who majored in Engineering, it is clear that we are losing students to the University of Maine. Over the past three years we have had 5.12% of these students transfer to the University of Maine. The top competitors for USM in Engineering are the University of Maine and the University of New Hampshire.

**State of Maine**

The College Board published *College-Bound Seniors* report each year. This report presents data by state for 2016 high school graduates who took the SAT exam. Students are only counted once, no matter how often they are tested. In the state of Maine there were 11,833 test takers who indicated a high school graduation date of 2016. Of this group, 888 stated they intended to major in Engineering in college. This represents 10% of these test takers and put Engineering in the top 3 most selected intended college major for the class of 2016.

It is important to note that of the 11,833 SAT test takers for the class of 2016, 38% sent score reports to the University of Maine and 15.4% sent score reports to the University of Southern Maine. These two schools were in the top three colleges/universities to receive SAT score reports from the class of 2016 (The University of New Hampshire rounds out the top 3).

**University of Southern Maine Graduation – Percentage of Bachelor’s Degrees Awarded (Common Data Set)**

Academic Program	7/1/12 – 6/30/13	7/1/13 – 6/30/14	7/1/14 – 6/30/15	7/1/15 – 6/30/16
Engineering	0.008%	2.09%	2.7%	4.16%
Engineering Technologies	0.03%	3.22%	2.55%	2.82%

*\*Important to Note that for FY 15 Engineering & Physical Sciences rose to the top 5 schools awarding degrees at USM (118 degrees awarded).*

**University of Maine Graduation – Percentage of Bachelor’s Degrees Awarded (Common Data Set)**

Academic Program	7/1/12 – 6/30/13	7/1/13 – 6/30/14	7/1/14 – 6/30/15	7/1/15 – 6/30/16
Engineering	12.1%	11%	11.9%	14.6%
Engineering Technologies	6.2%	5.8%	6.2%	6.7%

## **New England**

New England has close to 1 million students enrolled in public and private colleges/universities. There are currently 35 colleges/universities that offer engineering as an academic major. The number of schools by state is:

- Connecticut 9
- Maine 3 (UM, USM, Maine Maritime Academy)
- Massachusetts 16
- New Hampshire 2
- Rhode Island 3
- Vermont 2

According to surveys conducted by the New England Association for College Admissions Counseling, admission applications for engineering majors have increased by 8% over the past 3 years across New England. It is projected that applications for engineering majors will continue to grow due to workforce demand.

## **National Data**

In a recent report conducted for *Forbes*, analysts at *PayScale* compared its database with 120 college majors and job growth projections through 2020 from the U.S. Bureau of Labor Statistics to determine the 15 most valuable academic majors in the current marketplace. Ranked by median starting pay, median mid-career pay (10 years in), growth in salary and wealth of job opportunities, engineering and math were at the top of the list. Engineering concentrations comprised one third of the most valuable majors in this report.

The National Science Foundation reports that science and engineering students persist and complete undergraduate programs at a higher rate than non-science and non-engineering students. Generally, the percentages of students earning bachelor's degrees in particular science and engineering fields are similar to the percentages planning to major in those fields.

The National Center for Educational Statistics reports that applications, enrollment and awarding undergraduate degrees in engineering have increased 29.1% since 2009.

## Appendix E: Scan of Engineering Education in Maine

Compiled by USM

School	Programs Offered	Faculty	Facilities	Notes
USM	B.S. Degrees: <ul style="list-style-type: none"> <li>• Electrical Engineering</li> <li>• Mechanical Engineering</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mariusz Jankowski</li> <li>▪ Michael P. Davis</li> <li>▪ Mehrdaad Ghorashi</li> <li>▪ Hongzhi Guo</li> <li>▪ Mustafa Guvench</li> <li>▪ Lin Lin</li> <li>▪ Carlos Lück</li> <li>▪ James Masi</li> </ul>	<b>John Mitchell Center</b> (Gorham; location of all facilities below) <ul style="list-style-type: none"> <li>▪ Fairchild Semiconductor Electrical Engineering Suite</li> <li>▪ Pratt &amp; Whitney Mechanical Engineering Laboratory</li> <li>▪ National Semiconductor Learning Factory</li> <li>▪ CMP Co. Power &amp; Automation Laboratory</li> <li>▪ Skunk Works (Student Lab)</li> <li>▪ IDEXX Education Lab</li> <li>▪ Electrical Eng. Circuits Lab</li> <li>▪ Product Testing &amp; Metrology Lab</li> <li>▪ Stantec Computer Aided Design Lab</li> </ul>	Accredited by the Accreditation Board for Engineering and Technology
UMaine	B.S. Degrees: <ul style="list-style-type: none"> <li>• Biomedical Engineering</li> <li>• Chemical Engineering</li> <li>• Civil/Environmental Engineering</li> <li>• Computer Engineering</li> <li>• Construction Engineering Technology</li> </ul>	<b>Civil &amp; Environmental Engineering</b> <ul style="list-style-type: none"> <li>▪ Aria Amirbahman</li> <li>▪ Kimberly Huguenard</li> <li>▪ Shaleen Jain</li> <li>▪ Jean MacRae</li> <li>▪ Lauren Ross</li> <li>▪ Aaron Gallant</li> </ul>	<b>Civil &amp; Environmental Engineering</b> <ul style="list-style-type: none"> <li>▪ The Richard &amp; Jean Higgins Materials Testing Laboratory</li> <li>▪ The Stephen W. Cole Concrete Laboratory</li> <li>▪ The Gorrill Palmer Consulting Engineers Soils Laboratory</li> </ul>	Accredited by the Accreditation Board for Engineering and Technology

	<ul style="list-style-type: none"> <li>• Electrical Engineering</li> <li>• Electrical Engineering Technology</li> <li>• Engineering Physics</li> <li>• Mechanical Engineering</li> <li>• Mechanical Engineering Technology</li> <li>• Survey Engineering Technology</li> </ul> <p>M.S. Degrees:</p> <ul style="list-style-type: none"> <li>• Chemical Engineering</li> <li>• Biomedical Engineering</li> <li>• Civil Engineering</li> <li>• Electrical Engineering</li> <li>• Computer Engineering</li> <li>• Mechanical Engineering</li> <li>• Engineering and Business</li> <li>• Engineering Physics</li> </ul> <p>Ph.D.:</p> <ul style="list-style-type: none"> <li>• Chemical Engineering</li> <li>• Civil Engineering</li> <li>• Electrical Engineering</li> <li>• Mechanical Engineering</li> </ul>	<ul style="list-style-type: none"> <li>▪ Per Erik Garder</li> <li>▪ Dana Humphrey</li> <li>▪ Melissa Landon</li> <li>▪ Miltiades Zacas</li> <li>▪ Habib Joseph Dagher</li> <li>▪ Bill Davids</li> <li>▪ Eric Landis</li> <li>▪ Roberto Lopez-Anido</li> <li>▪ Edwin Nagy</li> <li>▪ Xenia Rofes</li> <li>▪ Willem Brutsaert</li> <li>▪ Bryan Pearce</li> <li>▪ Thomas Sandford</li> <li>▪ Qingping Zou</li> </ul> <p><b>Mechanical Engineering</b></p> <ul style="list-style-type: none"> <li>▪ Michael Boyle</li> <li>▪ Vincent Caccese</li> <li>▪ Sheila Edalatpour</li> <li>▪ Wilhelm “Alex” Friess</li> <li>▪ Andrew Goupee</li> <li>▪ Babak Hejrati</li> <li>▪ Zhihe Jin</li> <li>▪ Justin Lapp</li> <li>▪ Eric Martin</li> <li>▪ Justin Poland</li> <li>▪ Oliver Putzeys</li> <li>▪ Masoud Rais-Rohani</li> <li>▪ Senthil Vel</li> <li>▪ Qian Xue</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Franklin Woodard Environmental Engineering Laboratory</li> <li>▪ The Kleinschmidt Hydraulics Laboratory</li> <li>▪ Advanced Geotechnics Laboratory</li> <li>▪ Advanced Structures and Composites Center</li> <li>▪ SeaGrant University of Maine Cooperative Extension</li> <li>▪ Senator George J. Mitchell Center for Sustainability Solutions</li> </ul> <p><b>Mechanical Engineering</b></p> <ul style="list-style-type: none"> <li>▪ Crosby Lab</li> <li>▪ Wave Energy, Offshore Platform Lab</li> <li>▪ Mechanical Testing Lab</li> <li>▪ Electronics Lab</li> <li>▪ Composite Materials Lab</li> <li>▪ Solar Energy Lab</li> <li>▪ 3D Printing Lab</li> <li>▪ Nano-Materials Lab</li> <li>▪ Wind Tunnel</li> <li>▪ Biomedical &amp; Robotics Lab</li> <li>▪ Materials Testing/Shaker Table Lab</li> <li>▪ Blue Giant Materials Testing System</li> <li>▪ Biomechanics/Head Injury Lab</li> <li>▪ Remote Structural Monitoring Lab</li> <li>▪ Alford W2Ocean Engineering Lab</li> </ul>	
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	<ul style="list-style-type: none"> <li>• Biomedical Engineering (Grad. School of Biomedical Science and Engineering)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yingchoa Yang</li> <li>▪ Xudong Zheng</li> <li>▪ Donald Grant</li> <li>▪ David Rubenstein</li> <li>▪ James Sucec</li> </ul> <p><b>Electrical &amp; Computer Engineering</b></p> <ul style="list-style-type: none"> <li>▪ Don Hummels</li> <li>▪ Mauricio Pereira da Cunha</li> <li>▪ Bruce Segee</li> <li>▪ Yifeng Zhu</li> <li>▪ Ali Abedi</li> <li>▪ Rosemary Smith</li> <li>▪ John Vetelino</li> <li>▪ Richard Eason</li> <li>▪ Nuri Emanetoglu</li> <li>▪ Duane Hanselman</li> <li>▪ David Kotecki</li> <li>▪ Vincent Weaver</li> <li>▪ Andrew Sheaff</li> </ul> <p><b>Chemical &amp; Biomedical Engineering</b></p> <ul style="list-style-type: none"> <li>▪ Robert Bowie</li> <li>▪ Douglas Bousfield</li> <li>▪ Caitlin Howell</li> <li>▪ Albert Co</li> </ul>	<p><b>Electrical &amp; Computer Engineering</b></p> <ul style="list-style-type: none"> <li>▪ Laboratory for Surface Science and Technology (LASST)</li> <li>▪ Clean Room Micro/Nano Fabrication Facility</li> <li>▪ Sensor and Microelectronic Device Packaging</li> </ul> <p><b>Chemical &amp; Biomedical Engineering</b></p> <ul style="list-style-type: none"> <li>▪ Materials Characterization and Processing Facility</li> <li>▪ Molecular Biophysics Facility</li> <li>▪ Pulp &amp; Paper Manufacturing Facility</li> <li>▪ Sensor Development Facility</li> <li>▪ Spectroscopic Techniques Facility</li> <li>▪ Surfaces and Interfaces Facility</li> <li>▪ Transport and Separation Process Facility</li> </ul>	
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		<ul style="list-style-type: none"><li>▪ William DeSisto</li><li>▪ Adriaan R.P. van Heiningen</li><li>▪ John Hwalek</li><li>▪ Andre Khalil</li><li>▪ Michael Mason</li><li>▪ Paul Millard</li><li>▪ David Neivandt</li><li>▪ Hemant Pendse</li><li>▪ Thomas Schwartz</li><li>▪ Karissa Tilbury</li><li>▪ G. Peter van Walsum</li><li>▪ Sara Walton</li><li>▪ M. Clayton Wheeler</li></ul> <p><b>Engineering Technology</b></p> <ul style="list-style-type: none"><li>▪ Phil Dunn</li><li>▪ Howard "Mac" Gray</li><li>▪ Knud Hermansen</li><li>▪ Will Manion</li><li>▪ Amber Killip</li><li>▪ Meredith Kirkman</li><li>▪ John Allen</li><li>▪ Scott Dunning</li><li>▪ Jude Pearse</li><li>▪ Paul Villeneuve</li><li>▪ Joel Anderson</li><li>▪ Keith Berube</li><li>▪ S. David Dvorak</li><li>▪ Brett Ellis</li><li>▪ Karen Horton</li></ul>		
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		<ul style="list-style-type: none"> <li>▪ Keith Kinney</li> <li>▪ Raymond Hintz</li> <li>▪ Carlton Brown</li> </ul>		
Maine Maritime Academy	<p>B.S. Degree:</p> <ul style="list-style-type: none"> <li>• Marine Systems Engineering (license and non-license)</li> <li>• Marine Engineering Technology</li> <li>• Power Engineering Technology</li> <li>• Marine Engineering Operations</li> <li>• Power Engineering Operations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Tim Allen</li> <li>▪ Richard Armstrong</li> <li>▪ Priscilla Audette</li> <li>▪ Lance Burton</li> <li>▪ Richard Collenberg</li> <li>▪ Mark Cote</li> <li>▪ Lynn Darnell</li> <li>▪ Scott Eaton</li> <li>▪ Sadie Alley Ferreira</li> <li>▪ Barbara Fleck</li> <li>▪ Laurie Flood</li> <li>▪ Kaveh Haghkerdar</li> <li>▪ Joseph Harman</li> <li>▪ Waldo Harmon</li> <li>▪ Richard Kimball</li> <li>▪ Mark Legel</li> <li>▪ Mark Libby</li> <li>▪ Jerald Markley</li> <li>▪ Leo Mazerall</li> <li>▪ Patrick Moroney</li> <li>▪ Doug Read</li> <li>▪ Richard Reed</li> <li>▪ Andrew Rogers</li> <li>▪ Brendyan Sarnacki</li> <li>▪ Jill Schoof</li> <li>▪ David Skaves</li> <li>▪ Richard Smith</li> </ul>	<p><b>Research Facilities &amp; Laboratories</b></p> <ul style="list-style-type: none"> <li>▪ ABS (American Bureau of Shipping) Center for Engineering, Science, and Research</li> <li>▪ Engine and Fuels Testing Laboratory</li> <li>▪ Material Testing Laboratory</li> <li>▪ Research Projects Laboratory</li> <li>▪ Renewable Energy Laboratory</li> <li>▪ Ocean Energy Laboratory</li> </ul> <p><b>Research Vessel</b></p> <ul style="list-style-type: none"> <li>▪ <i>R/V Quickwater</i></li> </ul>	Accredited by the Accreditation Board for Engineering and Technology

		<ul style="list-style-type: none"> <li>▪ James Stefanski</li> <li>▪ Hank (Henry) Stewart</li> <li>▪ William Tefft</li> <li>▪ Alan Trundy</li> <li>▪ Travis Wallace</li> <li>▪ Paul Wlodkowski</li> <li>▪ Michael Young</li> </ul>		
Southern Maine Community College	<p>A.S. Degree:</p> <ul style="list-style-type: none"> <li>• Engineering</li> <li>• Electrical Engineering Technologies</li> </ul>	<ul style="list-style-type: none"> <li>▪ Meredith Comeau</li> <li>▪ Jamie McGhee</li> <li>▪ Adam Tambone</li> </ul>	<ul style="list-style-type: none"> <li>▪ Computer Science &amp; Engineering Center (CSEC)</li> <li>▪ Ross Technology Center</li> </ul>	Transfer agreements with USM and UMaine
Central Maine Community College	<p>A.S. Degree:</p> <ul style="list-style-type: none"> <li>• Architectural and Civil Engineering Technology</li> </ul>	<ul style="list-style-type: none"> <li>▪ Daniel Moreno</li> </ul>	<ul style="list-style-type: none"> <li>▪ Jalbert Hall</li> </ul>	
Eastern Maine Community College	<p>A.S. Degree</p> <ul style="list-style-type: none"> <li>• Electrical &amp; Automation Technology</li> <li>• Civil Engineering Technology</li> </ul>	<ul style="list-style-type: none"> <li>▪ John Liimakka</li> <li>▪ Mark Nisbett</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maine Hall</li> </ul>	Articulation agreement with UMaine
Bates College	<p>Combined Plan:</p> <ul style="list-style-type: none"> <li>• Engineering</li> </ul>	<ul style="list-style-type: none"> <li>▪ Nathan Lundblad</li> <li>▪ Hong Lin</li> </ul>	<ul style="list-style-type: none"> <li>▪ Carnegie Science Hall</li> </ul>	3 years at Bates for liberal arts and pre-engineering, then transfer to Case Western, Columbia, Dartmouth, RPI, and Washington University

## Appendix F: Scan of K-12 Engineering Programs in Maine

Compiled August 2017

Higher Education Institutions/ Partnerships	Program Name	Program Description
University of Maine (Orono; Pulp & Paper Foundation)	<b>CONSIDER ENGINEERING</b>	A 4-day summer session for high aptitude math and science <b>high school students</b> offered 3 times in July to groups of 34. The four-day, free of charge, on-campus "camp" gives students opportunities to experience the rewards and challenges of both college life and technical careers. Students participate in about 20 activities and are introduced to nearly two dozen UMaine faculty, engineers and engineering students.
University of Maine (Orono)	<b>MAINE SUMMER TRANSPORTATION INSTITUTE</b>	A 2-week long summer session for <b>middle school students</b> in the Foster Innovation Center; up to 20 students from the greater Bangor area will get a close look at careers in engineering and transportation.
University of Maine (Orono)/University of Southern Maine (Gorham)	<b>ENGINEERING EXPO</b>	Annual week-long community outreach events where engineers, educators, and students gather for hands-on activities and workshops to learn about engineering and what engineers do.
Maine Robotics (Non-profit located in Orono; Camp programs are located Statewide)	<b>MAINE ROBOTICS CAMP PROGRAM</b>	Summer day camps that prepare <b>K-12 students</b> for the technology world of tomorrow. Offers a variety of programs in STEM fields throughout the summer. <ol style="list-style-type: none"> <li>1. Lego Robotics Camp</li> <li>2. Build Your Own Computer Camp</li> <li>3. 3D Design &amp; Printing camp</li> <li>4. Programming Minecraft Camp</li> <li>5. Introduction to Robotics (Big Bots)</li> </ol>

Maine Robotics/ University of Maine/ University of Southern Maine/Maine 4H program/Maine Girl Scout Council/Maine Maritime Academy/ University of Maine at Farmington's Department of Computer Science	<b>MAINE FIRST LEGO LEAGUE</b>	The FIRST® LEGO® League is an international STEM (Science, Technology, Engineering & Mathematics) program based out of Manchester New Hampshire. Each year the program hosts a new theme and missions for the robots to complete. Teams have from 2 to 10 children on them and work throughout the season preparing for the tournaments. The team also researches and gives a presentation on a topic within the theme for the year. <b>K-8 Students &amp; High School Students</b> . Runs May-September
University of Southern Maine/University of Maine (Orono; Cooperative Extension)	<b>4-H STEM AMBASSADORS</b>	4-H STEM Ambassadors are trained USM students who facilitate hands on science, technology, engineering, and math (STEM) with youth <b>8-14 years old</b>
Maine School of Science and Mathematics	<b>MSSM SUMMER CAMP</b>	Every summer nearly 600 <b>students ages 10-14</b> participate in the MSSM Summer Camp. The summer offerings challenge the mind and develop interest in science, technology, engineering and mathematics.
University of Maine (Orono)	<b>UPWARD BOUND MATH/SCIENCE</b>	A summer program for <b>high school students</b> that will apply project research modeling, where students learn to ask scientific questions and critically consider the possible answers. Students benefit through trial and error, hands on, integrated learning in conjunction with professionals in the field.
Maine Space Grant Consortium/ Perloff Foundation/ Maine Community Foundation	<b>STEM 4 ME</b>	Supports projects that encourage students to create real-world solutions to problems in areas such as renewable energy, ecology, automation, space science and sustainable food production, integrating wherever possible the arts and humanities. Eligible applicants are <b>educators at publicly funded middle schools, high schools and academies</b>
Jackson Laboratory (Bar Harbor)	<b>SUMMER STUDENT PROGRAM</b>	Provides high school (and college students) with an opportunity to conduct biomedical research independently with the guidance of staff scientists. [Biomedical Engineering]
Challenger Learning Center of Maine (Bangor)	<b>LIFT-OFF CAMP</b>	Three-day science and engineering focused camp for <b>K-2 students</b> to prepare for going back to school.

<p>Challenger Learning Center of Maine (Bangor)</p>	<p><b>ASTRONAUT ACADEMY</b></p>	<p>5-Day program highlights many aspects of astronaut training <b>Entering Grades 6-8</b> learn technologies used in space, construct a Mars habitat prototype, re-create the Apollo 13 engineering challenge and web conference with NASA, simulate missions in the Mission Control, Transporter and Space Lab simulators. Off-site day trip to UMaine Orono labs and Emera Astronomy Center planetarium.</p>
<p>Challenger Learning Center of Maine (Bangor)</p>	<p><b>ROBOT TECH CAMP</b></p>	<p>5-Day program presents working with robots, rovers, circuits, Minecraft and conducting exciting engineering challenges. Campers will also learn to build and program a LEGO We DO Robot, use a 3D printer and even learning coding basics; Campers will also get to use Challenger’s mission control, transporter, and space lab simulators. <b>Entering Grades 2-4</b></p>
<p>Challenger Learning Center of Maine (Bangor)</p>	<p><b>AFTERSCHOOL DESIGN SQUAD GLOLBAL</b></p>	<p>The Design Squad program is open to students in <b>grades 3-6 students</b> to explore engineering through fun-packed, high energy, hands-on activities, such as designing and building an emergency shelter or a structure that can withstand an earthquake. Through DSG, students also get a special opportunity: the chance to work alongside a partner club from another country. Partner clubs share their experiences by exchanging design ideas, photos, and videos. Along the way, they develop their global competency by learning more about each other’s cultures, communities, and lives.</p>
<p>Challenger Learning Center of Maine (Bangor)</p>	<p><b>AFTERSCHOOL LEGO CLUB</b></p>	<p>Challenger Afterschool LEGO club combines the excitement of LEGO creation with engineering fun, including the use of Challenger’s LEGO WeDo Engineering kits to build and program LEGO robots. For <b>grades 2-5</b></p>

<p>University of Maine/ Beech Hill School                  Calais Middle-High School/Caravel Middle School /Caribou Middle School/Dedham Middle School/ Ella Lewis-Peninsula schools/                  Fort Fairfield Middle School /Fort O'Brien School /Greely Middle School /Hichborn Middle School /Houlton Middle-High School                  Leonard Middle School                  /Mattanawcook Junior High /Molly Ockett Middle School /Mountain Valley Middle School /Orono Middle School                  Penquis Valley School, Milo /Presque Isle Middle School /Reeds Brook Middle School/                  Rose M. Gaffney Elementary School /Searsport Middle School /Surry Elementary School /                  Trenton Elementary School /Troy Howard Middle School /Valley Rivers Middle School</p>	<p><b>EXPANDING YOUR HORIZONS CONFERENCE</b></p>	<p>Annual Conference that aims to provide a safe and encouraging environment to explore STEM for <b>middle school girls</b>. The conference is coordinated by the UMaine Women's Resource Center with support from the Maine Girls Collaborative Project. The University of Maine Cooperative Extension is the event's Healthy Start Partner and the UMaine College of Engineering is the Fun Futures Sponsor. The Maine School of Science and Mathematics summer camp also donated to the conference. The event involves volunteers, including university faculty, staff and more than 35 UMaine students, as well as community professionals. Throughout the day, groups of girls will be guided by UMaine students and staff through three workshops around campus. Two of the workshops are STEM-related, while the third focuses on gender equity and confidence building.</p>
<p>University of Southern Maine/Portland Public Schools/ Portland High School/Deering High School/Casco Bay High School/Make it Happen! Multilingual Multicultural Center of Portland Public Schools/Maine Girls Academy/Portland Housing</p>	<p><b>STEM SISTERS (new program)</b></p>	<p>Monthly meetings &amp; special events established as a network for young girls in the Greater Portland area to connect to, find support, and be encouraged to pursue pathways through STEM learning and education. Primarily young women in <b>middle and high school</b></p>



Authority/ Study Centers (Kennedy Park)		
Challenger Learning Center of Maine (Bangor)	<b>MINECRAFT MANIA</b>	February Vacation Camp Day that bring the computer game to life with Minecraft challenges. Use the Minecraft blocks to complete engineering challenges, pixel art and even try out basic javascript computer programming used in everyone’s favorite Minecraft world. <b>Grades K-5</b>
Challenger Learning Center of Maine (Bangor)/Girl Scouts of Maine	<b>RENDEZVOUS WITH A COMET</b>	Girl Scout Cadettes will carry out a day mission for an out-of-this-world experience. The team will be astronauts, engineers, and mission controllers solving real-world problems and sharing the thrill of discovery on a mission to space. Badge link: Night Owl. <b>Grade level 6-8</b>
Challenger Learning Center of Maine (Bangor)	<b>LEGO ROBOT PROGRAMMING</b>	Introduction to robotic and integrating sensors. Students learn programming basics and experiment with programming language using LEGO WeDo kits. This program is 90 min. <b>Grades 2-5</b> , up to 24 students max
Challenger Learning Center of Maine (Bangor)	<b>BLAST-OFF</b>	Young engineers build a rocket using simple materials and learn about the engineering design process, principles of flight and analyzing and communicating results. <b>Grades K-8</b> , up to 25 students. 90 minutes-2 hours
Challenger Learning Center of Maine (Bangor)	<b>ROVERS</b>	Students engage in an overview of engineering and the design process, followed by the opportunity to design, test and redesign a rover and share results. <b>Grades 5-8</b> , up to 25 students. 90 minutes - 2 hours

Challenger Learning Center of Maine (Bangor)	<b>SIMULATED SPACE MISSIONS</b>	Mission simulations are learning environments embedded with activities and lessons aligned with national Next Generation Science Standards (NGSS) and Common Core State Standards (CCSS). While students become astronauts and engineers at Challenger Learning Centers they are solving real-world problems as they share the thrill of discovery on missions through the Solar System. <b>(K-12)</b>
Project Login/ University of Maine (Orono)	<b>STUDENT TECH CONFERENCE</b>	Brings over 800 students <b>(K-12)</b> to the University of Maine transform their workshops to a focus on coding and innovation.
Mad Science of Maine (South Portland)/ Partnerships with regional schools)	<b>BRIXOLOGY</b>	Engineering Afterschool Program (to be launched January 2017) This 6-week/6 class session is very hands-on and fits perfectly into STEM curriculum. Children build a different engineering-themed project in each class. They explore engineering fields including mechanical, structural, aerospace, nautical, and bioengineering. Use critical thinking, cooperation, and creative problem-solving to test and improve creations. Also, they experience extended learning with a take home project to reinforce each concept. <b>K-5 graders</b>
Challenger Learning Center of Maine (Bangor)	<b>BECOMING A SCIENTIST</b>	Simulated mission: A team of scientists and engineers has been called in to conduct research aboard the space lab and deploy a new satellite. Students collect data, avert disasters, and ensure the safety of the crew, simultaneously conducting important research for the benefit of humankind. <b>Grades 5-8/ Crew Size: 16-28/ Duration: 2-2.5 hours</b>
Code.org/ Educate Maine/ Maine Mathematics & Science Alliance	<b>CODE STUDIO</b>	Leading curriculum for <b>K-12</b> computer science. There are 1,410 teacher accounts and 47,805 student accounts on Code.org in Maine. Provides professional learning for 252 teachers in CS Fundamentals <b>(K-5)</b> and 3 teachers in Computer Science Principles in Maine.
Maine Space Grant Consortium (Augusta)	<b>MAINE REESEARH INTERNSHIPS FOR TEACHERS AND STUDENTS (MERITS) PROGRAM</b>	Provides summer (six weeks) research opportunities to Maine <b>high school juniors</b> in host institutions across the state. Students who are interested in STEM fields and would like to experience “real-time” applications of STEM in a research-focused work world conducting research and technology development should apply.

Maine Mathematics Science and Engineering Talent Search Program (MMSETS) (Orono)	<b>MASTER AFTERSCHOOL PROGRAM (Reeds Brook Middle School)</b>	The second semester of an incentive program to grasp STEM concepts with special emphasis on foundation in mathematics ( <b>grades 6-8</b> )
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## Appendix G: Building Maine's Engineering Pipeline

### Goal

The goal of this initiative is to develop a K-12 pathway to engineering education by increasing interest and competency in STEM-based skill sets, such as engineering literacy, particularly among women and underserved rural students.

### Background and Rationale

With tremendous natural resources and hardworking citizens, Maine per capita income is one of the lowest in the Nation because Maine does not have adequate STEM-trained workforce that creates the vast majority of jobs, with the most high-salary jobs being in or related to engineering. Currently, engineering and manufacturing comprise 8% of Maine's GDP (\$3.7 billion) and approximately 30% of Maine's engineers are 55 years or older. Projections indicate that Maine will have a shortage of 1,260 engineers by the year 2026 due to both retirements and the growth of engineering within the state. To address this critical shortfall, the Maine engineering workforce should be doubled in the next 10 years and the first step in achieving this objective is creating an engineering pathway in Maine K-12 schools because the quantity and quality of engineering instruction in Maine's K-12 schools is insufficient.<sup>52</sup>

There are several grand challenges in K-12 engineering education including: (1) early engineering exposure and initiation of creative problem solving, (2) teacher training, (3) exposing teachers and students to real world engineering practices, (4) curriculum development, and (5) integrating training opportunities at higher education institutions and industries. A recent survey<sup>53</sup> of STEM related activities in Maine shows 34 such programs are offered across the state by many organizations. These range from 2-hr to 1-day (short-term) tours/simulation engagements to 1- to 2-week hands-on activities (medium-term), to more than 1-month activities (long term). While all these activities have been helpful in raising STEM awareness in Maine, only a few engage students in engineering in a meaningful manner to have any impact on students' interest. These challenges inform the following key research questions: (1) How can engineering literacy be increased in K-12 students and teachers? (2) How can K-12 engineering literacy improve recruitment and retention of students to higher education engineering majors and workforce?

### The Plan

The aforementioned challenges will be addressed by assessing the effectiveness of the following six strategies, which are geared toward increasing engineering literacy and awareness at the earliest foundations of education, continuing on through all levels of education, and instilling the next generation of Mainers with the skillsets that they will need to succeed in the 21<sup>st</sup>-century economy. This effort will begin to combat a result of a preliminary study<sup>52</sup> indicating that over 60% of Maine K-12 schools do not offer engineering-focused education of

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<sup>52</sup> Friess, A. (2017). Finding the E in STEM, A survey of Maine teachers and principals regarding engineering education in Maine, internal report, Mechanical Engineering Department, University of Maine.

<sup>53</sup> Meagher, T. (2017). Draft K-12 STEM Programs in Maine.

any type, with this value increasing to 80% in rural areas. Targeting K-12 schools provides an additional advantage to a national problem, only 18% of all engineering students are female, yet with earlier intervention and training the pathway may greatly improve the recruitment and retention of female engineering students. In these educational initiatives, the best practices of the existing programs<sup>2</sup> will be examined for adaptation and implementation statewide to provide short-term and long-term outcomes. In the following objectives, Additive Manufacturing (AM), also known as three dimensional printing (3D), has been used as an example and possible vehicle to address the above grand challenges, fostering inspiration and admiration of engineering in K-20 students. However, other proven examples of engineering engagement can be adopted. The vertical and horizontal integration from elementary school to continuing education through advancing the frontiers of engineering techniques will directly support Maine's economic development.

*Strategy 1: INSPIRE (Outreach to K-12 schools)*

The goal of this strategy is to inspire Maine students to become engineers by introducing them to the creativity and innovation inherent in engineering, and increasing their knowledge of engineering principles and professions. This will be achieved through coordinated, statewide outreach by Maine's post-secondary engineering programs that builds on existing initiatives, such as Engineering Expo, tours of UMS engineering facilities, and tours of engineering companies.

*Strategy 2: ENGAGE (Equip K-12 schools)*

This strategy seeks to engage K-12 students in hands-on learning with 3D printers installed at every K-12 school in Maine through a collaborative effort between Maine's post-secondary engineering and education programs, the Maine Department of Education, and K-12 schools. A pilot study will be conducted to train teachers and students from 60 schools in a newly designed engineering module centered around 3D printing. Specific teacher training needs and curriculum will be identified and developed, and the program will expand until every Maine school has trained teachers and grade-appropriate curriculum to support 3D printing and student innovation.

*Strategy 3: PREPARE (Educate K-12 teachers)*

Improving engineering knowledge among K-12 teachers will improve Maine students' overall STEM proficiency and encourage more of them to seek professions in these fields.

UMaine and USM propose creating four post-secondary credential programs to increase engineering literacy among Maine's K-12 educators:

- 4+1 Engineering/Education B.S./M.S. that pairs engineering education with teacher training
- Certificate in Education for practicing engineers interested in entering K-12 education
- Certificate in Engineering Education for current teachers
- Minor in Engineering for graduates of other disciplines (e.g. science or math) to learn about engineering while pursuing an M.S. in education

By creating four pathways for aspiring engineering educators, UMaine and USM seek to foster a cadre of teachers with demonstrated knowledge of both engineering and education. The Maine Department of Education's *Statewide Strategic Plan for STEM*, released in 2010, calls for eight regional STEM coordinators and research centers to increase student achievement. Graduates of the above programs would be well-suited to fill those roles and others.

*Strategy 4: ENABLE (Engineering teaching certificate)*

Building on the credentials outlined above, UMaine and USM will work with the Maine Department of Education to develop a teaching certificate that enables engineering professionals to teach in K-12 schools. The real-world knowledge and experiences these individuals bring into the classroom are invaluable tools to inspire, engage, and inform students about engineering.

*Strategy 5: SUPPORT (Community colleges pathways)*

Maine's community colleges can be gateways for students from diverse backgrounds to enter the engineering field. These institutions can foster their interest and prepare them to enter a bachelor's degree program with a solid academic foundation. To build this pathway, UMaine and USM will partner with Maine's community colleges to develop instructional modules and courses tailored to their students' needs and interests, likely incorporating both on-line and on-site components. Collaborative A.A./B.S. programs will allow students to transition easily from community college into bachelor's degree programs at UMaine and USM.

*Strategy 6: PRE-ENGINEERING high school programs*

UMaine and USM will work together to build an immersive, summer pre-engineering ("Step Up") program with local school districts to further increase the pipeline of engineering students, particularly in Southern Maine. This residential program will offer a specialized, innovative, interdisciplinary curriculum in engineering, science, and mathematics designed to improve students' competence in these fields. The program will also seek to engage parents so that they see the opportunity that engineering holds for their children.

The curriculum will consist of industry-defined engineering applications in multiple fields. A key component of the program will be hands-on activities and inquiry-based exploration, an approach proven to enhance students' enthusiasm for engineering, science, and mathematics. Math and engineering concepts will be reinforced and used to analyze and interpret the data obtained from the research projects. Students will also learn scientific writing and oral presentations skills. Having increased students' competence and interest in engineering, science and mathematics, the program will encourage students to pursue engineering careers by connecting them with role models and mentors in engineering-related fields, and increasing their awareness of exciting opportunities for postsecondary education and engineering related careers. Students also will participate in sessions on leadership development, interview skills, and resume writing.

This initiative will increase interest among the many place-bound students in Southern Maine. Growing the number of Maine students pursuing engineering degrees will ensure there are enough students to fill programs at both UMaine and USM, even as demographic trends shrink

the overall number of high school graduates. Required resources will include a program coordinator, administrative support, operating funds, and scholarships for participating students. Corporate sponsorships will be sought to partially support program expenses.

#### Timeline and Investment

UMaine and USM propose launching this initiative as soon as funds become available. The estimated cost of the above activities is \$982,000 per year for staff coordinators, faculty training and program development, technical assistance, and equipment; costs that over time will be offset by corporate sponsorships, grants, and other institutional revenue sources.

	<b>ANNUAL COST</b>
<b>K-12 OUTREACH MANAGER</b>	\$100,000
<b>PRE-ENGINEERING SUMMER PROGRAM COORDINATOR (ALSO SERVES AS USM LIAISON WITH K-12 OUTREACH MANAGER)</b>	\$80,000
<b>TECHNICIAN</b>	\$90,000
<b>FACULTY FOR TRAINING AND PROGRAM DEVELOPMENT</b>	\$270,000
<b>FACULTY SUMMER SALARIES</b>	\$22,000
<b>PRE-ENGINEERING SUMMER PROGRAM OPERATING FUNDS AND STUDENT SCHOLARSHIPS</b>	\$250,000
<b>GRADUATE STUDENTS</b>	\$50,000
<b>UNDERGRADUATE STUDENTS</b>	\$40,000
<b>3D PRINTERS (60)</b>	\$30,000
<b>PROGRAM EXPENSES</b>	\$50,000
<b>TOTAL</b>	<b>\$982,000</b>

#### Expected Impacts

This proposed plan will:

- Create engineering literacy in every Maine K-12 school through access to engineering tools and related experiential coursework impacting tens of thousands of students, including female, first generation, rural, and underrepresented minority students.
- Prepare 500 STEM-educated K-12 teachers within 10 years to lead their school districts in developing STEM programs and contributing to the national call for building 1,000

STEM schools, training 100,000 STEM teachers,<sup>54</sup> and graduating 1,000,000 additional STEM graduates over the next decade.<sup>55</sup>

- Enable engineering graduates and professionals to teach in Maine K-12 schools.
- It is expected that the above efforts will contribute to building a strong pathway for increasing the number of engineering students in Maine higher education programs with direct impact in engineering workforce development and economy.
- There will be a vibrant pre-engineering high school pathways program in partnership with local school districts.
- The percentage of Maine high school seniors pursuing engineering (reported on the SAT) will consistently exceed the national average.
- Transfers from the Maine Community College System into engineering programs at UMaine and USM will increase.

#### Prior Awards and Recognitions

The project team has extensive experiences in design and implementation of engineering related activities for K-12 schools, as demonstrated below, and is working with a vast network of K-12 schools.

1. **“Engineering Innovative Solutions to Stormwater Problems through Diverse Community Participation”** NSF EPSCoR Track-3 Award # 1348266; \$735,315; 10/1/2013-9/30/2016, PI: M. Musavi, Co-PIs: A. Abedi, C. James, J. Vetelino, J. Peckenham.

This is the funding source for the SMART project described in this document.

**Intellectual Merit:** This program is empowering female and minority high school students, and their teachers and communities, to create innovative local solutions to a pervasive environmental problem, stormwater. The program is actively engaging participants with STEM professionals in an inquiry- and project-based instructional environment. Using the latest sensor technology for data collection and computer modeling for data analysis, STEM-underrepresented high school and college students will address the widespread problem of stormwater management. **Key Findings:** The initial findings and interviews have shown that close mentoring of high school students and exposure to university based projects and environment can positively impact students’ attitude towards higher education especially in STEM areas. This perception was more prominent among underrepresented students, who initially didn’t have any knowledge of STEM education and/or any motivation to continue in

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<sup>54</sup> Prepare and Inspire: K-12 Education in Science, Technology, Engineering, and Mathematics (STEM) for America’s Future, President’s Council of Advisors on Science and Technology (PCAST), 2010.

<sup>55</sup> Engage to Excel: Producing one million additional College Graduates with Degrees in Science, Technology, Engineering, and Mathematics, President’s Council of Advisors on Science and Technology (PCAST), 20112.



higher education due to their high school performance or family reasons. About 75% of the 60-80 participating students in the first 2 years of this project were female, African American, Hispanic, or Native American, many of whom are socioeconomically disadvantaged and/or their parents did not have higher education. After participation in the activities of this project at UMaine and follow up school activities, students exhibited a much higher level of confidence in higher education and their ability to succeed. **Broader Impact:** Engaging a highly diverse group of project participants will increase our understanding of effective community inclusive learning methods. This research will benefit society in that it aims to offer a viable and cost-effective solution to the problem of stormwater, while engaging a diversity of students in STEM projects and careers in their communities. The project model is designed to be easily replicable and scalable nation-wide. **Products:** Two conference publications [31, 32], several conference presentations, several online press releases, a wireless sensor network for collecting watershed data and operational manual have resulted from the project.

- 2. "INCLUDES Collaborative: Creating a Diverse STEM Pathway with Community Water Research"** NSF INCLUDES Award #1649346, \$295,738, 01/01/2017-12/31/2018, PI: M. Musavi (UMaine)., Co-PIs: V. Bhethanabotla (Florida South Univ), L. Brown (City College of NY), C. James (Bangor HS), and V. White (Mississippi State Univ).

**Intellectual Merit:** This project will address the need for research on mechanisms for change, collaboration, and negotiation regarding the greater participation of under-represented groups in the STEM workforce. Previous research has shown that environmental and societal based projects have great potential to engage the interests of women and minority students. Other research points to the great impact that invested mentors and role models have on women and racial minorities. However, most isolated programs cannot address the complex pathway to STEM careers. The preliminary model for this program will test the integration of previous findings implemented with the collective impact process. It will investigate the most effective collective process for aligning efforts and impacting K-12 students using programs rooted in community-based STEM solutions, with collaborative partner involvement at key transition grade levels. **Broader Impacts:** This project will expand on a current broadening participation effort to develop a regional and national community of diverse STEM learners. This collaborative community will consist of higher education faculty and students, K-12 students, their caregivers, mentors, educators, stormwater districts, state and national environmental protection agencies, departments of education, and other for-profit and non-profit organizations. The focus of this collaborative effort is to diversify the face of STEM education, focused on particular challenges for women and underrepresented minorities, while creating awareness and addressing a vitally important community environmental issue: stormwater contamination and management and its effect on water quality in both fresh and salt water environments. The globally important issues of water quality and stormwater unifies students and easily translates anywhere to active, community-connected research.

- 3. "Finding the E in STEM: Survey of Engineering Instruction in Maine' K-12 Schools"** UMaine 2016 Research Reinvestment Funds (RRF) Seed Grant Program, PI: Al. Friess, Co-PIS: M. Davis (USM), S. Templeton (Maine Dept of Education), Luke Shorty (MSSM), M. Musavi (UMaine), and C. Mason (UMaine), \$99,902, 07/01/2016-06/30/2017.

4. **IEEE-USA 2014 K-12 STEM Literacy Teacher-Engineer Partnership Award**, Presented to M. Musavi and C. James (Bangor High School).
5. **Bangor High School and Thornton Academy STEM Academies**: The project team has worked with the above two high schools to develop the first two STEM academies in Maine integrating engineering courses and is working with several other schools to develop similar STEM programs.

## Appendix H: Detailed Enrollment and Budget Projections

*UMaine Enrollment and Revenue*

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Number of Undergraduates - TOTAL	1819	1919	2019	2119	2219	2319	2419	2519	2619	2719	2819
In-State	1346	1303	1246	1271	1331	1391	1451	1511	1571	1631	1691
Out-of-State	293	430	579	636	666	696	726	756	786	816	846
NEBHE	129	136	143	148	155	162	169	176	183	190	197
International	45	48	50	53	55	58	60	63	65	68	70
Canadian	5	4	0	11	11	12	12	13	13	14	14
Residency Status											
In-State	74.0%	67.9%	61.7%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Out-of-State	16.1%	22.4%	28.7%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
NEBHE	7.1%	7.1%	7.1%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
International	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Canadian	0.3%	0.2%	0.0%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Tuition rate - increase over prior year											
In-State, NEBHE, & Canadian	---	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Out-of-State & International	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Tuition per SCH											
In-State	\$286	\$289	\$292	\$295	\$298	\$301	\$304	\$307	\$310	\$313	\$316
Out-of-State & International	\$932	\$960	\$989	\$1,019	\$1,050	\$1,082	\$1,114	\$1,147	\$1,181	\$1,216	\$1,252
NEBHE & Canadian	\$458	\$463	\$468	\$473	\$478	\$483	\$488	\$493	\$498	\$503	\$508
Tuition weighted by residency %	\$419	\$469	\$522	\$544	\$556	\$568	\$581	\$594	\$607	\$621	\$635
Credits/student/year	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
Gross tuition revenue	\$22,178,885	\$26,190,320	\$30,669,014	\$33,544,618	\$35,902,532	\$38,330,287	\$40,898,275	\$43,541,923	\$46,261,230	\$49,135,321	\$52,090,892
Discount for UMaine financial aid (Table prepared by UMaine OIR, 11/29/17)	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%
<b>Net tuition revenue</b>	<b>\$16,190,586</b>	<b>\$19,118,934</b>	<b>\$22,388,380</b>	<b>\$24,487,571</b>	<b>\$26,208,849</b>	<b>\$27,981,110</b>	<b>\$29,855,741</b>	<b>\$31,785,603</b>	<b>\$33,770,698</b>	<b>\$35,868,784</b>	<b>\$38,026,351</b>
<b>Change in net tuition revenue</b>	<b>---</b>	<b>\$2,928,348</b>	<b>\$6,197,794</b>	<b>\$8,296,985</b>	<b>\$10,018,263</b>	<b>\$11,790,524</b>	<b>\$13,665,155</b>	<b>\$15,595,017</b>	<b>\$17,580,112</b>	<b>\$19,678,198</b>	<b>\$21,835,765</b>

Board of Trustees Meeting - Reports:

*USM Enrollment and Revenue*

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Number of Undergraduates - TOTAL	232	252	272	292	312	332	352	372	392	412	432
In-State	202	219	197	253	269	286	303	319	335	352	368
Out-of-State	29	32	28	38	41	44	48	51	55	58	62
NEBHE	0	0	0	0	0	0	0	0	0	0	0
International	0	0	0	0	0	0	0	0	0	0	0
Canadian	1	1	1	1	1	1	2	2	2	2	2
Residency Status											
In-State	87.2%	87.0%	86.8%	86.6%	86.4%	86.2%	86.0%	85.8%	85.6%	85.4%	85.2%
Out-of-State (assumes 0.2% annual growth)	12.4%	12.6%	12.8%	13.0%	13.2%	13.4%	13.6%	13.8%	14.0%	14.2%	14.4%
NEBHE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
International	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Canadian	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Tuition rate - increase over prior year											
In-State, NEBHE, & Canadian	---	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Out-of-State & International	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Tuition per SCH											
In-State	\$262	\$265	\$268	\$271	\$274	\$277	\$280	\$283	\$286	\$289	\$292
Out-of-State & International	\$689	\$710	\$731	\$753	\$776	\$799	\$823	\$848	\$873	\$899	\$926
NEBHE & Canadian	\$419	\$423	\$427	\$431	\$435	\$439	\$443	\$447	\$451	\$456	\$461
Tuition weighted by residency %	\$316	\$322	\$328	\$334	\$341	\$348	\$355	\$362	\$369	\$376	\$384
Credits/student/year	23.5	23.5	23.5	23.5	25	25	25	25	26	26	26
Gross tuition revenue	\$1,722,832	\$1,906,884	\$2,096,576	\$2,291,908	\$2,659,800	\$2,888,400	\$3,124,000	\$3,366,600	\$3,760,848	\$4,027,712	\$4,313,088
Discount for USM financial aid (estimate)	24%	24%	24%	24%	24%	24%	24%	24%	24%	24%	24%
<b>Net tuition revenue</b>	<b>\$1,309,352</b>	<b>\$1,449,232</b>	<b>\$1,593,398</b>	<b>\$1,741,850</b>	<b>\$2,021,448</b>	<b>\$2,195,184</b>	<b>\$2,374,240</b>	<b>\$2,558,616</b>	<b>\$2,858,244</b>	<b>\$3,061,061</b>	<b>\$3,277,947</b>
<b>Change in net tuition revenue</b>	---	<b>\$139,880</b>	<b>\$284,046</b>	<b>\$432,498</b>	<b>\$712,096</b>	<b>\$885,832</b>	<b>\$1,064,888</b>	<b>\$1,249,264</b>	<b>\$1,548,892</b>	<b>\$1,751,709</b>	<b>\$1,968,595</b>

Board of Trustees Meeting - Reports:

*UMaine Expenses*

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
<b>Faculty - Starting Base Salary</b>											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Full Professor	\$135,000	\$139,050	\$143,222	\$147,518	\$151,944	\$156,502	\$161,197	\$166,033	\$171,014	\$176,144	\$181,429
Assistant Professor	\$88,000	\$90,640	\$93,359	\$96,160	\$99,045	\$102,016	\$105,077	\$108,229	\$111,476	\$114,820	\$118,265
Lecturer	\$67,000	\$69,010	\$71,080	\$73,213	\$75,409	\$77,671	\$80,002	\$82,402	\$84,874	\$87,420	\$90,042
<b>Professional Staff - Starting Base Salary</b>											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	\$62,000	\$63,860	\$65,776	\$67,749	\$69,782	\$71,875	\$74,031	\$76,252	\$78,540	\$80,896	\$83,323
<b>Administrator (Associate Dean for Research)</b>											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	\$170,000	\$175,100	\$180,353	\$185,764	\$191,336	\$197,077	\$202,989	\$209,079	\$215,351	\$221,811	\$228,466
<b>Clerical Staff - Starting Base Salary</b>											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	\$30,000	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778	\$35,822	\$36,896	\$38,003	\$39,143	\$40,317
Benefit rate for faculty & staff	53.0%	53.4%	53.6%	53.9%	54.2%	54.5%	54.8%	55.1%	55.4%	55.7%	56.0%
<b>Teaching Assistant</b>											
% increase in stipend over prior year	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
% increase in tuition over prior year	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
% increase in health insurance over prior year	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Stipend (9 mo.)	\$18,500	\$19,055	\$19,627	\$20,216	\$20,822	\$21,447	\$22,090	\$22,753	\$23,436	\$24,139	\$24,863
18 cr. tuition	\$7,722	\$7,954	\$8,193	\$8,439	\$8,692	\$8,953	\$9,222	\$9,499	\$9,784	\$10,078	\$10,380
1/2 Health Insurance	\$1,334	\$1,374	\$1,415	\$1,457	\$1,501	\$1,546	\$1,592	\$1,640	\$1,689	\$1,740	\$1,792
Total cost teaching assistant	\$27,556	\$28,383	\$29,235	\$30,112	\$31,015	\$31,946	\$32,904	\$33,892	\$34,909	\$35,957	\$37,035
<b>Annual salary with benefits</b>											
Full Professor (Department Chair)	\$206,550	\$213,303	\$219,988	\$227,030	\$234,297	\$241,796	\$249,533	\$257,517	\$265,756	\$274,257	\$283,029
Assistant Professor	\$134,640	\$139,042	\$143,400	\$147,990	\$152,727	\$157,615	\$162,659	\$167,863	\$173,233	\$178,775	\$184,493
Lecturer	\$102,510	\$105,861	\$109,179	\$112,674	\$116,281	\$120,002	\$123,842	\$127,805	\$131,894	\$136,113	\$140,466
Administrator (Associate Dean for Research)	\$260,100	\$268,603	\$277,022	\$285,890	\$295,041	\$304,483	\$314,227	\$324,281	\$334,655	\$345,360	\$356,407
Professional staff	\$94,860	\$97,961	\$101,032	\$104,266	\$107,603	\$111,047	\$114,600	\$118,267	\$122,051	\$125,955	\$129,984
Clerical staff	\$45,900	\$47,401	\$48,886	\$50,451	\$52,066	\$53,732	\$55,452	\$57,226	\$59,057	\$60,946	\$62,895

Board of Trustees Meeting - Reports:

*UMaine Expenses – continued*

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
<b>Cumulative E&amp;G Positions Added (FY19 &amp; Beyond)</b>											
Full Professor	---	0	1	1	2	2	3	3	4	4	5
Assistant Professor	---	3	6	9	12	15	18	21	24	27	30
Lecturer	---	1	2	3	4	5	6	7	8	9	10
Administrator (Associate Dean for Research)	---	0	1	1	1	1	1	1	1	1	1
Professional staff	---	1	1	2	2	2	2	3	3	3	4
Clerical staff	---	1	1	1	2	2	2	3	3	3	4
Teaching Assistant	---	4	8	12	16	20	24	28	32	36	40
Number of faculty	79	83	88	92	97	101	106	110	115	119	124
Number of teaching assistants	7	11	15	19	23	27	31	35	39	43	47
<b>Undergraduate student/faculty ratio</b>	<b>23.0</b>	<b>23.1</b>	<b>22.9</b>	<b>23.0</b>	<b>22.9</b>	<b>23.0</b>	<b>22.8</b>	<b>22.9</b>	<b>22.8</b>	<b>22.8</b>	<b>22.7</b>
<b>Undergraduate student/TA ratio</b>	<b>259.9</b>	<b>174.5</b>	<b>134.6</b>	<b>111.5</b>	<b>96.5</b>	<b>85.9</b>	<b>78.0</b>	<b>72.0</b>	<b>67.2</b>	<b>63.2</b>	<b>60.0</b>
<b>Cumulative Salaries Added w/Benefits</b>											
Full Professor	---	\$0	\$219,988	\$227,030	\$468,594	\$483,592	\$748,599	\$772,551	\$1,063,024	\$1,097,028	\$1,415,145
Assistant Professor	---	\$417,126	\$860,400	\$1,331,910	\$1,832,724	\$2,364,225	\$2,927,862	\$3,525,123	\$4,157,592	\$4,826,925	\$5,534,790
Lecturer	---	\$105,861	\$218,358	\$338,022	\$465,124	\$600,010	\$743,052	\$894,635	\$1,055,152	\$1,225,017	\$1,404,660
Administrator (Associate Dean for Research)	---	\$0	\$277,022	\$285,890	\$295,041	\$304,483	\$314,227	\$324,281	\$334,655	\$345,360	\$356,407
Professional staff	---	\$97,961	\$101,032	\$208,532	\$215,206	\$222,094	\$229,200	\$354,801	\$366,153	\$377,865	\$519,936
Clerical staff	---	\$47,401	\$48,886	\$50,451	\$104,132	\$107,464	\$110,904	\$171,678	\$177,171	\$182,838	\$251,580
<b>SUBTOTAL</b>	---	<b>\$668,349</b>	<b>\$1,725,686</b>	<b>\$2,441,835</b>	<b>\$3,380,821</b>	<b>\$4,081,868</b>	<b>\$5,073,844</b>	<b>\$6,043,069</b>	<b>\$7,153,747</b>	<b>\$8,055,033</b>	<b>\$9,482,518</b>
Teaching assistants	---	\$113,532	\$233,880	\$361,344	\$496,240	\$638,920	\$789,696	\$948,976	\$1,117,088	\$1,294,452	\$1,481,400
<b>ONGOING INVESTMENT NEEDED IN ENGINEERING</b>	---	<b>\$781,881</b>	<b>\$1,959,566</b>	<b>\$2,803,179</b>	<b>\$3,877,061</b>	<b>\$4,720,788</b>	<b>\$5,863,540</b>	<b>\$6,992,045</b>	<b>\$8,270,835</b>	<b>\$9,349,485</b>	<b>\$10,963,918</b>
<b>BALANCE AVAILABLE FOR INVESTMENT IN CAMPUS</b>	---	<b>\$2,146,467</b>	<b>\$4,238,228</b>	<b>\$5,493,806</b>	<b>\$6,141,202</b>	<b>\$7,069,736</b>	<b>\$7,801,615</b>	<b>\$8,602,972</b>	<b>\$9,309,277</b>	<b>\$10,328,713</b>	<b>\$10,871,847</b>
<b>TOTAL AVAILABLE FOR INVESTMENT</b>	---	<b>\$2,928,348</b>	<b>\$6,197,794</b>	<b>\$8,296,985</b>	<b>\$10,018,263</b>	<b>\$11,790,524</b>	<b>\$13,665,155</b>	<b>\$15,595,017</b>	<b>\$17,580,112</b>	<b>\$19,678,198</b>	<b>\$21,835,765</b>

Board of Trustees Meeting - Reports:

USM Expenses

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Faculty - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Full Professor	\$127,500	\$131,325	\$135,265	\$139,323	\$143,502	\$147,807	\$152,242	\$156,809	\$161,513	\$166,359	\$171,349
Assistant Professor	\$78,250	\$80,598	\$83,015	\$85,506	\$88,071	\$90,713	\$93,435	\$96,238	\$99,125	\$102,099	\$105,161
Lecturer	\$67,000	\$69,010	\$71,080	\$73,213	\$75,409	\$77,671	\$80,002	\$82,402	\$84,874	\$87,420	\$90,042
Professional Staff - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	\$62,000	\$63,860	\$65,776	\$67,749	\$69,782	\$71,875	\$74,031	\$76,252	\$78,540	\$80,896	\$83,323
Clerical Staff - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	\$30,000	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778	\$35,822	\$36,896	\$38,003	\$39,143	\$40,317
Benefit rate for faculty & staff	53.0%	53.4%	53.6%	53.9%	54.2%	54.5%	54.8%	55.1%	55.4%	55.7%	56.0%
Teaching Assistant											
% increase in stipend over prior year	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
% increase in tuition over prior year	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
% increase in health insurance over prior year	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stipend (9 mo.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18 cr. tuition	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1/2 Health Insurance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total cost teaching assistant	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Annual cost for one undergraduate grader	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159	\$1,194	\$1,230	\$1,267	\$1,305	\$1,344
Annual salary with benefits											
Full Professor	\$195,075	\$201,453	\$207,767	\$214,418	\$221,281	\$228,363	\$235,670	\$243,211	\$250,991	\$259,020	\$267,305
Assistant Professor	\$119,723	\$123,637	\$127,512	\$131,594	\$135,806	\$140,152	\$144,637	\$149,265	\$154,040	\$158,967	\$164,052
Lecturer	\$102,510	\$105,861	\$109,179	\$112,674	\$116,281	\$120,002	\$123,842	\$127,805	\$131,894	\$136,113	\$140,466
Professional staff	\$94,860	\$97,961	\$101,032	\$104,266	\$107,603	\$111,047	\$114,600	\$118,267	\$122,051	\$125,955	\$129,984
Clerical staff	\$45,900	\$47,401	\$48,886	\$50,451	\$52,066	\$53,732	\$55,452	\$57,226	\$59,057	\$60,946	\$62,895

Board of Trustees Meeting - Reports:

*USM Expenses – continued*

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
<b>Cumulative E&amp;G Positions Added (FY19 &amp; Beyond)</b>											
Full Professor	3										
Assistant Professor	3	1	2	2	3	4	5	5	6	6	7
Lecturer	1	0	0	0	0	0	1	1	1	1	1
Professional staff	1	0	0	1	1	1	1	1	1	1	1
Clerical staff	1	0	0	0	0	1	1	1	1	1	1
Teaching Assistant	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of faculty	7	8	9	9	10	11	13	13	14	14	15
Number of teaching assistants	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative undergraduate graders added	0	2	2	3	3	4	4	5	5	6	6
<b>Undergraduate student/faculty ratio</b>	<b>33.1</b>	<b>31.5</b>	<b>30.2</b>	<b>32.4</b>	<b>31.2</b>	<b>30.2</b>	<b>27.1</b>	<b>28.6</b>	<b>28.0</b>	<b>29.4</b>	<b>28.8</b>
<b>Undergraduate student/TA ratio</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Cumulative Salaries Added w/Benefits</b>											
Full Professor (Department Chair)	\$585,225	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Assistant Professor	\$359,169	\$123,637	\$255,024	\$263,188	\$407,418	\$560,608	\$723,185	\$746,325	\$924,240	\$953,802	\$1,148,364
Lecturer	\$102,510	\$0	\$0	\$0	\$0	\$0	\$123,842	\$127,805	\$131,894	\$136,113	\$140,466
Professional staff	\$94,860	\$0	\$0	\$104,266	\$107,603	\$111,047	\$114,600	\$118,267	\$122,051	\$125,955	\$129,984
Clerical staff	\$45,900	\$0	\$0	\$0	\$0	\$53,732	\$55,452	\$57,226	\$59,057	\$60,946	\$62,895
<b>SUBTOTAL</b>	<b>\$1,187,664</b>	<b>\$123,637</b>	<b>\$255,024</b>	<b>\$367,454</b>	<b>\$515,021</b>	<b>\$725,387</b>	<b>\$1,017,079</b>	<b>\$1,049,623</b>	<b>\$1,237,242</b>	<b>\$1,276,816</b>	<b>\$1,481,709</b>
Teaching assistants	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Undergraduate graders	\$0	\$2,060	\$2,122	\$3,278	\$3,377	\$4,637	\$4,776	\$6,149	\$6,334	\$7,829	\$8,063
<b>ONGOING INVESTMENT NEEDED IN ENGINEERING</b>	<b>\$1,187,664</b>	<b>\$125,697</b>	<b>\$257,146</b>	<b>\$370,732</b>	<b>\$518,398</b>	<b>\$730,024</b>	<b>\$1,021,855</b>	<b>\$1,055,772</b>	<b>\$1,243,576</b>	<b>\$1,284,645</b>	<b>\$1,489,772</b>
<b>BALANCE AVAILABLE FOR INVESTMENT IN CAMPUS</b>	<b>\$121,688</b>	<b>\$14,183</b>	<b>\$26,900</b>	<b>\$61,766</b>	<b>\$193,698</b>	<b>\$155,808</b>	<b>\$43,033</b>	<b>\$193,492</b>	<b>\$305,316</b>	<b>\$467,064</b>	<b>\$478,823</b>
<b>TOTAL AVAILABLE FOR INVESTMENT</b>	<b>\$1,309,352</b>	<b>\$139,880</b>	<b>\$284,046</b>	<b>\$432,498</b>	<b>\$712,096</b>	<b>\$885,832</b>	<b>\$1,064,888</b>	<b>\$1,249,264</b>	<b>\$1,548,892</b>	<b>\$1,751,709</b>	<b>\$1,968,595</b>



## Appendix I: Industry Feedback

On February 16, 2018, fourteen engineering industry leaders gathered at USM with seven UMS staff to provide feedback on a draft plan to grow engineering in the UMS system. Three additional industry leaders provided feedback by email. The professionally facilitated feedback session was a follow-up to a focus group one year earlier with many of the same participants. The following is a summary of the group's feedback.

### Attendees

#### Industry

##### *In-person*

1. Mitch Sanborn, Lanco Integrated
2. Lisa Martin, Manufacturers Association of Maine
3. Brent Bridges, Woodard & Curran
4. Stephen Nicholson, Bath Iron Works
5. Beth Sturtevant, CCB, Inc
6. Kevin McDonnell, Pratt and Whitney
7. Karl Hoose, Valt Enterprises
8. Steve Swan, Texas Instruments
9. Adam Henckler, Portsmouth Naval Shipyard
10. Kent Peterson, Fluid Imaging
11. Stephen Von Vogt, Maine Marine Composites
12. George Harris, Micronetixx Technologies
13. Clifton Greim, Harriman Associates
14. Chris Joyce, Texas Instruments

##### *Feedback by email*

15. Bryan Bozsik, Alere
16. Michele Meggison, Sappi
17. Eugene Miller, Bath Iron Works

#### UMS Faculty

18. Mariusz Jankowski, USM
19. Mohamad Musavi, UMaine

#### UMS Staff

20. Terry Shehata, USM
21. Samantha Warren, UMS
22. Ainsley Wallace, USM
23. Corey Hascall, USM
24. Chanel Lewis, USM

## Consulting Staff

25. Carole Martin, Carole Martin Consulting

26. Michael LeVert, 45 North Research

## General Feedback

Overall, industry leaders were supportive of the unified vision and strategies presented in the Plan. They appreciated the collaborative approach to grow engineering system-wide, and made clear that they both supported and wanted more collaboration between the two campuses. They endorsed both the spirit and substance of the major components of the Plan, while noting several concerns and suggestions. Multiple participants voiced their endorsement of the skills and knowledge that UMS engineering graduates learn. And, as with last year's focus group, the group affirmed that the primary problem to address is the low of production of engineers from UMS compared to the need, which the plan addresses.

However, while the Plan as written was supported overall, industry leaders made clear that the implementation of the Plan is just as critical as the vision. Closely involving industry in the details and nuances of implementation will be key.

Several industry leaders also mentioned the critical role that the State of Maine has in ensuring the vision of the Plan is successfully implemented. There was a general feeling that the state's economic development professionals don't fully grasp the link between economic growth and higher education, including the positive economic impact of growing the system's engineering capacity. This Plan is highly dependent on facility investments, which can only be accomplished with state support.

There was a general consensus that the Plan should more directly target a more diverse population of students. Industry leaders felt the summary of the plan did not adequately mention several populations of potential engineers: "non-traditional" students who have some college but have not finished a degree; working professionals, perhaps with a B.A. in a different field, who are place-bound with professional commitments that preclude going to class full-time or during working hours; women; minorities; New Americans. This feedback was framed in several ways: as an opportunity to engage more potential engineers; as a way to increase diversity within the industry, resulting in tangible benefits to engineering companies; and as an appropriate role for USM, particularly for those populations who are place-bound in Greater Portland and unable to attend a full-time degree program. Industry leaders suggested a more explicit focus on these groups and more night and online classes as solutions.

Several industry leaders also made the point that there is a need for engineers with advanced degrees, with the suggestion for demand-driven selective masters programs.

### New Programming

Industry leaders were generally supportive of the three new programs planned for USM, with the most support for computer engineering and several concerns raised about the demand for Industrial Engineers.

There was broad consensus that expanding Electrical Engineering at USM to include Computer Engineering was smart and needed. Several leaders suggested that software engineers were also needed, and therefore missing from the Plan.

There was not a lot of discussion about the proposed Engineering Science; however, one participant supported the general nature of the program as a way to keep the overall programming flexible and adaptable as the industry changes over time.

Most of the conversation centered around Industrial Engineering. Industrial Engineering is seen as a valuable skillset, but there were questions about the size of the demand for Industrial Engineers. Several companies noted that while they employ Industrial Engineers today and have a need for more in the future, demand is not at the same scale as for Mechanical or Electrical Engineers. The question was raised whether the industry could absorb a fully implemented program with 30 Industrial Engineering graduates a year.

On the other hand, the Associated Manufacturers of Maine noted that Industrial Engineering consultants are their most requested service from Maine businesses. These requests are generally from small businesses who need the broad-based systems-level expertise that Industrial Engineers have.

The point was also made that Industrial Engineers may be more in demand for newer companies who are building new manufacturing facilities, as opposed to companies with well-established production processes. Health care and food retail were mentioned as industries where Industrial Engineers may be in demand.

It was also noted that Industrial Engineering directly ties to increasing diversity because it attracts a different population of students.

### K-12 Pipeline

There was strong agreement that the K-12 pipeline was critical to building tomorrow's workforce. Leaders noted that without the proper "hooks," students may engage with engineering during K-12 but then leave for college out-of-state. This concern raised the importance of several elements not explicitly in the Plan but critical to successful implementation, such as dual enrollment programs where high school students can receive college credit and immersive on-campus experiences for high school students.

The group noted that there are really three groups that need to be engaged: students, teachers, and parents. Industry leaders recognized their own central role in supporting this pipeline by mentoring students (and teachers) and generating excitement about engineering. This includes getting teachers to tour local businesses so they see first-hand the opportunity for their students (although it was noted how challenging that is given how busy teachers are).

The need for collaboration between companies to tell their stories together was acknowledged. (Also noted were current efforts by the Associated Manufacturers of Maine to highlight Maine manufacturing companies.)

There was strong endorsement of the plan to provide 3-D printers to students as an affordable way to show students a “cool” and effective engineering tool.

Several leaders referenced Maine’s Career and Technical Education schools as ‘diamonds in the rough’ that could play a central role in these efforts.

### Internships

Industry leaders strongly supported the need for an effective and streamlined internship and coop program. There was consensus that the current system of internships, particularly at USM, has been “frustrating,” and “unpredictable,” at times. There is no central person or department to reach out to for internships and no unified set of requirements or standards. This is in contrast to other engineering schools where the experience is smoother and more standardized. The need for a single-entry point for finding and hiring an intern, system-wide, was endorsed.

Several leaders expressed concern with the lack of “work-ready” skills (i.e., “soft” skills) that interns come to their companies with. They noted that the campuses have a responsibility to ensure that potential interns understand what it means to work in a professional environment.

One participant mentioned that one of the more successful internship programs of the past used a third party to screen interns and substantially diminish the time it took for a company to locate and hire an intern.

There was general agreement that businesses should pay for interns – and not get them for free from the university. However, there was agreement that a sliding scale may be appropriate for smaller companies. Further, there was an acknowledgement that internships take a variety of forms, from a fully-paid 12-month internship (i.e., a “coop”) to internships that carry college credit and/or fulfill a “capstone” requirement. Clarity and consistency of the types and intents of these internships will be important as the Plan moves forward.

## Appendix J: Legislative Resolve

### **‘Resolve, Directing the University of Maine System to Study the Opportunities to Increase Engineering Capacity in Southern Maine’**

**Emergency preamble. Whereas,** acts and resolves of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

**Whereas,** engineers are essential to Maine's economy, providing an estimated \$4,000,000,000 of direct and indirect impact on the State's gross domestic product annually; and

**Whereas,** 27% of Maine's engineering and scientific workforce is 55 years of age or older and the State is currently producing less than half of the engineering graduates needed to meet the needs of businesses and industry in the coming decade; and

**Whereas,** this resolve directs the University of Maine System to study the opportunities to strengthen the capacity of the engineering programs in southern Maine to meet the workforce, applied research and technical assistance needs of southern Maine's businesses and industry; and

**Whereas,** the study must be initiated before the 90-day period expires in order that the study may be completed and a report submitted in time for submission to the next legislative session; and

**Whereas,** in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore, be it

**Sec. 1. Study established. Resolved:** That the University of Maine System, referred to in this resolve as "the system," shall develop recommendations for strengthening educational programs to better meet the current and projected engineering workforce, applied research and technical assistance needs of southern Maine businesses and industry; and be it further

**Sec. 2. Duties. Resolved:** That the system, with input from and in consultation with faculty, staff, students and industry, community and secondary and postsecondary education partners, shall:

1. Identify the current and projected engineering workforce, applied research and technical assistance needs of southern Maine businesses and industry;
2. Review enrollment trends and existing capacity including but not limited to faculty and facilities of the engineering department and related nonacademic programs and partnerships at the University of Southern Maine;

3. Identify future growth opportunities for the University of Southern Maine to better meet the region's engineering needs through program improvements and new and expanded institutional and industrial partnerships including strengthened synergy with the University of Maine's engineering program;
4. Identify opportunities to strengthen Maine's engineering workforce by increasing engineering program enrollment and access among traditional and nontraditional students at the University of Southern Maine;
5. Review best practices from other institutions of higher education that would inform how the University of Southern Maine could best respond to the engineering needs of southern Maine businesses and industry; and
6. Prepare recommendations for strengthening engineering capacity to meet current and projected workforce, applied research and technical assistance needs of southern Maine businesses and industry, including program improvements and new initiatives at the University of Southern Maine to increase student recruitment and retention and strengthen opportunities for students and industry including through internships and cooperative education experiences; and be it further

**Sec. 3. Report. Resolved:** That the system shall report its findings and recommendations to its board of trustees by November 20, 2017. The system shall submit a report of its findings and recommendations, including recommended legislation, to the Joint Standing Committee on Education and Cultural Affairs and the Joint Standing Committee on Labor, Commerce, Research and Economic Development by December 31, 2017. After reviewing the report, the Joint Standing Committee on Education and Cultural Affairs may report out a bill to implement recommendations contained in the report to the Second Regular Session of the 128th Legislature.

**Emergency clause.** In view of the emergency cited in the preamble, this legislation takes effect when approved.

### SUMMARY

This amendment is the minority report of the committee, changes the bill to a resolve and requires the University of Maine System to study the existing and emerging engineering workforce, applied research and technical assistance needs of southern Maine businesses and industry. The study must include recommendations to increase the engineering capacity specifically in southern Maine by strengthening academic and related nonacademic programs at the University of Southern Maine. The University of Maine System is required to report its findings and recommendations to its board of trustees by November 20, 2017 and to submit a report to the Joint Standing Committee on Education and Cultural Affairs and the Joint Standing Committee on Labor, Commerce, Research and Economic Development by December 31, 2017. After reviewing the report, the Joint Standing Committee on Education and Cultural Affairs may report out a bill to implement recommendations contained in the report to the Second Regular Session of the 128th Legislature. The cost of the study will be absorbed using existing University of Maine System resources.

## Appendix K: UMaine-USM Engineering Planning Committee

<b>Name</b>	<b>Title</b>	<b>Institution</b>
Mariusz Jankowski	Professor of Electrical Engineering and Department of Engineering Chair	USM
Carlos Lück	Associate Professor of Electrical Engineering	USM
Andrew Anderson	Professor of Technology	USM
Mustafa Guvench	Professor of Electrical Engineering	USM
Ainsley Wallace	USM Foundation Vice President	USM
Meghan Cadwallader	Director of Educational Partnerships	USM
James Graves	Dean of the College of Science, Technology, and Health	USM
Dana Humphrey	Dean of Engineering	UMaine
James (Jake) Ward	Vice President for Innovation and Economic Development	UMaine
Mohamad Musavi	Associate Dean of Engineering; Professor of Electrical and Computer Engineering	UMaine
Clay Wheeler	Associate Director of Forest Bioproducts Research Institute; Professor of Chemical Engineering	UMaine
Aria Amirbahman	Professor of Environmental Engineering	UMaine
Terry Shehata	Maine Economic Improvement Coordinator / Economic Development Officer	MEIF (USM)

With support and participation from Samantha Warren, University of Maine System; Margaret Vishneau, Tracey Meagher, and Jared Lank from the Muskie School of Public Service, USM; and research and report assistance from Michael LeVert and Catherine deLutio from 45 North Research.

# MaineStreet Discussion

University of Maine System  
Board of Trustees  
May 21, 2018







# MaineStreet



- What is MaineStreet?
- Current Challenges
- MaineStreet Improvements Project
- ERP/SIS Options
- Recommendations





# What is MaineStreet?



- MaineStreet refers to the current Enterprise Resource Planning platform supporting the University of Maine System

- PeopleSoft ERP

- Campus Solutions (Student Information System)
- Human Capital Management (HR System)
- Financials





# What is MaineStreet?



## • History

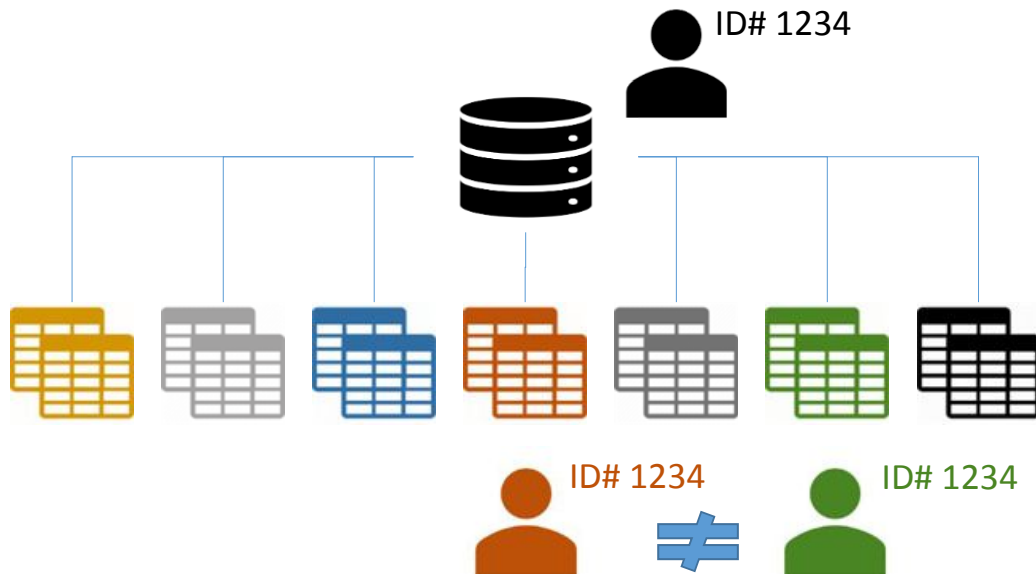
- Implemented 14+ years ago (2004-2009)
  - Key driver: need to migrate legacy SIS (ISIS) from mainframe
  - Some configuration decisions resulted in business process re-design
    - Admissions
      - Effort to achieve data consistency across campuses
      - Provided foundation for Shared Processing Center
    - Exception, rather than rule
  - Many configuration decisions influenced by desire to maintain business processes (ISIS), including:
    - **Separate configurations** supporting each campus
    - Maintain **separation of data**





# Current Challenges

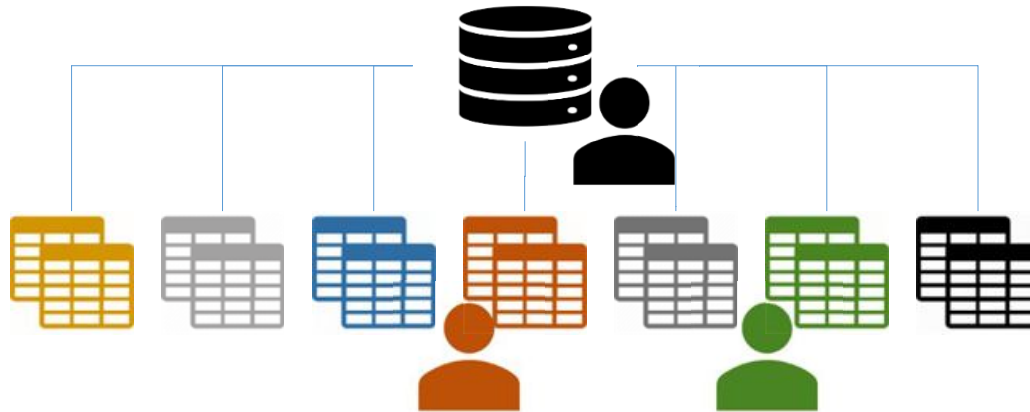
- Result of Configuration Decisions
  - Single Oracle Database : Multiple Application Instances
    - Supports independent campus administration





# Current Challenges

- Current Data Architecture has compromised:
  - Record Portability
    - Program Integration
    - Course Cross-Listing
  - Data Access, Retrieval, Analysis
    - Potential for (7) different versions of similar data

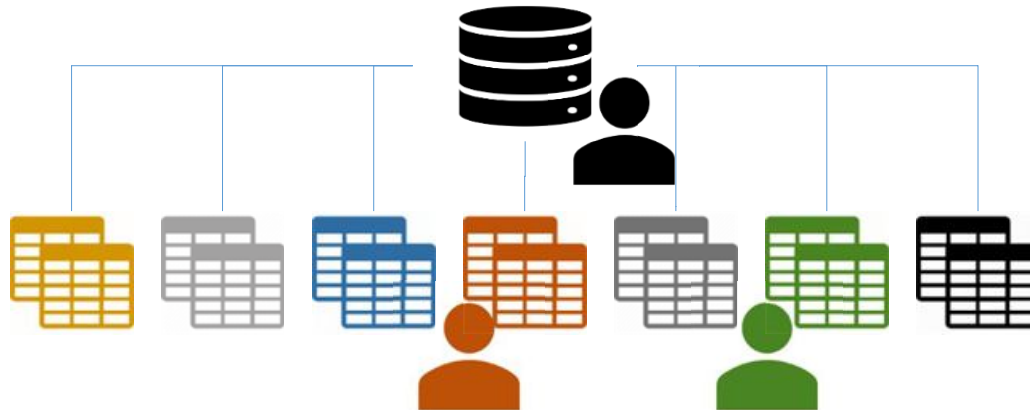




# Current Challenges



- Current Data Architecture has compromised:
  - Uniform Data Governance
    - Consistent data standards
  - Currency of software releases and patches
    - Independent software configurations require independent testing, validation during upgrades





# Current Challenges

- Addressing Challenges

- Roughly 1,000 customizations deployed to resolve system 'bugs'
- Another 2,000 customizations deployed in response to feature/enhancement requests
- Customizations require:
  - Review/validation for each patch and upgrade applied
  - May also require 're-application' post upgrade
  - Increases time required to complete upgrades and overall cost
    - Testing, Validation, Modifications to code

- *Industry best-practice advises use of customization only when there are specific business advantages to be realized*

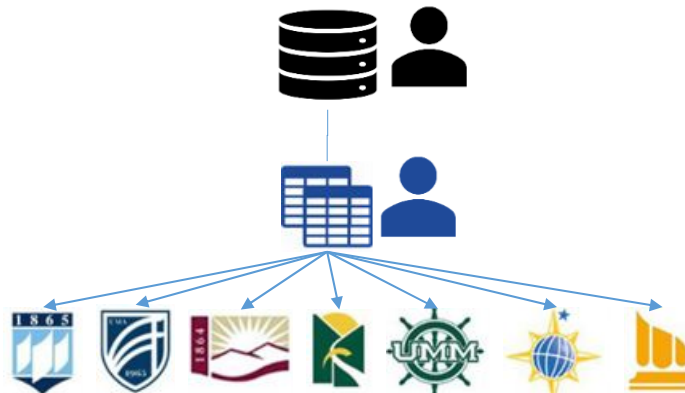




# Current Challenges

- Moving Forward

- Recognition across divisions, functional offices that UMS must:
  - Shift away from treating 'symptoms' (i.e. functionality challenges) with 'band-aid' solutions
  - Focus resources directly on addressing root 'cause' to resolve issues
    - Re-Engineer underlying Data Architecture to best support 'One University'
    - Re-Engineer business processes to take full advantage of delivered functionality



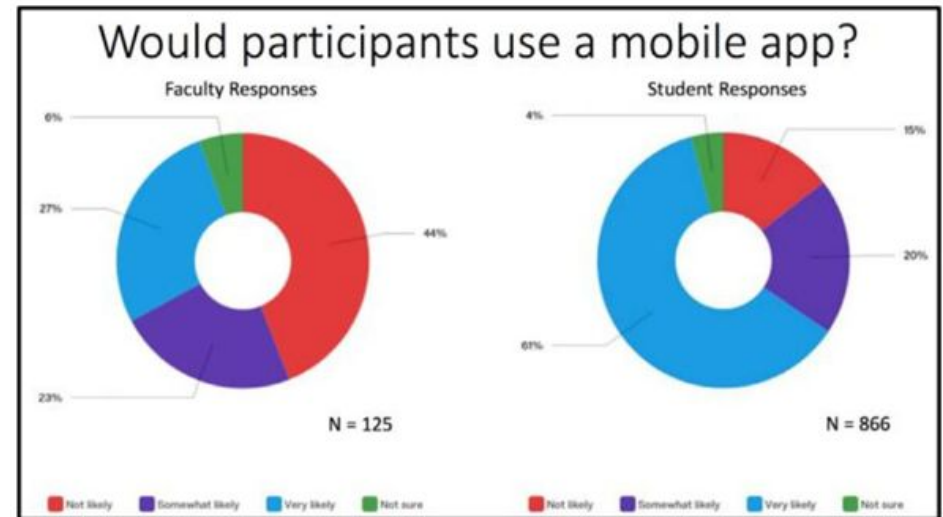




# MaineStreet Improvements Project



- \$2M Project
  - Interface enhancements/improvements
- User Feedback
  - Student Priority
    - Improved mobile access/functionality
  - Faculty Priority
    - Streamlined access to functions
  - Ongoing engagement with functional offices, leaders:
    - Reinforced need for overall improvement in delivered functionality

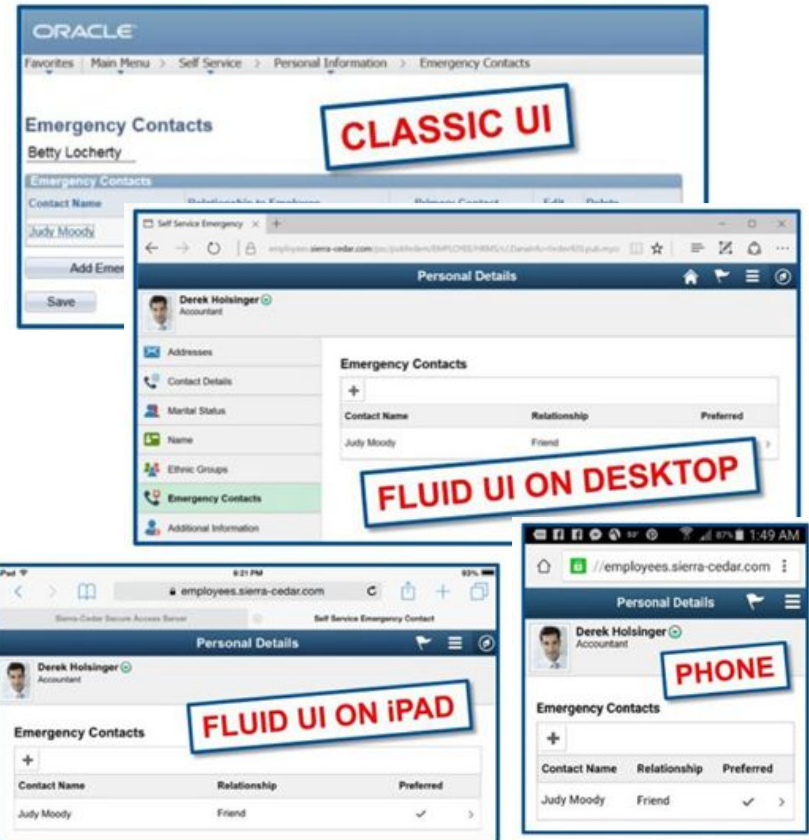




# MaineStreet Improvements Project



- Campus Solutions (SIS)
  - Currently at v 9.0
  - Version 9.2 available (since Dec 2015)
    - Provides interface improvements
      - 'Fluid' layout – mobile-friendly access to tools
    - Lack of functional enhancements
      - Presents opportunity to complete 'technical' upgrade
        - Limited underlying database modifications
  - Access to 'delivered' features UMS has been unable to take advantage of to date
    - E.g. Activity Guides





# SIS Options for UMS



Option	Cost	Near Term Impact	Long Term Impact	Time To Completion
1. Maintain CS v. 9.0 Environment	Low	Low	Low	None



# SIS Options for UMS



Option	Cost	Near Term Impact	Long Term Impact	Time To Completion
1. Maintain CS v. 9.0 Environment	Low	Low	Low	None
2. Maintain CS v. 9.0 Environment; Re-Implement CS 9.2 with new Data Architecture	Med	Low	Med	Med



# SIS Options for UMS



Option	Cost	Near Term Impact	Long Term Impact	Time To Completion
1. Maintain CS v. 9.0 Environment	Low	Low	Low	None
2. Maintain CS v. 9.0 Environment; Re-Implement CS 9.2 with new Data Architecture	Med	Low	Med	Med
<b>3. Complete CS 9.0 &gt; 9.2 Technical Upgrade; Re-Implement CS 9.2 with new Data Architecture</b>	<b>Med-High</b>	<b>Med</b>	<b>Med</b>	<b>Med-High</b>



# SIS Options for UMS



Option	Cost	Near Term Impact	Long Term Impact	Time To Completion
1. Maintain CS v. 9.0 Environment	Low	Low	Low	None
2. Maintain CS v. 9.0 Environment; Re-Implement CS 9.2 with new Data Architecture	Med	Low	Med	Med
3. Complete CS 9.0 > 9.2 Technical Upgrade; Re-Implement CS 9.2 with new Data Architecture	Med-High	Med	Med	Med-High
4. <b>Complete CS 9.0 &gt; 9.2 Technical Upgrade; Re-implement CS 9.2 with New Data Architecture; RFP for new ERP/SIS</b>	<b>High</b>	<b>Med</b>	<b>High</b>	<b>Long</b>



# Recommendations



1. Continue engagement and collaboration with stakeholders, campus and system leadership
  - Determine appropriate option to pursue
2. Re-focus MaineStreet Improvements Project on immediate Technical Upgrade of Campus Solutions to v. 9.2
  - Benefits:
    - Leverage delivered PeopleSoft functionality
      - Features identified as 'requirements' by stakeholders
      - Mobile-friendly, Fluid Interface
    - Fully standardize on technical infrastructure (Intel/Linux)
  - Cost estimate - \$400-900K
    - Include 'fit-gap' analysis and review of customizations
    - 'Testing as a Service' to fully validate upgraded environment



# Recommendations



## 3. Leverage current efforts and tools

- EAB Campus Guide – Student Engagement
- Datamart Pilot – Reporting, Business Intelligence
- Data Governance – System-wide collaboration to achieve data standardization
  - Data Cookbook
- HCM 9.2 Upgrade – Experience with new technical architecture (Sun Solaris > Intel/Linux)



## 4. Fully explore 3<sup>rd</sup> Party Transaction/Integration Tools

- Provide enhanced user experience (UX) with integration to underlying PeopleSoft database
  - E.g. IntraSee Turnkey Solutions; Grey Heller PeopleMobile/PeopleUX
  - Benefits/Examples







# Recommendations



## 5. Initiate RFP for Consultation Services

- Engage with experts in evolving SIS market to explore best-fit SIS options
  - Prioritize 'configuration' vs. 'code' to optimize cost savings and access to enhancements
- Evaluate alignment with UMS future directions
- Development of future-focused specifications

## • Summary

- Stakeholder interest in achieving standardization
- Current efforts responding to stakeholder needs; UMS priorities
- Wealth of opportunities to provide tools best equipped to fulfill current UMS goals with flexibility to accommodate future directions





# ERP Landscape



- ERP Industry

- Shifting from singular, on-premise solutions
- Move to deconstructed environments with coupled applications
  - Designed to operate in 'Cloud'
  - Ubiquitously mobile
  - Integrated Analytics
- Shift represents response to:
  - Escalating support and maintenance costs
  - Platform management and infrastructure overhead
  - Need for greater agility, flexibility
  - High end-user expectations for personalized experience





# ERP Landscape



- UMS currently leverages several cloud-enabled/hosted services:

- Salesforce CRM (Recruitment)
- Blackboard (Learning Mgmt)
- Gmail/Google Suite (Email/Docs)
- Concur (Travel)
- Marketplace (Procurement)
- Box (Cloud Storage)
- Touchnet (Bill Payment)





# ERP Landscape

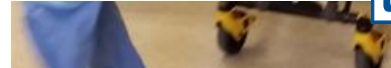
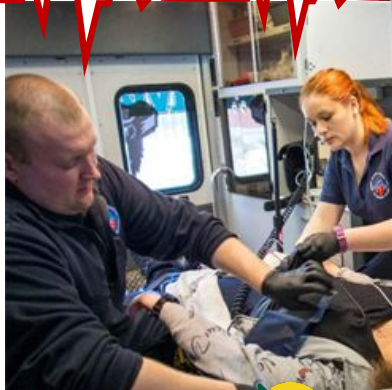
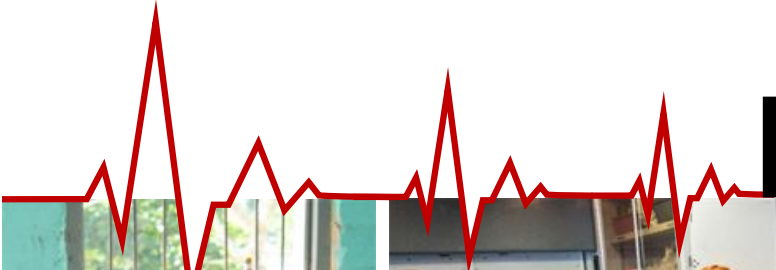


- Alignment with industry trends is critical
  - Already seeing vendors mandating migration to cloud services
    - CollegeNet (Scheduling); Atlassian (Service Management)
  - ERP Vendors Migrating to Cloud
    - Ellucian Banner
    - Oracle Student Cloud
  - ERP Vendors Already in the Cloud
    - Workday





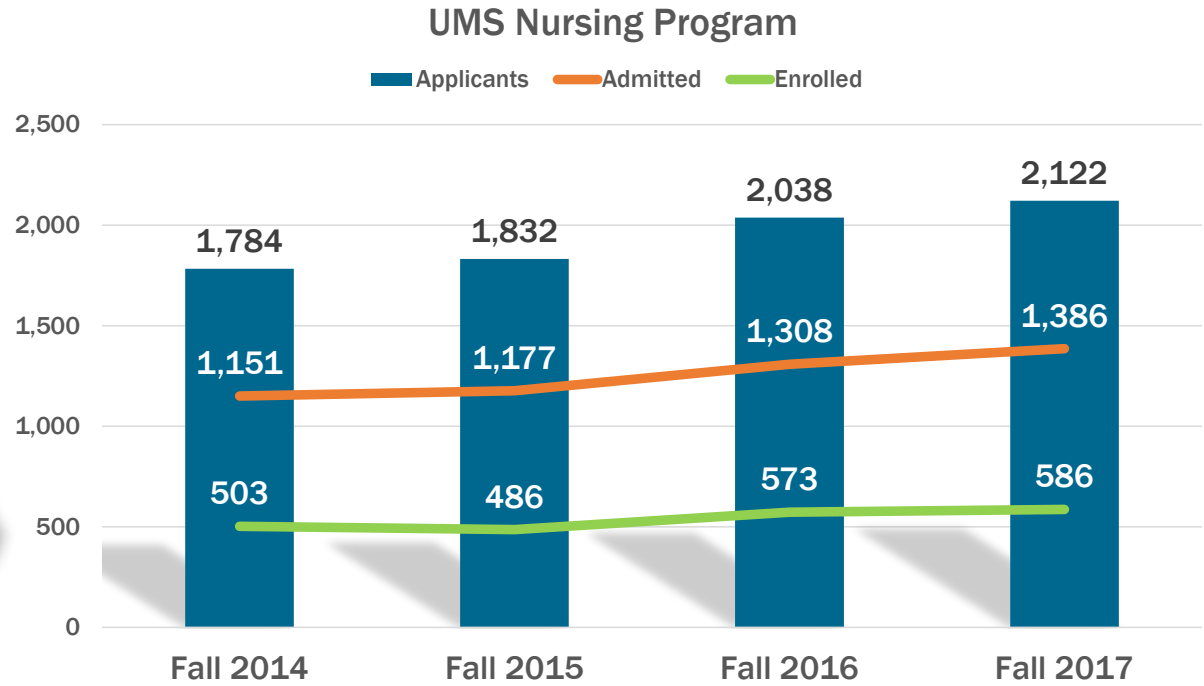
# Nursing



Maine's Public Universities



# UMS Nursing Program: 4-year Enrollment History



Note: "Applicants" is an unduplicated count of individuals applying to Nursing programs (graduate and undergraduate) across the UMS. Some students apply to only one program while others apply to multiple, and some applications may be incomplete. The applicant count includes prospective nursing students who begin the enrollment process but are denied admission due to incomplete documentation.

*Maine's Public Universities*



# 1 Initiative

## Model to Increase Enrollment

UMA Nursing Program Coordinators and Chief Nursing Officer from Maine General Medical Center and team working together

- Will include opportunities for BSN prepared nurses to work as clinical educators while employed with Maine General
- As well as, opportunities to continue their education with a focus on nursing education

**Discussions beginning with Togus VA for dedicated education unit model**



## Initiative 2

Nursing faculty in leadership roles for regional workgroups in Nursing Workforce Initiatives



## Initiative 3

Pre-licensure Baccalaureate Nursing program has increased enrollment from 56 to 80 students



## Clinical Partnerships

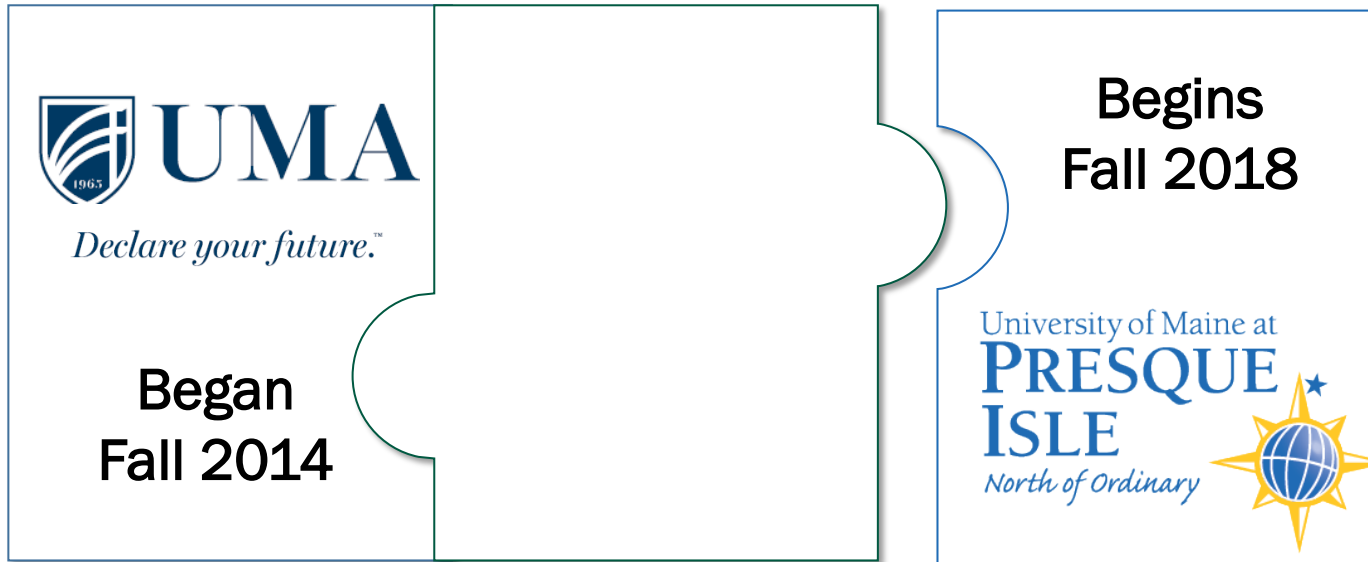
- Fall 2018 Pilot Program with Aroostook County hospitals
- Thriving in Place Project (TIPPS) with Aroostook Area Agency on Aging
- Partnership with Cary Medical Center on Stroke Prevention initiative, Flu Clinic, and Community Education
- Partnership with Northern Maine Medical Center on increased simulation education, inter-professional education



*Maine's Public Universities*



## Academic Partnerships



Maine's Public Universities



## Meeting Workforce Needs

### Senior Spring Survey Results

- 89% of graduates indicate they intend to work in Maine
- 25% indicate they intend to work in Aroostook County
- 50% indicate they intend to work in central Maine

- Between 3 to 10 (full time) openings for Registered Nurses in Aroostook County hospitals
- 77 pre-licensure graduates in 2017-2018 academic year

*Maine's Public Universities*



# Educating New Nurses

## Admission

### First-year Students

Fall 2018 -110 First-time students admitted

### Transfers

Fall 2017 - 30 External Transfers  
Spring 2018 - 15 Internal transfers

### Second-Degree

23 currently enrolled undergraduates as a second degree



Working with EMMC and Husson Univ. to double clinical placements for the two School of Nursing's at EMMC

- Pilot will begin in Fall 2018





# Nursing Outreach to Rural Maine (NORM)

## NORM

Working on planning grant to NORM program for the University of Maine at Machias

- Accelerated second bachelor's degree program in nursing at UMM



## Health Resources and Services Administration



UMaine SON partnered with PCHC in HRSA grant to increase numbers of nurses working in rural ambulatory, public health and community based centers.

- Monies would provide rent, living expenses and a stipend.
- Students would fulfill their community health rotations in rural areas serviced by PCHC
- Funding announcement in August 2018

*Maine's Public Universities*



# Acadia Proposal (NORM)

## Advanced Standing BSN Program



**NORM Pilot** Acadia Hospital requested to serve as the pilot site for the accelerated program

**Benefits** Allows us to us to use current faculty, part-time, adjunct and clinical simulation resources to support the program

Acadia Hospital committed to provide tuition reimbursement and direct loans to employees for educational purposes. Repayment following program completion

**Funding** Follow-up grant will be submitted to Vice Chancellor, May 31 to roll out the accelerated program

*Maine's Public Universities*

## Educating Existing Nurses



### Nursing Graduate Program

Previously unranked in the US News and World Report to top 50% in this year's evaluation

### FNP Graduate Enrollment

- Capped at low number for several years
- Cap lifted in Spring 2017
  - 15 new FNP student in Fall 2017
  - 18 new FNP's admitted to Fall 2018

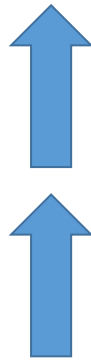
### System-wide Efforts

Continue to work with Nursing Integration Team from all campuses to offer integrated graduate program for nurse educators.





UNIVERSITY OF  
SOUTHERN MAINE



## Pre-licensure programs

- Enrollment 13% Spring '17 -> Spring '18; 441 students
- 15% more grads in '18
- Clinical groups expanded in community hospitals
  - Augusta to Portsmouth
- First ever winter clinical placements mental health
- NUR 100 at vocational school, Naples; transfers to USM as college credit
- New staff clinical placement coordinator (grad and undergrad)



UNIVERSITY OF  
SOUTHERN MAINE



- **Expansion of high and medium fidelity simulations – 2 Certified Simulation educators**
  - all upper level UG semesters
  - grad NP programs
- **New Adult Gerontology Acute Care NP program – MS and CAS**
  - Accepting admissions Fall 18
- **Engaging alumni to enhance clinical placements**
- **DNP revisions**





UNIVERSITY OF  
SOUTHERN MAINE



PARTNERSHIPS



## New in 2017/2018

- VNA Home Health and Hospice
  - Includes summer externship opportunity
- Bar Mills Rural Partnership
  - Inter/intra-disciplinary setting
- Partners for World Health
- Future plans: Inter-professional education – IPE – OT, SW, BSPH



*Amistad, Bayside Community, Casco Bay Community, Dominican Republic, Healthy Aging/Elder Life, Sagamore Village, Kennedy Park, L/A Community Care*



# Questions?





## UMFK Board of Visitors

University of Maine System Board of Trustees Meeting

May 20, 2018



# BOV Presentation Outline

- Introduction of board members
- Workforce demographics and outlooks
- Collaboration UMFK & UMPI
- Program highlights
  - Nursing Program
  - Forestry Program
- Summary - education to industry



## Demographics

- ❑ Maine's senior population will grow by 37% over the next 10 years!
- ❑ By 2024, Maine's population:
  - ❑ Aged 16 – 64: Will *decline* by 71,000
  - ❑ Aged 65 & older: Will *increase* by 94,000
- ❑ In many Maine counties, 48 to 50% of the nursing staff is over 55

Maine's Aging Population & Physician Shortage  
Will Require More Nursing Faculty, Registered Nurses,  
Nurse Practitioners, and Physician Assistants

Source: Maine Office of Policy & Management Projects



## Demographics

- ❏ Maine is facing a projected 3,200 nursing shortage by year 2025<sup>1</sup>
- ❏ Maine would need a 65% increase in nurse production or 400 new nurses/year to mitigate this trend
- ❏ Aroostook County workforce consists of 31,000 employees with over 4,500 in the forest sector<sup>2</sup>
- ❏ Aroostook County forest sector average age is 56 years old

Healthcare and Forest Sectors Are Vital To Maine's  
Future Economy!





## Retention / Attraction

- ❏ OPPORTUNITIES AROOSTOOK website
- ❏ Conducting Aroostook County business/educator socials
- ❏ Promoting high school student bus tours to major firms
- ❏ Virtual Job Shadow program for all 16 high schools in Aroostook County
- ❏ Working with Junior Achievement & Jobs for Maine Grads programs
- ❏ Promoting internships



Founded in 1878 to provide teachers for the local economy. Our mission has expanded to serve populations statewide, nationally, and internationally.

### **Vision Statement**

UMFK will become a model "rural university" in New England, creating pathways to educational opportunity and professional success for rural communities and people.

### **Mission Statement**

UMFK will nurture and engage a diversity of learners and aspiring professionals in Maine's rural communities and beyond through affordable, technologically-enhanced, and professionally-focused educational programs.



UNIVERSITY OF MAINE  
**FORT KENT**  
UNIVERSITÉ DU MAINE

UMPI was founded as the Aroostook State Normal School in 1903.

### **Vision**

We will lead the State of Maine in delivering an affordable and accessible education with an innovative spirit and commitment to excellence.

### **Mission**

We deliver exceptional experiences for learners of all ages to become informed leaders, engaged citizens, and prepared professionals within their communities and beyond.



University of Maine at  
**PRESQUE ISLE**  
*North of Ordinary*

# A HISTORY OF PARTNERSHIPS & COLLABORATIONS

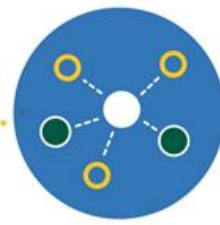
We collaborate on cultural arts programming



We serve at-risk students through our Upward Bound and Talent Search projects



We share strategic staffing positions (UMPI-UMFK Executive Vice President of Collaboration and Strategic Alliances, shared Director of Financial Aid)



Our Career Readiness teams host joint reverse career fairs



University of Maine at  
**PRESQUE ISLE**  
*North of Ordinary*



UNIVERSITY OF MAINE  
**FORT KENT**  
UNIVERSITÉ DU MAINE



# OUR CHARGE



## Establish meaningful academic partnerships and strengthen existing ones in ways that best:



Prepare our students for their future careers right here in The County



Meet workforce development needs



Create positive and lasting impacts on the local economy



Ensure institutional integrity

**This work will maximize efficiencies, strengthen fiscal sustainability, and increase enrollments.**



# MUTUALLY BENEFICIAL



## **This work allows us to:**

- Build on the strengths of each institution
- Be better prepared for demographic trends in Maine
- Use existing resources and better leverage connections with regional partners
- Create increased effectiveness and widen our impact



# ACADEMIC PARTNERSHIPS



01

## EDUCATION

Fully accredited teacher education program offered at both campuses

02

## NURSING

Critical leadership in statewide response to Maine's nursing shortage

03

04







# OTHER PARTNERSHIPS



## Joint Executive Director of Enrollment Management

- Made possible by additional System funding on precondition that we continue to maximize our partnership efforts.

- Providing guidance and support on these efforts; increasing communication between campuses, constituencies, and business community.

## Joint BOV committee

## UMFK-UMPI Collaboration Committee

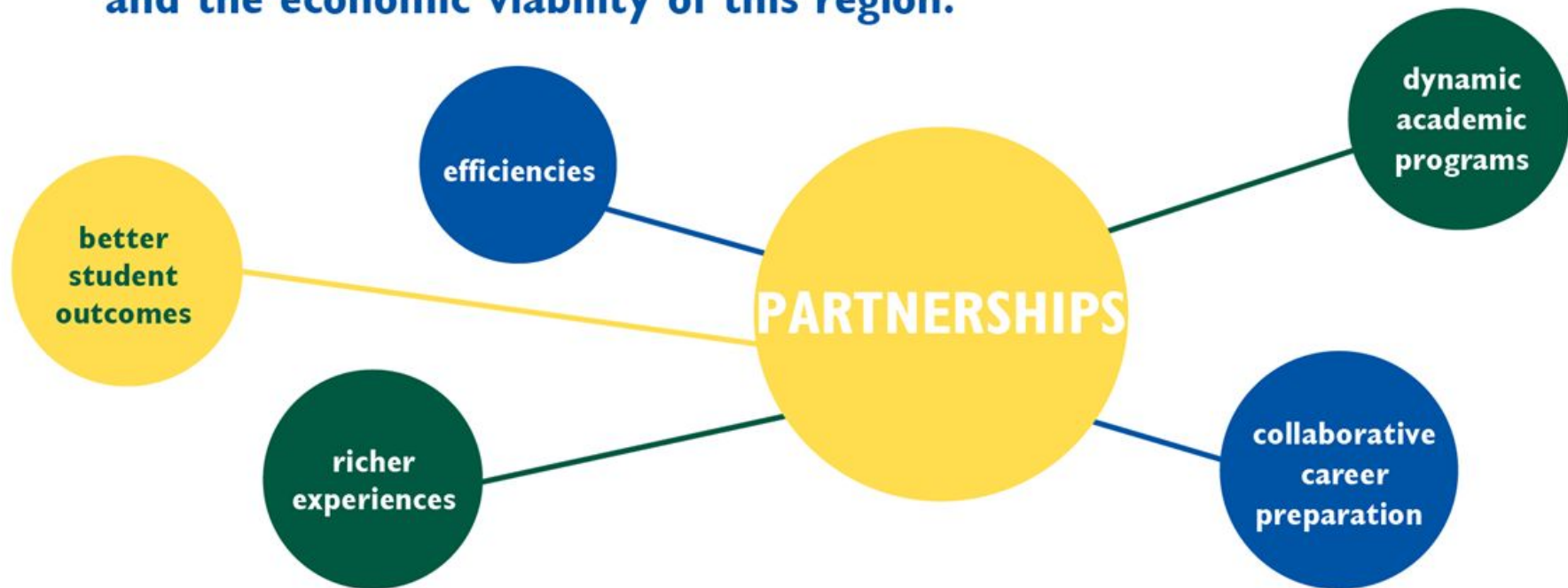
- Composed of administrative and faculty members; working to identify and prioritize academic and administrative collaborations.



# MEETING WORKFORCE NEEDS



**We play a critical role in workforce development and the economic viability of this region.**





# MOVING FORWARD



These partnerships and other efforts being explored are all about **preserving** and **extending** access to programs so our young people stay and complete their college work here.



# Nursing Program Highlights

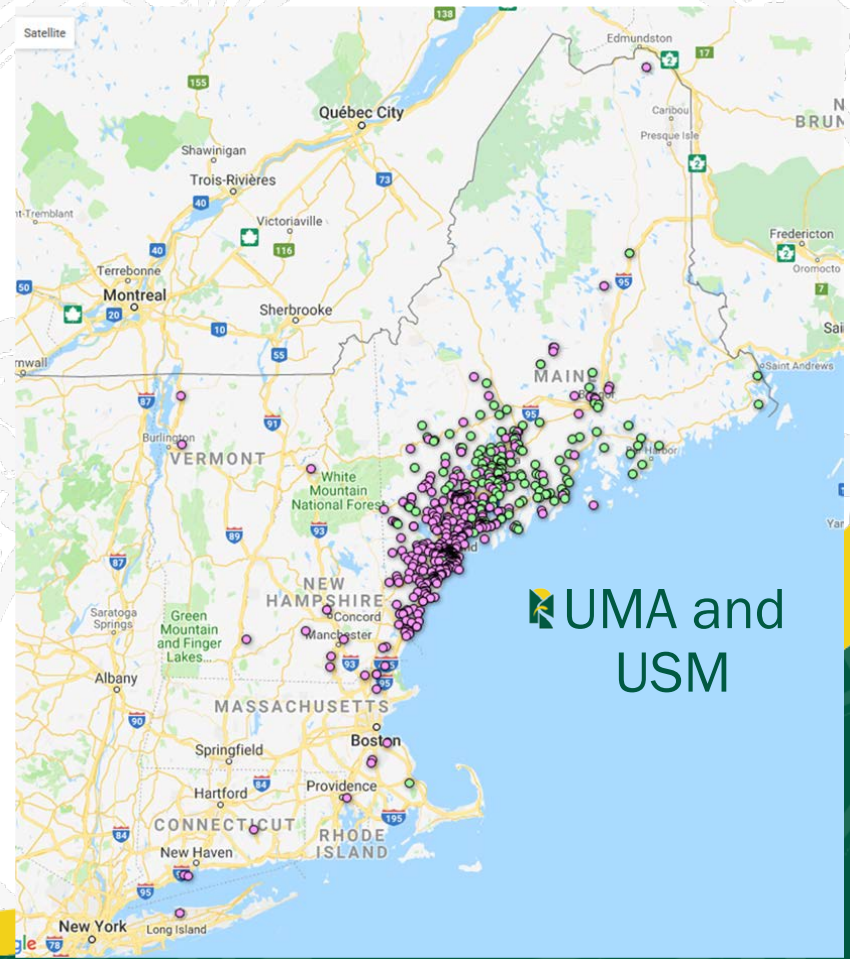
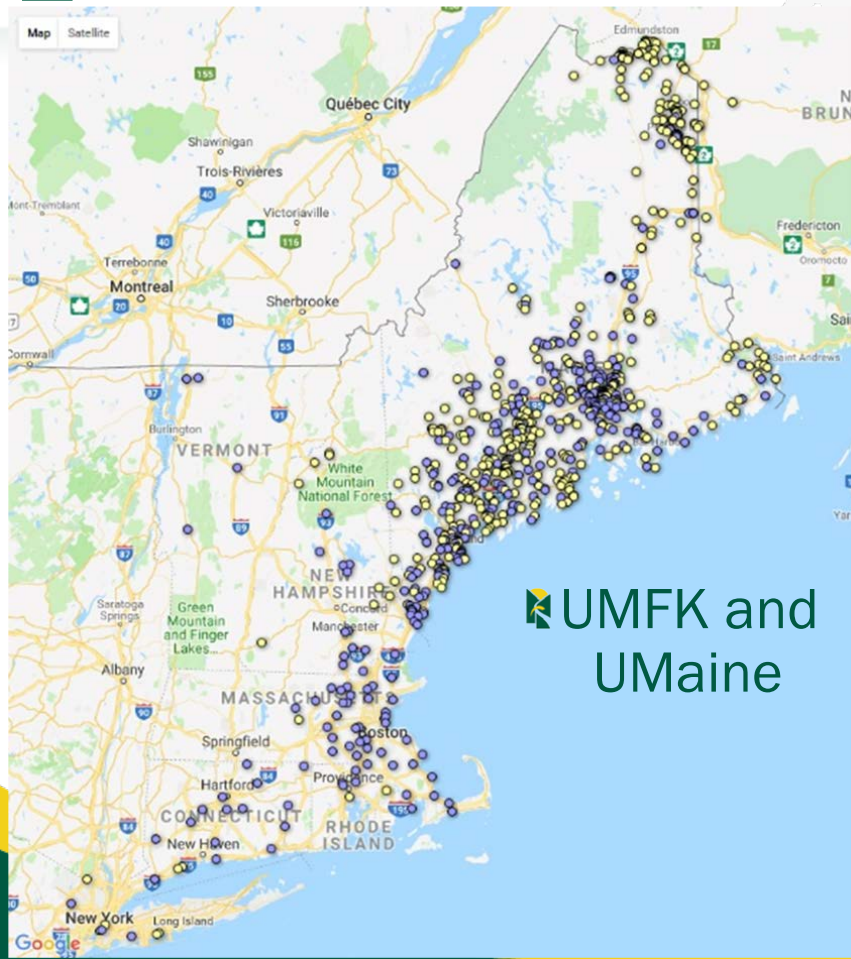
- ▣ Program successes
- ▣ Program collaboration
  - UMFK / UMA / UMPI
- ▣ Industry partnerships
  - Regional and statewide facilities
- ▣ Growth opportunities
  - Increased enrollment
  - MSN program





## Nursing Program Highlights

- ❑ UMFK's premier program – Maine's nursing center of excellence!
- ❑ Expansion with UMPI a great partnership display
- ❑ Physician shortage will draw need for advanced nursing degrees (Masters, PA, NPs etc.)
- ❑ Demand will continue to grow for next 20 years





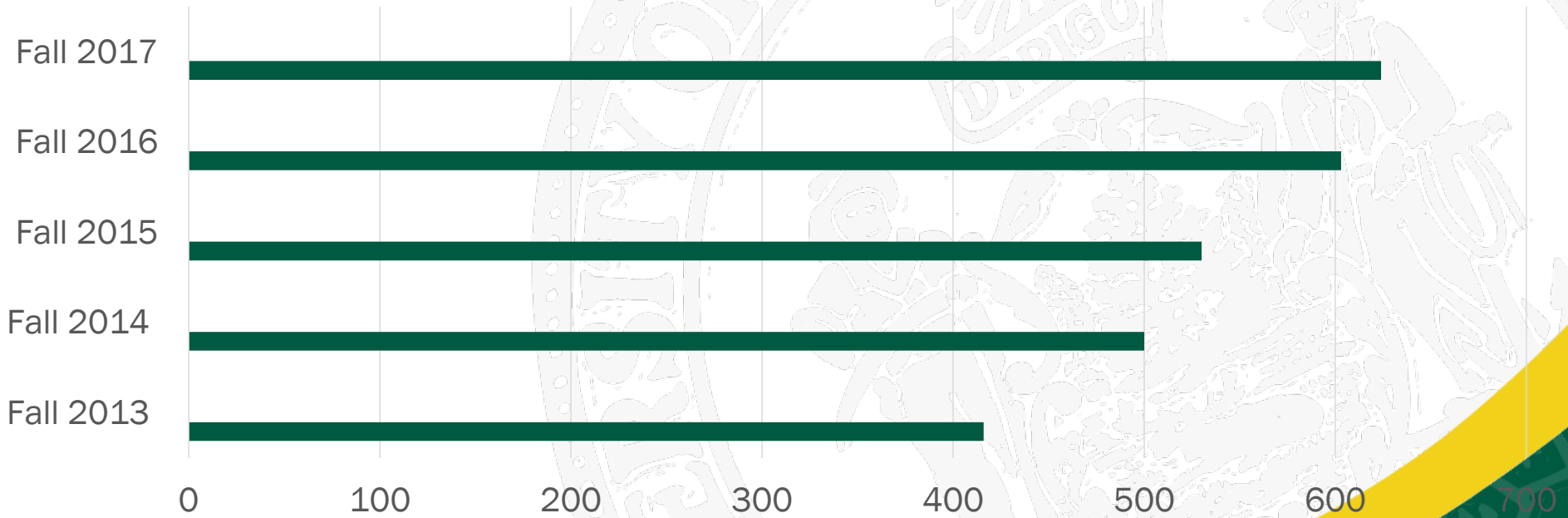
# Nursing Program Successes

5-Year Enrollment Trend					
	Traditional	UMA	Accelerated	RN to BSN	Total Headcount
Fall 2012	206		32	110	348
Fall 2013	237		28	151	416
Fall 2014	243	28	28	201	500
Fall 2015	230	74	38	188	530
Fall 2016	258	124	48	173	603
Fall 2017	254	140	59	171	624



# Nursing Program Successes

UMFK Nursing Student Headcount







# Industry Partnerships

✦ Pilot program with Aroostook County clinical partners to begin fall 2018

- Advantages for students
- Advantages for employers
- Advantages for UMFK





# Collaborative Partnerships

- ▣ University of Maine at Augusta
- ▣ University of Maine at Presque Isle
- ▣ Articulation agreements with majority of Maine Community Colleges



# Forestry Program Highlights

- ▣ Program successes
- ▣ Program collaboration
- ▣ Industry partnerships
- ▣ Growth opportunities





# Forestry Program Successes

- ▣ 90% permanent job placement rate in the forest industry
- ▣ Latest in technology throughout the program curriculum
  - LiDAR, GIS, GPS, drones, airborne hyperspectral sensor
- ▣ Very positive feedback from recent accreditation review
- ▣ Over 90% summer job placement within forest industry



## Forestry Program Collaboration

- UMFK-Cooperative Forestry Research Unit
  - Industry research collaboration since 1975
  - Graduate school faculty collaboration
  - UMFK student employment in research
- Northern Hardwood Research Institute (New Brunswick)
  - Joint research projects
  - Field tours & workshops with NHRI scientists
- Hyperspectral sensor project with Center for Research on Sustainable Forests (UMaine)
  - Forest health and productivity



# Forestry Program Partnerships

## ▣ Irving Professorship in Forestry

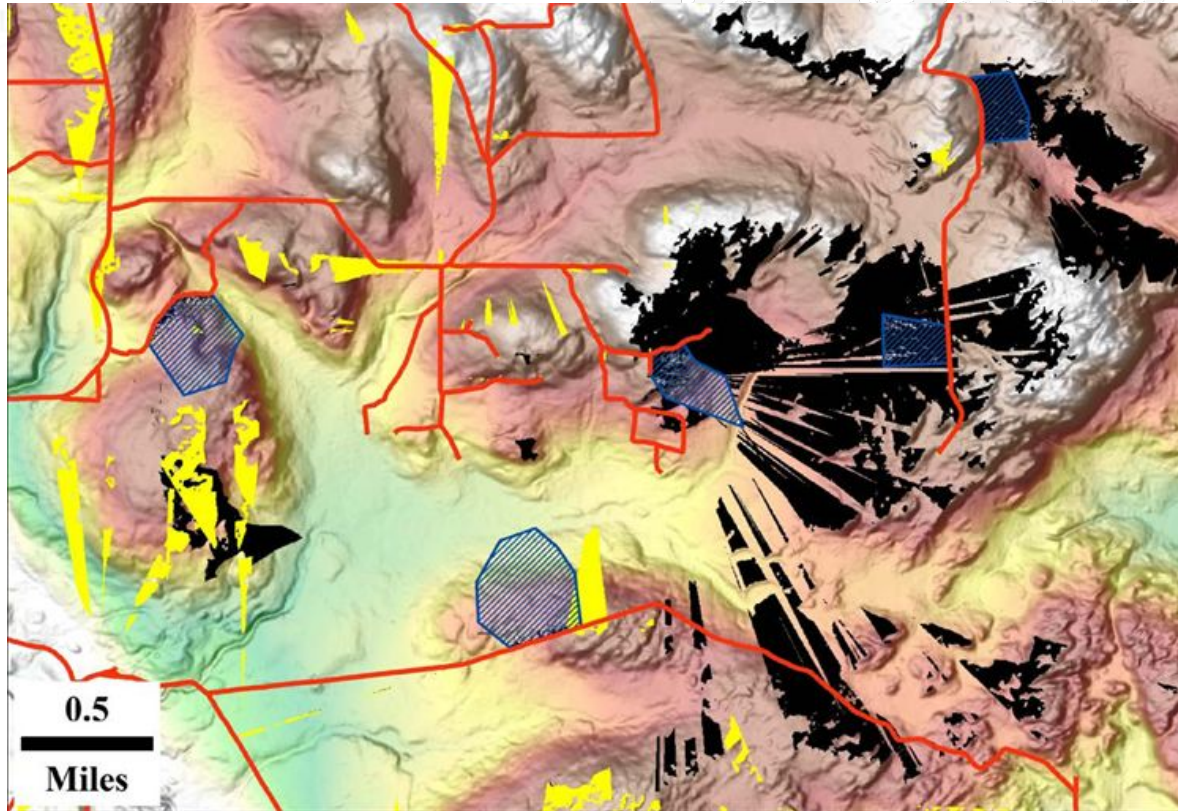
- Viewshed analysis
- Watershed impact
- Habitat use
- Adaptive forest management

## ▣ Internship opportunities





# Viewshed Analysis





# Forestry Program Opportunities

- ❏ Training in LiDAR technology (students and practitioners)
- ❏ Expanding current articulation agreements with high school programs
- ❏ Exploring opportunities with community colleges to train mechanized logging equipment operators.
- ❏ Attracting non-traditional students





# Summary

- ✦ Workforce planning
- ✦ Program collaboration
  - UM System Campuses / High Schools / Community Colleges
- ✦ Education to industry partnerships
- ✦ Nursing program has unlimited growth potential
- ✦ Forestry program is vital to Aroostook County & beyond
- ✦ Meeting the educational needs to address workforce challenges



UNIVERSITY OF MAINE  
**FORT KENT**  
UNIVERSITÉ DU MAINE

UNIVERSITÉ DU MAINE



Thank you!



## AGENDA ITEM SUMMARY

- |    |  |   |
|----|--|---|
| 1. | <b>NAME OF ITEM:</b>                   | Financing Authorization Resolution for Gorham Athletic Fields LED lighting project, USM |
| 2. | <b>INITIATED BY:</b>                   | James H. Page, Chancellor   |
| 3. | <b>BOARD INFORMATION:</b>              | <b>BOARD ACTION:</b> X  |
| 4. | <b>OUTCOME:</b>                        | <b>BOARD POLICY:</b>  |
|    | Primary Outcome:                       | Section 701 – Budgets – Operating & Capital   |
|    | Enhance fiscal positioning             | Section 712 – Debt Policy   |
|    | Increase Enrollment                    |   |
|    | Improve student success and completion |   |

5. **BACKGROUND:**  
 The University of Maine System (UMS) acting through the University of Southern Maine anticipates entering into an agreement with Banc of America utilizing the tax-exempt Master Lease Financing Agreement to finance \$1,000,000 of the Gorham Athletic Lighting Field project which was approved by the Board of Trustees at its March 19, 2018 meeting.

USM was approved to expend up to \$1,780,000 for installation of LED lighting on three athletic fields on the Gorham Campus. The scope of the project includes installation of state of the art LED lighting for the Hannaford Field, Baseball and Softball fields. A vendor has been identified through the National Joint Powers Alliance (NJPA) purchasing consortium. USM currently has completed design for the lighting on all three fields. The funding is identified for the first project (Hannaford Field), and financing will cover the Softball and Baseball fields. The Hannaford Field project will be completed by the end of June 2018, and the other two fields will be completed in time for the opening of Fall Semester 2018.

A Financing Authorization resolution related to the proposed project is enclosed for Board review and approval and will enable the University to be reimbursed for expenditures, including expenditures made for this project within 60 days prior to approval of this resolution.

**6. TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees approves the Financing Authorization resolution related to the execution of a tax-exempt Master Lease Financing Agreement not to exceed \$1 million for the purposes of financing the Gorham Athletic Fields LED lighting project.

5/10/2018

## UNIVERSITY OF MAINE SYSTEM

### RESOLUTION FINANCING AUTHORIZATION

#### DECLARATION OF OFFICIAL INTENT OF UNIVERSITY OF MAINE SYSTEM TO REIMBURSE CERTAIN CAPITAL EXPENDITURES FROM PROCEEDS OF INDEBTEDNESS

---

**WHEREAS**, the Internal Revenue Service has determined that the University of Maine System (the “University”) is described in Section 501(c)(3) of the Internal Revenue Code;

**WHEREAS**, the University intends to install LED lighting on three athletic fields on the Gorham, Maine Campus of the University of Southern Maine (the “Project”);

**WHEREAS**, the University expects to pay certain capital expenditures in connection with the Project prior to the issuance of indebtedness to be used to finance such expenditures;

**WHEREAS**, the University is authorized to incur or issue debt obligations to finance costs of the Project;

**WHEREAS**, in order to reimburse itself or pay for costs of the Project, the University anticipates that it will enter into a tax-exempt financing lease for the purpose of financing the costs of the Project; and

**WHEREAS**, section 1.150-2(d) of the Treasury Regulations requires the University to declare its reasonable official intent to reimburse expenditures for the Project with proceeds of a subsequent borrowing;

**NOW, THEREFORE, BE IT RESOLVED**, by the Board of Trustees of the University as follows:

Section 1. The Board of Trustees of the University finds and determines that the foregoing recitals are true and correct.

Section 2. This Resolution is adopted by the Board of Trustees of the University solely for purposes of establishing compliance with the requirements of section 1.150-2 of the Treasury Regulations. The Resolution does not bind the University to make any expenditure or incur any debt with respect to, or to proceed with, the Project.

Section 3. That this Board of Trustees expects that this University will pay certain capital expenditures in connection with the Project prior to the issuance of taxable or tax-exempt indebtedness for the Project. The reimbursement of such expenditures is consistent with the University's established budgetary and financial circumstances. There are no funds or sources of moneys of the University, or any related person or commonly controlled entity, which have been, or reasonably are expected to be, reserved, allocated on a long-term basis, or otherwise set aside to pay costs of the Project to be paid or reimbursed out of proceeds of indebtedness to be issued for the Project.

Section 4. The Board of Trustees of this University hereby declares this University's official intent to use proceeds of indebtedness to reimburse itself for future expenditures related to the Project. This Board reasonably expects that the maximum amount of indebtedness to be issued for the Project is \$1,000,000.

Section 5. This Resolution shall be continuously available for inspection by the general public during normal business hours at the offices of this University, located at the Controller's Office, University of Maine System, 5703 Alumni Hall, Suite 101, commencing on May 22, 2018.

Section 6. That the Resolution of the Trustees of the University of Maine System entitled Reimbursement of Project Expenditures attached hereto as an Addendum is hereby approved and adopted; and further

Section 7. This Resolution shall take effect immediately.

ADOPTED: May 21, 2018

**ADDENDUM**

RESOLUTION OF THE TRUSTEES OF THE UNIVERSITY OF MAINE SYSTEM

**REIMBURSEMENT OF PROJECT EXPENDITURES**

Be it resolved that, for purposes of U.S. Treasury Regulation §1.150-2, the University of Maine System reasonably expects (1) to incur debt to reimburse expenditures (including expenditures made within the last 60 days) temporarily advanced from funds currently held in the Plant Fund, such expenditures to be made to pay the cost, or a portion of the cost, of planning, design, acquisition, construction, reconstruction, improvement, renovation, rehabilitation and equipping of the projects described below (the “Projects”) and (2) that the maximum principal amount of debt to be issued by the University of Maine System for the Projects including for reimbursement purposes is One Million Dollars (\$1,000,000).

*(a) PROJECTS*

**University of Southern Maine:**

Installation of LED lighting on three athletic fields on the Gorham campus

This Resolution shall take effect immediately.

ADOPTED: May 21, 2018



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## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Chancellor Contract
2. **INITIATED BY:** James Erwin, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **BACKGROUND:**
5. **OUTCOME:** **BOARD POLICY:**
6. **TEXT OF PROPOSED RESOLUTION:**

A resolution will be presented at the Board of Trustees meeting.

5/17/18



*Dedicated Education Unit*

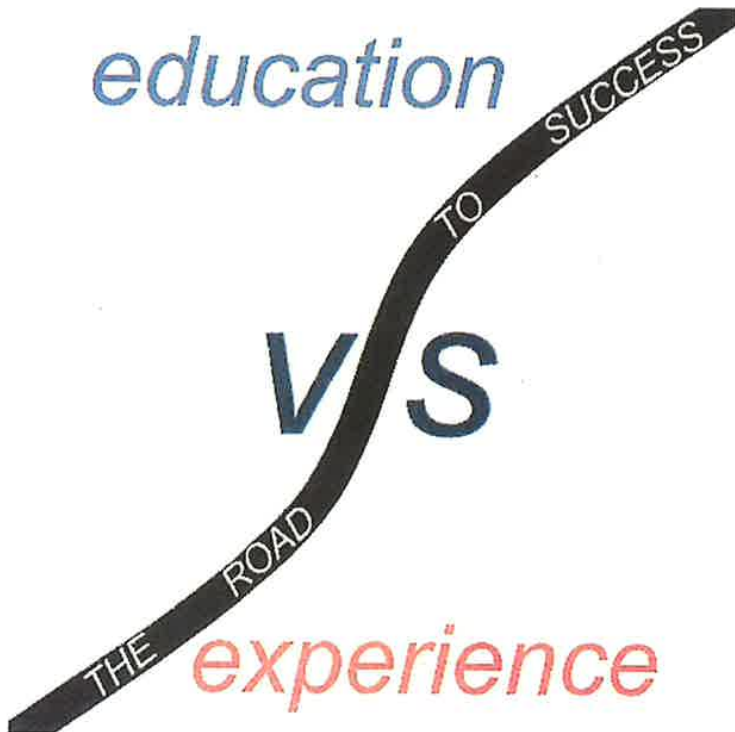
*Grant 4*

*Cardiac Telemetry*

*education*

**V S**

*experience*



## EMMC DEU PROJECT

**Concept and Work-to-Date:** To create a Dedicated Education Unit on Grant 4 Cardiac. Triad oversight of DEU model: Clinical Faculty Coordinator, Clinical Educator, and Unit Managers.

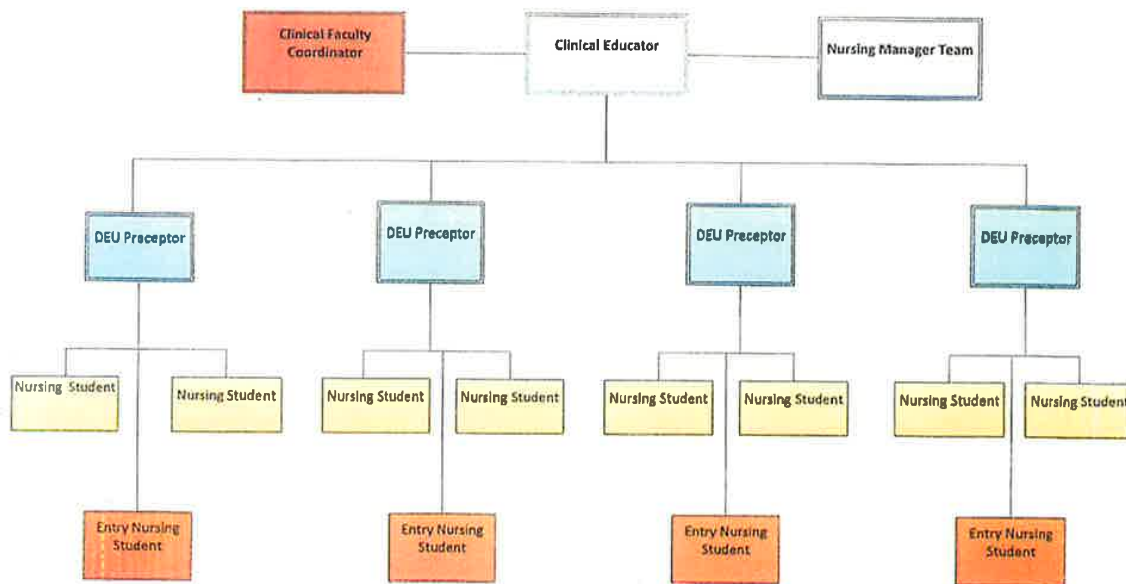
<https://vimeo.com/7941844>

<https://www.youtube.com/watch?v=6BpEAt-PRyM&feature=youtu.be>

**Benefits:** To increase student enrollment, better use existing resources, support professional development of nurses and increase nurse satisfaction.

### Definitions:

- **Clinical Faculty Coordinator** - employed by SON serves as mentor to clinical staff instructor
- **Clinical Educator** - Designated EMMC Clinical Educator.
- **DEU Preceptor** - EMMC BSN nurse who has expressed commitment to DEU and recommendation from Nurse Manager.
- **Student** - Midlevel and entry level nursing students selected for DEU rotation
- **Evaluation/Feedback** - completed jointly by Faculty Mentor and Clinical Staff Instructor



Proposed Dedicated Education Unit  
Eastern Maine Medical Center  
Grant 4 Cardiac

**Risks and Barriers:**

- Multiple schools - Portland Model and most DEUs work with one school.
  - 3 different schools on unit over 7 day period – not always back to back days and some are currently half shifts
- Each SON has a different expectations, outcomes and perceptions of the DEU.
  - Husson’s curriculum only allows faculty to the students with meds.
  - 3 different feedback tools.
- Different clinical hourly requirement by each SON
- BON requirement 8:1 student to Clinical instructor
- Clinical Nurses schedule concerns
- Patient Ratio for DEU preceptor
- Available BSN nurses
- Unit Leadership engagement
- SON Engagement
- Staff Engagement
- Meeting commitment by all parties pending

**Recommendation:**

- Select one school to work for initial pilot
- Select one feedback/evaluation tool
- Clinical Educator and Faculty Mentor to jointly conduct one day workshop for DEU preceptors
- Student/DEU Preceptor Ratio – 2 Junior Students/1 Sophomore Student to 1 CSI (pod) with 4 pod max per shift on unit.
- Opportunity Student remediation by EMMC Sim Team on Clinical shift
- ~~Clinical Staff Instructor~~ selection criteria- volunteer, recommendation and incentive
  - Preceptor differential
  - SON college credit voucher

*Preferential on one 12-hour shift/ week or 2-12-hour shifts every other week.*

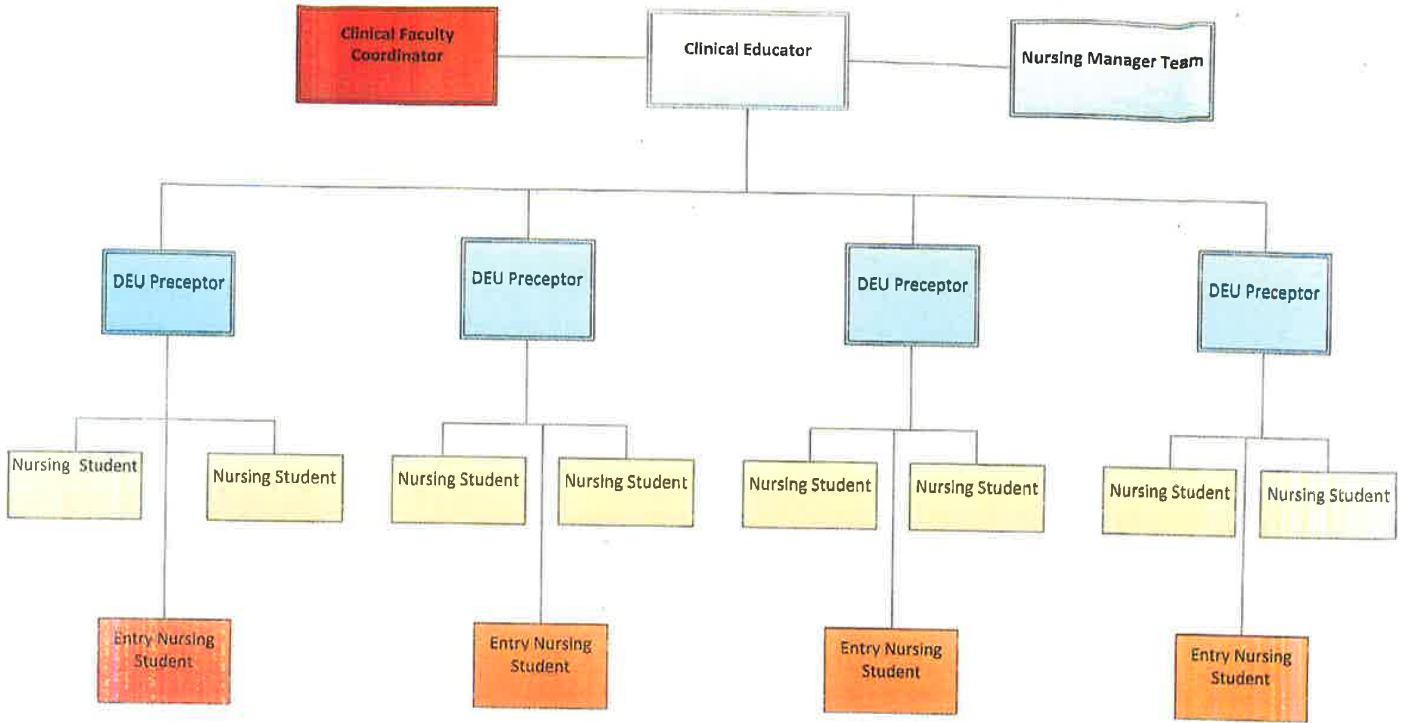
*DEU Partner selection*

**Work to be done:**

1. DEU Student Orientation Guide
  - a. Clinical Plan
  - b. Common Medications
  - c. Common diagnosis
  - d. Common procedures and interventions
  - e. Concept Map
2. Tool Revision
  - a. Maine Core Competency Focused
3. DEU Preceptor Workshop Development
4. Develop outline of clinical progression expectations
5. ~~Clinical Staff Instructor~~ Criteria/Eligibility
6. Student Eligibility
- \* 7. Communication plan
8. Engage early adopters from Staff

*Meeting 9. 10. 11. 12. Throughout the Spring beginning 5-18-2018*

*Univ. of Portland  
Special 7-13-18*



**Proposed Dedicated Education Unit  
Eastern Maine Medical Center  
Grant 4 Cardiac**

## EMMC DEU Clinical Experience Junior and Entry Level Students

The educational objectives for the first three weeks of the DEU clinical experience are for the student to gain beginning level clinical knowledge and skills and an appreciation for the patient care team and usual daily unit practices and nursing care provided.

All DEU students and CFCs are expected to follow this schedule.

Weeks One-Three	Information Source	Level of Implementation		
		Student/CI	Not completed	Partially completed
<b>Week One</b> Learning Activities Tour Document mTrain Pyxis Review Med Review Concept Mapping Skills Competency Work with CNA 2-3 : 1 ratio				
<b>Week Two</b> 1 Pt assign with DEU preceptor				
<b>Week Three</b> 2 Pt assign with DEU preceptor				
<b>Week Four - Seven</b> 2 Pt with DEU preceptor & Entry Student for ADLs				

## EMMC DEU Clinical Experience Junior and Entry Level Students

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Weeks One-Three	Information Source	Level of Implementation		
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<b>Week One</b> Learning Activities Tour Document mTrain Pyxis Review Med Review Concept Mapping Skills Competency				
<b>Week Two</b> Work with CNA 2-3 : 1 ratio				
<b>Week Three</b> 1 Pt assign with DEU preceptor				
<b>Week Four</b> 1 Pt with DEU preceptor				
<b>Week Five – Eight</b> 2 Pt with DEU preceptor				
<b>Week Eight – Twelve</b> 2 Pt with DEU preceptor & Entry Student for ADLs				

## Common Diagnoses on the Cardiac Telemetry Unit

You should have an understanding of the pathophysiology of the diagnoses listed below.

Complete a concept map for each diagnosis listed below. Think about how your patient might present to you. What physical assessment findings might you expect to find. What co-morbidities might you need to consider when caring for your patient. What procedures or interventions might your patient require.

### Acute Coronary Syndrome

- Stable Angina
- Unstable Angina
- Non ST Elevation Myocardial Infarction (NSTEMI)
- STEMI

### Heart Failure

- Right-sided versus left-sided
- Preserved EF
- Reduced EF

### Arrhythmias

- Atrial fibrillation
- Atrial Flutter
- AV Blocks

### Syncope

### Hypertension

## Common Medications Administered on the Cardiac Telemetry Unit

Complete a medication card for all of the medications listed below. Include the classification, the method of action, desired effects, possible adverse reactions, possible drug interactions, precautions and contraindications. What assessment data is significant to have prior to administration? What procedures and/or interventions will this patient be having and is this medication supposed to be administered or is it to be held? Always ask yourself, is it safe to give this medication at this time given?

Aspirin

Plavix (clopidogrel)

Coumadin (warfarin)

Heparin

Lovenox (enoxaparin)

Morphine

Nitroglycerin

Lopressor (metoprolol)

Betapace(sotalol)

Tikosyn (dofetilide)

Cardizem

Amiodarone (cordarone)

Captopril

Lisinopril

Lasix (furosemide)

Lipitor (Atorvastatin)



## **Common Procedures & Interventions on the Cardiac Telemetry Unit**

You should have a working knowledge of each one of these tests, procedures or interventions. Consider is it invasive or non-invasive. Does this test, procedure or intervention require consent? Does this require a pre-procedure preparation, dietary restrictions, activity restrictions, and or a change in medication orders.

EKG

Echocardiogram

Cardiac Nuclear Stress Test (MIBI)

Transesophageal Echocardiogram (TEE)

Cardioversion

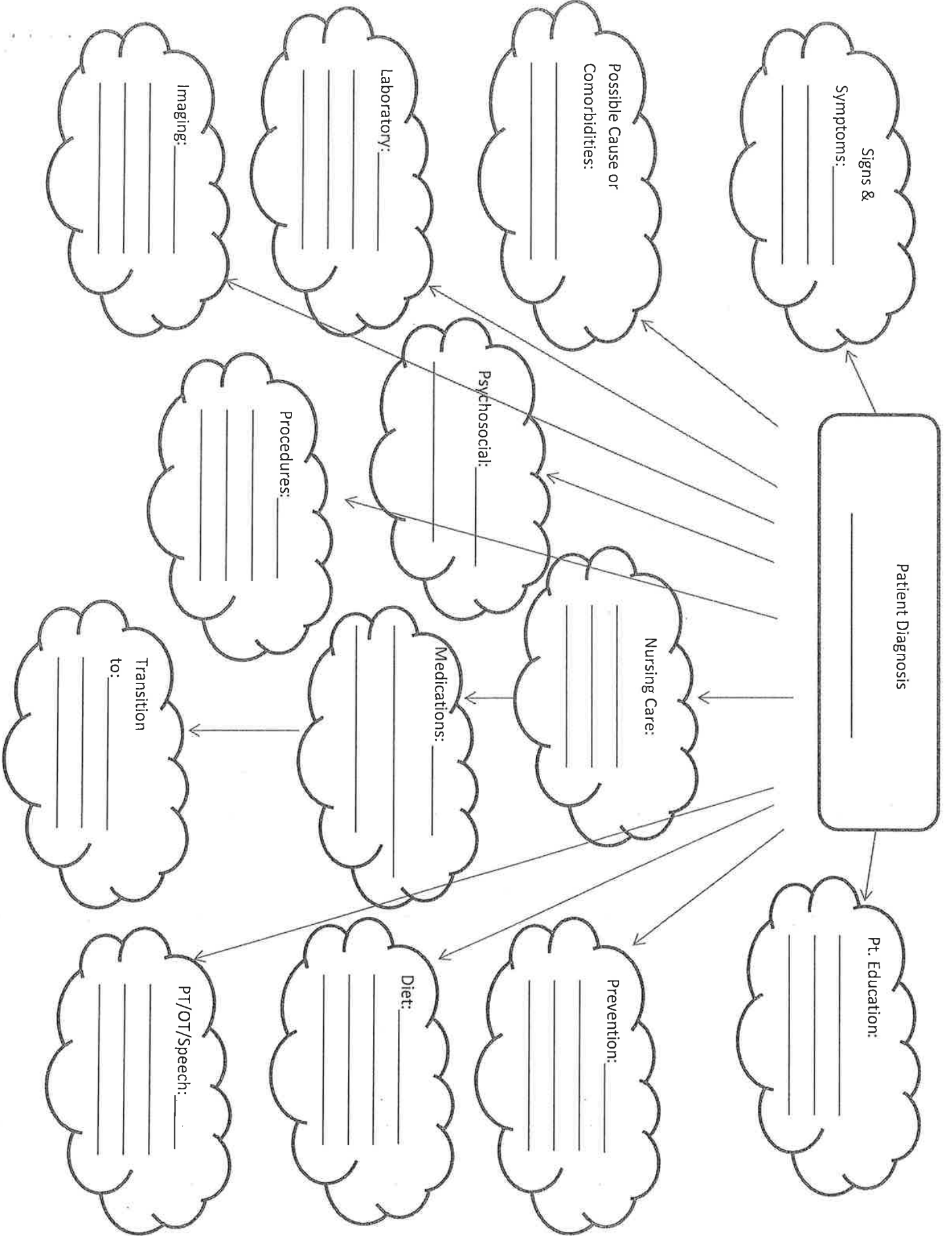
Diagnostic Heart Catheterization

Percutaneous Coronary Intervention (PCI)

Pacemaker/AICD Placement

Coronary Artery Bypass Grafting

Trans-femoral Aortic Valve Replacement (TAVR)



**DEU Workshop Outline** (to be developed further)

*J. Huns*

Overview of DEU models

Overview of EMMC DEU model

Roles and Responsibilities

Model of Clinical Instruction

Teaching and Learning Principles

Clinical Reasoning tools

Feedback Tools

Course Overviews

    Clinical Course Syllabi

    Clinical Expectations

    Feedback tools

    Clinical Teaching Handbook

Check in Timeline

Contact Sharing

**KPI / SRAP UPDATE**  
**21 MAY 2014**

**KPI STATUS UPDATE**

KPIs are the measures used to track progress in meeting UMS BOT Priority Outcomes.

Green Rows are currently measured.

Blue Rows are in development.

Red rows are delayed because of resources.

PRIORITY	METRIC	KPI	REFRESH	NOTES
<b>1. Enrollment Mgmt</b>				
a. Recruitment / Enrollment	Achieve or exceed 1 and 5 year enrollment projections	FYs19-23 2.4% FY19 2.9% FY18 <1.9%>	1x / year	<ul style="list-style-type: none"> <li>UFMS audit on credit hours</li> <li>KPI is composite based on 7 coordinated campus budgets</li> <li>Comparators: % year on MYFA; 1 year against budgets</li> <li>Headcount and FTE actuals are available.</li> </ul>
<b>b. Student Success</b>				
i. Retention (R) / Completion (C)	Achieve or exceed comparators.	(R) F/F16 71.2% (C) 4 year 33.8% (C) 6 year 47.6%	1x / year	<ul style="list-style-type: none"> <li>Academic Affairs audit</li> <li>Comparators: peers, campus trendlines</li> <li>KPI is composite based on 7 campus data.</li> <li>(R) Fall over Fall for 1<sup>st</sup> year full time</li> <li>Planned aggregate retention increase 1%/year</li> <li>(C) 4 year grad rate, 5 year trendline: 28.9% (2009) - 33.8% (2013)</li> <li>(C) 6 year grad rate, 3 year trendline: 50.5% (2009) - 49.7% (2011)</li> </ul>
ii. Student Debt	Reduce debt against comparators	FY17 \$27,453	1x / year	<ul style="list-style-type: none"> <li>Academic Affairs audit</li> <li>Comparators: campus trendlines, national averages, peers to be incorporated</li> <li>KPI is composite based on 7 campus results, results not normalized to number of students.</li> </ul>
iii. Student Satisfaction	Increase % against comparators	[Not yet at System level. Resources.]	1x / 2 years	<ul style="list-style-type: none"> <li>Academic Affairs audit</li> <li>Comparators: campus trendlines</li> <li>Current NSSE instrument for student engagement only. Annual local refresh/ aggregation instrument and process tbd.</li> </ul>
iv. Alumni Satisfaction	Increase % against comparators	[Not yet at System level. Resources.]	tbd	<ul style="list-style-type: none"> <li>Academic Affairs audit</li> <li>Comparators: campus trendlines</li> <li>Current limited campus outreach by select programs. Annual local refresh/ aggregation instrument and process tbd.</li> </ul>

<b>2. Fiscal Positioning</b>				
a. Structural Gap	Reduce gap against comparator	Elim year FY17 2022 FY18 5+	1x / year	<ul style="list-style-type: none"> <li>• UFMS audit, trails 1 year</li> <li>• Comparator: MYFA</li> </ul>
b. Core Financial Ratios	Trend against nat'l benchmarks	FY17 2.8 FY16 2.5	1x / year	<ul style="list-style-type: none"> <li>• UFMS audit, trails 1 year</li> <li>• KPI is Composite Financial Index.</li> <li>• See Dashboard for trendline (3 year positive, 5 year even)</li> </ul>
c. Investment Resources	<ul style="list-style-type: none"> <li>• State</li> <li>• System Philanthropy</li> </ul>	FY18 \$75MM (bond pending)	1x / year	<ul style="list-style-type: none"> <li>• UFMA audit</li> <li>• KPI is singular</li> <li>• Comparators: System's projections</li> </ul>
• Public Support	Increase % trend against surveyed state benchmarks	FY19 72-83% (Current data includes MCCS)	tbd	<ul style="list-style-type: none"> <li>• UFMS audit of state survey</li> <li>• KPI is absolute</li> <li>• Comparator: Statewide survey trendline. Target x&gt;80%</li> </ul>
<b>3. Research &amp; Econ Dev</b>				
a. Investment	Increase against comparators	RE FY18 \$99.5MM HERD 160 Props >\$1MM 41 (FY17)	1x / year	<ul style="list-style-type: none"> <li>• UFMS audit for trailing year</li> <li>• KPI is singular</li> <li>• Comparators: Research Expenditures (RE) UME trendline; HERD rating ((2011: #138); (2015: #157)); Proposals UME trendline</li> </ul>
b. Partnerships	Increase % against comparators	FY17 565	1x / year	<ul style="list-style-type: none"> <li>• UFMS audit for trailing year on contracts</li> <li>• KPI is UME based</li> <li>• Comparators: trendline (3 year average is flat)</li> </ul>
c. Impact	Increase % against comparators	tbd	tbd	<ul style="list-style-type: none"> <li>• UFMS audit for trailing period</li> <li>• Methodology to be reworked as part of new UME Research planning.</li> </ul>
d. Employer Satisfaction	Increase % against comparators	[Not yet at System level. Resources.]	tbd	<ul style="list-style-type: none"> <li>• Comparator: System trendline</li> <li>• Analysis by industry sector</li> </ul>

**SRAP INVESTMENT STATUS** This update includes only those initiatives approved for FY18 funding by the BOT.

CATEGORY	INITIATIVE	STATUS
Enrollment	Early College	Expansion plan completed and approved. Coordinator hired, campus plans in implementation.
	Enrollment Management	Joint UMFK/UMPI position hired. New resources for UMM, UMA, UMF in place.
	Market Research	RFP for research in evaluation stage.
Student Success	VCAA staffing	ACVAA hire made.
	IR	Staffing in place, capacity in rapid development with early results deployed.
	Early Warning	Software package acquired, distributed to campuses.
Research	RRF	See RRF annual report. Successful year 4, planning for successor plan in development.
Academic Trans	Program Integration	See VCAA data.

