

Academic Affairs Annual Report 2019





There were 11,404 students enrolled on census day in the fall of 2018 — 9,365 undergraduate and 2,039 graduate students, the highest enrollment the university has seen in the past six years and the fourth consecutive year of enrollment growth.

Academic Affairs Annual Report

ealthy organizations take time periodically to reflect upon why they exist, what values provide the foundation for their work, and what they aspire to be. The University of Maine, including its regional campus the University of Maine at Machias, engaged in this type of self-reflection through the *Strategic Vision and Values* process over the past academic year. Through a series of public forums, pop-up gatherings, formal meetings, electronic communications and prescribed reports, we learned a great deal about our institution. I was pleased but not surprised by the engagement of the university community in this work. More than 2,000 faculty, staff, students, Board of Visitors members, alumni and community partners participated in sessions, contributed



their thoughts in writing, or found other ways to engage in the dialogue. Integrating what we learned, we have articulated the university's strategic values, a vision for the future, goals — both broad and specific — and metrics by which we will gauge progress. *Strategic Vision and Values: A Framework for the University's Future* will be released this fall and will be the compass with which the university will navigate its future course.

The 2019 Academic Affairs Annual Report is organized around the three strategic values identified through the strategic planning process: Fostering Learner Success; Discovering and Innovating; and Growing and Expanding Partnerships. As in previous reports, what appears in the following pages is not a comprehensive list of accomplishments. Rather it is a summarizing and sampling of the work carried out across campus, throughout the state and, indeed, around the world by UMaine's talented faculty, staff and students.

As has been the case each time I prepare the Division of Academic Affairs annual report, I am amazed by the dedication, work ethic, creativity and resilience of UMaine's academic community. My amazement has not diminished over the six years that I have had the privilege of serving as the university's chief academic officer. This is the last report of this type that I will prepare. Please accept my thanks for all that you do to support our students, create new knowledge and serve our state.

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

Overview

here were 11,404 students enrolled on census day in the fall of 2018 — 9,365 undergraduate and 2,039 graduate students, the highest enrollment the university has seen in the past six years and the fourth consecutive year of enrollment growth. The fall 2018 first-year entering class was the second largest in UMaine's history. And these first-year students entered UMaine prepared to succeed. The mean SAT score for the firstyear class was seven points higher than the previous year and 11 points higher than the year before. Enrollment in graduate programs has grown 25% (over 400 students) since 2015. While the admissions picture for the fall 2019 entering class is still taking shape, the preliminary data indicate that enrollment of Maine residents will increase for the first time in several years and mean SAT score will continue the positive trend, as will the mean high school GPA. On the graduate side, the growth trend looks to continue with the largest enrollment increases seen in online graduate programs.

UMaine students earned 270,632 credits last year, which is the largest number of earned credit hours in over five years. UMaine degrees were awarded to 2,168 students in 2018–19, including 1,737 bachelor's, 362 master's and 69 doctoral degrees. The latter number ties the record for the highest number of UMaine doctorates earned in a single year.

UMaine faculty, staff and students continue to produce quality research, scholarship and creative activity. In 2018–19, UMaine saw the publication of over 1,800 scholarly works and the delivery of hundreds of additional presentations, performances and exhibits. Between July 1, 2018 and June 30, 2019, a total of \$91,224,889 was awarded from extramural sponsors, a 25% increase over the previous fiscal year. UMaine's total research expenditures was \$137.7 million, a 6% increase over last year and a remarkable 74% increase over total research expenditures in 2016. UMaine researchers continue to serve businesses and industries in Maine and beyond. Industry contracts produced over \$3 million in revenue in 2018–19, and another \$1 million plus from research contracts with local, state and federal governments.

UMaine's Think 30 initiative was launched in the summer 2015 with the goal of increasing the number of students who earn their bachelor's degrees in four years or less. Each year, more students are completing 30 credit hours in the 12-month year. The four-year graduation rate for the class that entered UMaine in fall 2014 was 40% — tied for the highest in UMaine's modern history. The graduation rate for the class that entered in fall 2015 is not yet known, since August graduations are included in that calculation, but the preliminary evidence suggests that it will break the prior year's record.

We welcomed 62 new scholar-teachers to the UMaine faculty in 2018. Thirty of these new faculty members are on the tenure-track. The total number of tenure-track faculty will have increased for the third consecutive year after many years of slow decline. Twenty-one faculty members were awarded tenure in 2019. The faculty are the life blood of the university. The influx of new faculty members and the substantial number earning tenure paint an encouraging picture of UMaine's future.



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Fostering Learner Success

The university is committed to fostering learning for all. We provide access and opportunity in and out of the classroom to prepare students for success in college, career, and civic engagement. Our faculty and staff create relevant opportunities for lifelong learning through excellence in teaching and co-curricular activity. Our inclusive community welcomes all learners and strives to sustain an enriching environment in which they can flourish and succeed. We recognize that the best learning occurs when a diversity of perspectives, experiences and ideas are valued and promoted.

Enrollment

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Ur	dergraduate	Graduate	Total
Education and Human Development	16,167	5,845	22,012
Engineering	27,161	1,246	28,407
Honors College	4,486	_	4,486
Liberal Arts and Sciences	122,526	3,633	126,159
Maine Business School	19,445	930	20,375
Natural Sciences, Forestry, and Agriculture	59,215	7,527	66,742
Other programs	1,752	699	2,451
	========	========	========
University of Maine totals:	250,752	19,880	270,632

Notes:

1. Each year comprises fall and spring semesters.

2. Other programs include University Studies, Labor Studies, Innovation Engineering, Intermedia, ROTC, Disability Studies and GSBSE courses not taught by UMaine faculty.



The College of Engineering (COE) offers weekly tours of engineering facilities.

Enrollment Initiatives

- UMaineOnline program enrollments grew by 35% over the previous year.
- Spearheaded by the Division of Lifelong Learning (DLL), UMaine is partnering with high schools to provide students with opportunities to earn college credit while still in high school. The Early College initiative saw enrollment increase 91% over the prior year, with 475 high school students earning UMaine credits.
- The six colleges and DLL regularly collaborated with Enrollment Management by participating in open houses, fall and spring orientation, and in-state and out-of-state recruitment events.
- The College of Natural Sciences, Forestry, and Agriculture (NSFA) held two prospective student mini-open houses at the Darling Marine Center, and a summer event for prospective students in Animal and Veterinary Sciences, Food Science and Human Nutrition, Environmental Horticulture and Sustainable Agriculture.
- UMaineOnline collaborated with Enrollment Management and the Graduate School to ensure effective processing of online applications in TargetX.
- The College of Engineering (COE) continues to offer weekly tours of engineering facilities.
- The Office of Admissions, UMaine Naval ROTC, NSFA, College of Liberal Arts and Sciences (CLAS) and COE have collaborated to pilot a NJROTC Pathways Program for NJROTC cadets. Ten under-represented minority students from around the country will begin the program in fall 2019.
- The Office of Enrollment Management piloted the INSPIRE Maine Scholarship Program for high-achieving, Pell-eligible Maine students for the incoming class in 2019–20.
- The Honors College collaborated with Enrollment Management by sending Honors associates to recruitment events, and revising processes to optimize the size and makeup of the fall 2019 incoming class. The size of the incoming Honors class is on track to exceed 350 students this year.

Curricular Innovations

- DLL has expanded its Early College programs to include an Outdoor Leadership Pathway program at Bryant Pond 4-H Learning Center, a partnership with the Maine High School Summer Leadership Institute to offer LDR 100 and a PSY 100 Step-Up program offered in partnership with the Maine Department of Vocational Rehabilitation.
- Innovations in NSFA include a partnership with the U.S. Fish and Wildlife Service Bird Permitting Office to establish a Federal Policy Internship Program, the creation of a new UMaine-University of New Hampshire dual graduate certification in ecological genomics, and the Juneau Icefield Research Program six-credit summer field camp offered in the School of Earth and Climate Science.
- The Graduate School of Business developed and implemented a 4+1 MBA with the American University of Bulgaria and is finalizing an MBA/PharmD dual degree with the University of New England.

- The School of Kinesiology, Physical Education and Athletic Training created a new Outdoor Leadership Program, and is collaborating the University of Southern Maine and University of Maine at Presque Isle to develop a collaborative master's degree in Athletic Training.
- COE has added a new minor in bioinstrumentation, which will be offered jointly by the Electrical and Computer and Biomedical Engineering departments, as well as formal concentrations in environmental, transportation and structural and water resources engineering for civil and environmental engineering majors.
- The School of Computing and Information Science (SCIS) will be offering a 4+1 program for an M.S. in Computer Science beginning fall 2019. Further, an Intent to Plan for an M.S. degree in Data Science and Engineering has been approved and moved forward for System-level approval.
- The School of Policy and International Affairs (SPIA) is collaborating with the Graduate School of Business to provide a global concentration for the MBA program.
- A number of programs will be moving online in the upcoming year:
 - Ed.S. in Instructional Technology
 - M.Ed. in Educational Leadership
 - Graduate Certificate in Food Technology
 - Graduate Certificate in Human Nutrition
 - B.S. in Survey Engineering Technology
 - M.S. in Food Science and Human Nutrition
- Experiential Programs Innovation Central (EPIC) will make its debut in AY19–20. This cutting-edge student-centered undergraduate educational program will expand experiential learning opportunities for UMaine students. EPIC will work with the Interdisciplinary Undergraduate Research Collaborative (IURC) to provide opportunities for undergraduate research experiences.



In 2018–19, UMaine began to implement the Navigate student app and advisor-facing platform.

Retention and Graduation

The Provost led a campuswide effort to develop a plan to improve the first-year student experience so that more students return to UMaine to continue their studies and advance toward a degree. The First-Year Student Success Initiative was a collaborative effort with the Division of Student Life that involved over 100 faculty and staff working in 10 teams to examine UMaine data and practices against nationally recognized best practices and newer innovations. The teams met throughout the academic year and produced reports, including recommendations for optimizing the first-year experience. These reports were distilled and integrated over the summer months; phase one of the First-Year Student Success Plan will begin implementation in the fall.



The First-Year Student Success Initiative was a collaborative effort with the Division of Student Life that involved over 100 faculty and staff working in 10 teams.

- In 2018–19, UMaine began to implement the Navigate student app and advisor-facing platform. The student app was successfully piloted for incoming first-year students in June 2019 and, as of mid-July, over 1,500 incoming students had downloaded the app.
- The Think 30 initiative continues to increase the number of students taking 30 credits a year. The percentage of students entering their second year with at least 30 credits has increased 12 percentage points since the year before the introduction of the initiative. The four-year graduate rate for the fall of 2014 entering class was the highest in UMaine's modern history.
- CLAS introduced seven-week, online courses that start mid-semester and are intended to give students the opportunity to catch up or get ahead, and earn their 30 credit hours each academic year.
- UMaineOnline hired an advisor to support online students and develop retention strategies for online programs
- TRIO Student Support Services increased the number of filled tutoring requests (46%), unique courses served (27%), hours of academic coaching and mentoring (63%), and number of students served through mentoring or coaching (30%).
- CLAS has expanded the use of Maine Learning Assistants (MLAs).
- The Graduate School expanded its retention efforts by hiring a Student Success Manager.
- NSFA continues to see success with its Academic Improvement Program (AIP), a studentmentor-led weekly check-in program.
- COE has benefited from an Undergraduate Advising and Internship Coordinator.
- Winter Session enrollment grew for the fourth consecutive year, with 1,263 students completing a three-credit-hour course.

Student Awards

- Angus Kohler, Chemistry (CHY), (BS-ACS certification, 2019) was one of 24 students accepted from a national pool to the 2018 National Nuclear Chemistry Summer School in San Jose, California. Kohler was named the Outstanding Student, which earned him an all-expenses-paid trip to the national meeting of the American Chemical Society in April 2019.
- Psychology doctoral student Colin Bosma was awarded the Association for Behavioral and Cognitive Therapies' Dissertation Research Award. Only one such national award is given annually.
- Third-year marine sciences major and Honors student Brynn Yarbrough has been named a 2019 Ernest F. Hollings Undergraduate Scholar by the National Oceanic and Atmospheric Administration (NOAA).
- Taylor Cray, a student in Women's, Gender, and Sexuality Studies (WGS) and Political Science (POS), was given the Torch Award by the Mabel Wadsworth Center.
- Chemical engineering (CHE) graduate student Daniela Stuck received the Catalysis Division travel award from the American Chemical Society (ACS).
- The UMaine American Society of Civil Engineers (ASCE) Sustainable Dog House team won regionals, and participated in the national competition. The 2019 Sustainable Solutions Competition challenges teams to design and build a temporary shelter that can house a displaced dog in the aftermath of a disaster or emergency.



Honors College students played lead roles in the Maine Day Meal Packout

- The Honors College Service Award was presented to Emma Hutchison (Maine Day Meal Packout).
- All three finalist spots in the college competition of Greenlight Maine were awarded to UMaine student entrepreneurs incubated at the University of Maine Foster Center for Student Innovation. Justin Hafner, kinesiology/psychology, leads Kinotek LLC, which won the final round of Greenlight Maine. Other team members include: Jon Gagnon with a B.S. Kinesiology/M.S. Kinesiology; David Holomakoff with a B.S. and M.S. in Bioengineering from UMaine; Patrick Breeding, a master's student with a B.S. in Bioengineering and Walter Rasmussen a computer engineering student.
- John Laperle, a B.S. in Finance student, was awarded the Faculty Finance Award.
- Maine Business School's (MBS) Student Portfolio Investment Fund (SPIFFY) was one of eight student investment programs that provided a presentation at the Quinnipiac G.A.M.E. Forum (2019) and earned first place in the Value Investing Category (2018), the first time SPIFFY had reached this milestone.

- Graduate students Karla Boyd and Chase Gagne won the Edith Patch-Frank H. Lathrop Prize in Entomology.
- Mackenzie Mazur, a graduate student in the School of Marine Sciences (SMS), received the Chase Distinguished Research Assistantship for FY19 for her presentation, "Testing regulations for the American lobster fishery in a changing Gulf of Maine."
- For the 16th straight year, over half of UMaine's student-athletes were honored for academic success at the annual scholar-athlete ceremony. One hundred ninety-eight were named UMaine Scholar-Athletes for achieving or maintaining a 3.0 GPA in calendar year 2018, and 78 new students were named Rising Stars for achieving a 3.0 GPA in their first semester.
- The Office of Major Scholarships generated 33 applications for competitive scholarships in 2018–19, with 10 being successful. Awardees included three Fulbrights, two Goldwaters, two Mitchell Peace, one NOAA-Hollings, one Gilman and one NIRA.
- Seven UMaine graduate students are National Science Foundation Graduate Research Fellows.



Undergraduate and graduate students in all six colleges participated in research, scholarship and creative activities.



Fulbright awardees from the University of Maine: Eric Miller, Emily Craig and Jesse Walters.



Undergraduate student poster presentation at UMaine Student Symposium.

2019 Valedictorian and Salutatorian

Drew Brooks of Lyman, Maine is the 2019 University of Maine valedictorian. He double-majored in microbiology and music, with a minor in molecular biology. He received two bachelor's degrees — one in microbiology, and one in music.





Drew Brooks

Research Fellowships. A 2018–19 UMaine Center for Undergraduate Research Fellowship helped fund his research, "The role of MyD88 in macrophage recruitment to Candida albicans infection in the zebrafish swim bladder," in the lab of associate professor of microbiology Robert Wheeler.

Ana Eliza Souza Cunha of Orono, Maine is the 2019 University of Maine salutatorian and the Outstanding Graduating Student in the College of Natural Sciences, Forestry, and Agriculture. She majored in biology, with minors in neuroscience and psychology, and a concentration in premedical studies.

Souza Cunha's numerous honors include the 2018



Ana Eliza Souza Cunha

Dr. Susan J. Hunter Presidential Research Impact Award, the Frank B. and Charles S. Bickford Memorial Prize, and a Servant Heart Scholarship. She will graduate with highest honors for her thesis, "Evaluating a Doppler Radar Monitor for Assessing Honey Bee Colony Health."

2019 Outstanding Graduating Students

Ana Eliza Souza Cunha College of Natural Sciences, Forestry, and Agriculture

Vincent Eze College of Education and Human Development

Dominic Guimond Maine Business School

Shayla Kleisinger Maine Business School

Natascia La Verde Division of Lifelong Learning

Eben Lenfest College of Engineering

Lydia Murray College of Natural Sciences, Forestry, and Agriculture

Grace Pouliot College of Education and Human Development

Honors College

Ilija Stojiljkovic Maine Business School

Thilee Yost College of Liberal Arts and Sciences

Honors College

Workforce Development

- UMaine Research Centers and Institutes provided jobs for 779 students (550 undergraduate and 229 graduate) with student financial support of over \$4.5 million in FY19.
- Over 88% of 2019 civil and environmental engineering (CIE) graduates had an internship, co-op or engineering research assistantship while undergraduates.
- By mid-April, 91.3% of May graduates in electrical and computer engineering (ECE) had accepted job offers.
- In collaboration with the Psychology and Community Studies Program at University of Maine at Machias (UMM), the Psychology Department (PSY) developed a minor at UMaine that will lead to Mental Health and Rehabilitation Technician Certification (MHRT/C). MHRT/C was developed to meet a workforce need in Maine; currently, more than 150 jobs across the state mention "MHRT" skills in the job search.
- CLAS shares 131 undergraduate teacher education students with the College of Education and Human Development (COEHD). English and mathematics are the most popular concentrations for these COEHD students.
- The diverse range of graduate programs in COEHD offer advanced educational opportunities to Maine's teachers and administrators, as well as in human development and family studies, higher education and a number of other fields.



UMaine's extensive aquaculture resources and expertise create experiential curricula to grow Maine's workforce.

- By providing a strong foundation in critical thinking and writing, the Honors experience adds to the competitiveness of UMaine students from all of the degree-granting colleges applying to professional schools and in workplaces.
- In 2018 and 2019, Cooperative Extension partnered with the UMaine Center for Inclusion and Disability Studies and UMaine Center for Cooperative Aquaculture Research (CCAR) to deliver a six-week, paid Aquaponics Internship Program for high school students with disabilities. This workforce development project at CCAR was designed to give youth an opportunity to develop skills relevant to the aquaculture industry and cultivate career awareness.
- The Frederick Hutchinson Center (FHC) offered 22 professional development/noncredit programs (an increase of 8.4% over last year), including: Effective Project Management, Implementing Project Management, Grant Writing, Restorative Practices, Public Speaking, SAT Prep Matters, Past Trauma and Current Relationships, Mindful Leadership, The Power of Group Work, and Intimate Partner Violence.
- The Innovate for Maine Fellows Program placed 24 interns with 28 company projects. To date, it has served 208 companies with 208 fellows representing 35 colleges and universities across the U.S. and Canada.
- In October 2018, the Foster Center hosted the Flagship Showcase event, with approximately 100 students and employers attending. Two students provided formal presentations of their internships and several others had poster displays.
- In the Corporate Classroom project of the MBS Professional Development Center, six students and a faculty member collaborated in internships with Hannaford Corp. in Portland, Maine. Executive in residence Susanne Lee supervised the work (a mini-externship) while students attended class and fulfilled project needs for the company (internships).
- The School of Forest Resources (SFR) surveyed employers to determine critical skills for employment as a foundational step for curriculum improvement.
- School of Social Work (SSW) faculty members are participating in a new extramurally funded initiative on workforce development in sectors important to the Maine economy: A Geriatric Workforce Enhancement Program in collaborative with the University of New England School of Osteopathic Medicine.
- Rising Tide Center (RTC) is working with an interdisciplinary group of faculty members in the Margaret Chase Smith Center to investigate the economic impact of sexual harassment and the most beneficial form of sexual harassment prevention training.
- The Graduate School hosted 31 professional development events, resulting in nearly 500 student interactions.
- SEANET and the Aquaculture Research Institute (ARI) introduced a new Aquaculture Workforce Development: Aquatic Systems, Health, and Husbandry Program in summer 2019. The program will leverage UMaine's extensive aquaculture resources and expertise to create experiential curricula to grow Maine's workforce.
- Genevieve McDonald, a 2018–19 graduate of the Bachelor of University Studies (BUS) program, was elected as a legislator for the Maine House of Representatives.

Degrees Conferred

Degrees Granted

Degrees Granted				
Bao	chelor's	Master's*	Doctoral	Total
Education and Human Development	184	96	5	285
Engineering	351	32	6	389
Honors College				
(88 bachelor's degrees with Honors)				
Liberal Arts and Sciences	397	52	19	468
Maine Business School	293	25	-	318
Natural Sciences, Forestry, and Agriculture	e 492	148	35	675
Division of Lifelong Learning	20	_	-	20
(Bachelor of University Studies)				
Other programs	_	9	4	13
	======	======	======	======
University of Maine totals:	1,737	362	69	2,168

*Includes 10 certificates of advanced studies

Notes:

- 1. Degrees are reported for August, December and the following May in a given academic year (e.g., August 2018, December 2018 and May 2019).
- 2. In cases where students receive dual degrees (i.e., they completed the additional 30 credit hours to receive two separate degrees) or one degree with multiple majors, the degrees are counted multiple times.

3. Excludes post-baccalaureate certificates

Results from Life After UMaine (2016–17 graduates)

- The most recent Life After UMaine survey shows that 73% of respondents reported full-time employment. Of those employed full time, 88% indicated their position was related to their UMaine degree. Of those employed in a job related to their degree, 92% believe they were well prepared.
- Three years after graduating, 60% of in-state students are employed full time in Maine, earning a median income of \$40,000 in their first jobs.
- About one-quarter of respondents are enrolled in graduate school (23% full-time, 4% part-time).
- The colleges with the highest percentage of respondents employed full time are the Maine Business School (85%) and the College of Engineering (84%). Roughly one-third of respondents from NSFA and COEHD indicated they had continued on to graduate school.
- The majority of respondents indicating full-time employment are employed in the following broad occupation categories: architecture and engineering (21%), health care (15%), education, instruction and library (10%), business and financial operations (10%), and management (10%).

Discovering and Innovating

As Maine's land grant and sea grant research university, we partner with communities, practitioners and scholars to discover and produce new knowledge to serve the state, the nation and the world. Innovation, creativity, and discovery are fundamental to who we are and what we do: They help us serve the people of Maine and people everywhere. We educate the next generation of leaders to solve problems and promote solutions for the challenges we all face.

Research Funding

UMaine is consistently ranked among the top 20% of universities engaged in research (public or private) through the National Science Foundation (NSF) Higher Education Research and Development (HERD) Survey. In addition, UMaine is classified as a High Research Activity Institution (R2) by Carnegie. The graphic below illustrates the most recent four-year trend data for UMaine research, and other sponsored activity awards and expenditures, with FY19 expenditures at \$137.7 million — an increase of 6% over FY18 numbers, and 38% over FY17 numbers.



The above graphic includes awards managed through Office of Research Administration (ORA), Department of Industrial Cooperation (DIC), University of Maine Foundation, and federal formula funds to NSFA (McIntire-Stennis/Hatch) and Cooperative Extension (Smith-Lever).

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Research Funding continued

Extramural funding has increased by providing outstanding customer service to our faculty through research administration, development and compliance staffing support. This new revenue has provided more funding to support the university through indirect cost recovery. Awards managed through ORA increased by \$21 million over FY18 numbers, reaching a total of \$78.8 million. Indirect Cost Recovery increased from \$7.9 million in FY18 to \$9.43 million in FY19 an increase of \$1.53 million.



Growth of awarded grants above the \$1 million mark was from \$18.6 million in FY18 to \$38.7 million in FY19 — an increase of 52%.



Coordinated Operating Research Entities (CORE) revenue was over \$321,000 in FY19.

Of the extramural funding received during FY19, 75% was from federal agencies, 7% from state and local government, and 18% from other sources, including private business, industry and foundations. A concerted effort is being made to further diversify UMaine's funding portfolio, including increasing proposal activity to nonfederal sponsors.

Top external sponsors for FY19

Research Centers

- Research Centers and Institutes received over \$3 million in contract income, in addition to their grants.
- Research Centers and Institutes received \$1,040,875 in gifts and donations.
- Research Centers and Institutes provided jobs for 779 students (550 undergraduate and 229 graduate), with student financial support of over \$4.5 million in FY19.

Publications and Presentations

Unit	Publications	Presentations	
CLAS	250+	500+	
COE	139	171	
COEHD	69	91	
Cooperative Ext	ension 70+	100+	
Honors	10	52	
Library	18	15	
MBS	19	23	
NSFA	590	649	
Research Center and Institutes	s 767	792	

Student research, scholarship or creative activities

- Student research, scholarship and creative activities include 89 Honors theses,
 97 master's theses and 66 doctoral dissertations in 2018–19.
- More than 20 undergraduate students received Center for Undergraduate Research Fellowships in 2018–19.
- Honors students gave presentations at the NCHC Annual Conference, Maine Biological and Medical Sciences Symposium, and the CUGR/Academic Showcase.
- Undergraduate and graduate students in all six colleges participated in research, scholarship and creative activities.

Faculty Mentoring and Professional Development

All colleges and departments are making a concerted effort to provide mentoring and professional development for faculty.

• All Cooperative Extension faculty participate in mentoring and diverse professional development, including the creation of a written professional development plan.

Meet the New Deans

Hannah Carter

University of Maine Cooperative Extension For more than a decade, Dr. Carter has been involved in leadership development programming on state and national levels, particularly in agriculture and Extension.





Michael Weber

Mississippi.

Faye Gilbert

Undergraduate

School of Business

For 15 years, Dr. Gilbert

has served as a dean of

business programs in

Georgia, Virginia and

Graduate School of Business Dr. Weber has a more than 20-year career in academia, with significant experience in graduate program development and growth.



Faculty Mentoring and Professional Development continued

- New COEHD faculty members are assigned a senior faculty mentor. Each year, the mentor and mentee develop a plan for the upcoming year, which is then reviewed at the end of the year.
- NSFA continues to routinely pair new faculty with senior mentors. In some of its health units, preceptors and adjunct faculty are oriented through structured programs.
- Since May 2013, COE has had a formal mentoring policy for new faculty. Mentors are assigned to each tenure-track faculty member, as well as lecturers who are in their probationary period.
- CLAS has revised its posted guidance on the reappointment, promotion and tenure processes to offer more detailed information to applicants. These materials also were emailed to faculty and department chairs, and used in the college's annual workshops on reappointment and promotion/tenure.

The Office of the Vice President for Research and Dean of the Graduate School provides training and technical assistance for faculty wishing to conduct research.

- New Researcher Orientation occurs annually in September, following the initial new faculty orientation held in August. New Research Orientation provides an in-depth view into research support services and promotes interaction with research support staff.
- The Office of Research Development conducted 38 training sessions, providing grant writing and professional development opportunities to 512 faculty, staff and students, and over 350 consultations to University of Maine System (UMS) researchers in FY19.

Several centers, such as the Center for Innovation in Teaching and Learning (CITL), Rising Tide Center, and the RiSE Center, provide professional development for faculty.

- The RiSE Center provides professional development and mentoring in STEM education and research communities.
- Rising Tide Center initiated Monthly Mentoring Memos, sent to all faculty mentors, mentees and units with newly hired faculty, providing tips and ideas to foster timely and relevant conversations.
- DLL coordinates new faculty orientation every August. Staff stay in contact with the new faculty cohort throughout the academic year, alerting them to professional development and networking opportunities. A total of 584 faculty participated in a wide range of professional development workshops offered by CITL.



The RiSE Center provides professional development and mentoring in STEM education and research communities.

Faculty and Staff Recognition

University of Maine Awards

- Muralee Das (MBS), Excellence in Teaching Award
- John Mahon (MBS), Excellence in Research Award
- Richard Borgman (MBS), Dr. Carol B. Gilmore Memorial Service Award
- Richard Ackerman (COEHD), Excellence in Teaching Award
- Renate Klein (COEHD), Excellence in Adjunct Teaching Award
- Shihfen Tu (COEHD), Excellence in Research and Creative Achievement Award
- Deborah Rooks-Ellis (COEHD), Excellence in Faculty Service and Engagement Award
- Elizabeth Allan (COEHD), Graduate School Faculty Mentor Impact Award
- Susan Bennett-Armistead (COEHD), Graduate School Faculty Mentor Impact Award
- Elizabeth Hufnagel, Graduate Student Government Faculty Mentor Award
- Faculty Mentor Impact Awards: Jasmine Saros (School of Biology and Ecology — SBE), Kristy Townsend (SBE), Mary Ellen Camire (School of Food and Agriculture — SFA), Yong Chen (School of Marine Sciences — SMS), Doug Gardner (SFR), Sally Molloy (Molecular and Biomedical Sciences — MBMS), Balu Nayak (SFA), Adrienne White (SFA), Nicholas Giudice (School of Computing and Information Science — SCIS), Marie Hayes (PSY), Jordan LaBouff (PSY/Honors), and Michael Scott (SCIS, New Media — NMD)
- Keith Evans (SMS/School of Economics SOE), NSFA Graduate Faculty Mentor Award
- Sharon Klein (SOE), Maine Campus Compact Donald Harward Faculty Service-Learning Award
- Andy Goupee (COE), Early Career Teaching Award and the Alumni Association Faculty Excellence Award

2019 Presidential Awards

Presidential Public Service Achievement Award Susan McKay Maine Center for Research in STEM education



Presidential Outstanding Teaching Award Jennifer Tyne Department of Mathematics and Statistics



Presidential Research and Creative Achievement Award Jasmine Saros Climate Change Institute School of Biology and Ecology

Distinguished Maine Professor Award Sandra Caron School of Educational Leadership, Higher Education and Human Development





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Faculty and Staff Recognition continued



Enrollment in graduate programs has grown 25% (over 400 students) since 2015.

- Ray Hintz (School of Engineering Technology SET), Graduate School Graduate Student Mentor Award
- Over 200 UMaine faculty were nominated for their student mentoring by undergraduate and graduate students.
- Mark Brewer (POS), Alumni Association Faculty Excellence Award; CLAS Outstanding Faculty Award for Service and Outreach
- Jason Charland (Office of Research Development), Daniel Sandweiss Graduate Student Advocacy Award
- Amy Fried (POS), Rising Tide Center Career Award
- Ramesh Gupta (Mathematics MAT), UMS Trustee Professorship
- James Settele (SPIA), Graduate Student Government Graduate Mentor Award
- Mike Kinnison (SBE), UMS Trustee Professorship

Regional and National Awards and Recognitions

- Chris Bartlett (Sea Grant), Natural Resources Protector and Educator Award from The Commons, Eastport
- Jim Dill (Cooperative Extension), New England Higher Education Excellence Award
- Leslie Forstadt (Cooperative Extension), Faculty Award in Creative Programming for her work focused on farm family communication and resilience; awarded by the Extension Policy Advisory Committee
- Kathryn Hopkins (Cooperative Extension), inducted into the North American Maple Syrup Council Maple Hall of Fame

- Tori Jackson (Cooperative Extension), Distinguished Service Award of the National Association of Agricultural Agents
- Jennifer Lobley (Cooperative Extension), National Association of Extension 4-H Agents, Northeast Regional Winner for Excellence in 4-H Volunteerism
- Mitchell Mason, Kristy Ouellette, Sarah Sparks, Laura Personette (Cooperative Extension), Regional Award, Diversity and Inclusion, Expanding the 4-H Audience. National Association of Extension 4-H Agents (NAE4HA) national award
- Kathy Savoie (Cooperative Extension), SOCNational Extension Association of Family and Consumer Sciences (NEAFCS) Distinguished Service Award
- Paul Mayewski (School of Earth and Climate Sciences SECS), Fellow of the National Geographic Society
- Brian McGill (SBE), Ecological Society of America
- Nancy Hall (Communication Sciences and Disorders CSD), Fellow of the American Speech-Language-Hearing Association
- Frank Drummond (SBE), Award for Teaching Excellence from the Entomological Society of America
- Andrei Alyokhin (SBE), Distinguished Achievement Award for Extension from the Entomological Society of America
- Allie Gardner (SBE), Second Century Stewardship Fellow of the National Park Service
- Kat Allen (SBE), NSF CAREER Award
- Senthil Vel (Mechanical Engineering — MEE), Distinguished Faculty Award for Excellence in Research from Sigma Phi Epsilon
- Mimi Killinger (Honors), served as Visiting Honors Scholar at the U.S. Air Force Academy
- Rachel Snell (Honors), 2019 Award of Excellence for her editorship of 2018 issue of *Chebacco — Beholding the Past*, by the Leadership in History awards committee of the American Association for State and Local History
- Joyce Rumery (Fogler Library), is the chair of the Maine Library Commission, chair of the Maine InfoNet Board, serves on the URSUS Directors' Council, attends meetings of the Cultural Affairs Council, and participates in the Larger Libraries Group



UMaine has three strategic values identified through the strategic planning process: Fostering Learner Success; Discovering and Innovating; Growing and Expanding Partnerships.

Growing and Expanding Partnerships

We collaborate with many partners to advance the cultural, economic and civic interests of communities throughout Maine and the world. As a public flagship university, we are stewards responsible for the resources entrusted to us. Through our engaged partnerships, we seek to make a difference in the arts, science, industry, commerce, and state and local government for the present and future betterment of all.

Community Engagement

- Harlan Onsrud and Torsten Hahmann (SCIS) are part of the team funded by a \$1.25 million NSF grant to integrate computational thinking into science and learning in grades 6–8.
- Anna McGinn of SPIA and the Climate Change Institute (CCI) worked with other graduate students to facilitate interactive climate outreach programs with nearly 1,000 students and community members at nine schools and two Upward Bound programs.
- Jessica Miller (Philosophy PHI), gave 10 educational presentations in bioethics for health professionals that provide continuing education credit vital to maintaining licensure for doctors, nurses, social workers and others.
- Amber Tierney (Sociology SOC), supervised 150 student service-learning projects in some 30 local nonprofit organizations.
- School districts and universities across Maine have partnered with the University Training Center for Comprehensive Literacy and Reading Recovery to influence literacy changes at the local, state and national levels; School of Learning and Teaching (SLT) faculty Debra Hogate, Mary Rosser and Lori Taylor lead this work.



Literacy coaching is one of many outreach initiatives of the College of Education and Human Development.

- Sheila Pendse (COE) coordinated campus tours and hands-on activities for 1,952 students from 43 K–12 schools; offered a residential summer program on Sustainable Energy Leaders of the Future to 12 girls from rural high schools; and for the 12th consecutive year, received Federal Highway Administration funding for a two-week Maine Summer Transportation Institute (MSTI) with 22 middle school students.
- Bruce Segee (ECE) helped organize the Maine Learning Technology Initiative (MLTI) conference, bringing over 1,000 K–12 students and experts from around the world to campus.
- Leadership Studies courses served as a significant link to internal and external constituencies through the facilitation of visiting class lectures from leaders Maine and the U.S. in business, education, politics, athletics and nonprofits.
- Fogler Library's Government Publications staff provided assistance to the Tri-State libraries (Maine, New Hampshire and Vermont) with collection assessment activities, worked with Vermont State Library on large weeding project, and visited all New Hampshire selective libraries: Manchester Public, Nashua Public, Supreme Court Library, New Hampshire State Library, St. Anselm's College, University of New Hampshire and Dartmouth.
- Honors College students played lead roles in the Maine Day Meal Packout (May 1, 2019) in which more than 200 volunteers packed over 75,000 meals for distribution around the state.
- The Community Engagement Academy is an innovative partnership of UMaine Cooperative Extension, Maine Sea Grant, University of New Hampshire (UNH) Cooperative Extension, and the UNH Office of Engagement and Academic Outreach. In 2018, the partnership offered a three-day Community Engagement Academy in three New Hampshire and Maine communities in different stages of downtown revitalization, and provided best practices for community engagement.
- The Early College Program provided outreach to 2,704 high school students in eight midcoast schools and 4,555 students in seven Bangor-area high schools; participated in 13 community events, including Maine School Counselors Association Annual Conference, Homeschooler of Maine Annual Conference, Penobscot Bay Chamber of Commerce Expo, and National History Day in Maine Competition; hosted a Home School Open House; offered "Coffee @ the Hutch" and "Coffee on Campus" events in Orono and Belfast for school counselors; and established partnerships with 110 high schools across the state to deliver college-level curriculum for dual credit.
- CCAR engages with school groups; UMaine faculty, staff and students; researchers; government leaders; nongovernmental organizations; trade groups; and private industry through tours and participation in community events. These activities are an opportunity to showcase UMaine's research, education and economic development.
- Provost Hecker serves as chair of the Board of Directors for the nonprofit Maine Math and Science Alliance. He also serves on the Board of Directors for the Bangor Area Chamber of Commerce and the Challenger Learning Center.
- MBS faculty members served on boards for nonprofits and as consultants to businesses and organizations. Examples include: Orono Public Library, American Red Cross, Bangor Halfway House, Bangor Symphony Orchestra, Hirundo Wildlife Trust, University Credit Union, Maine Troop Greeters, American University of Bulgaria, James Sewall Co. and Orono Economic Development Corporation.

Community Engagement continued

- An ecology and environmental sciences (EES) class, the Acadia Lessons Project, partnered with the Schoodic Institute to develop information on ecosystems services as the basis for a long-term environmental monitoring initiative.
- A service-learning project by students from ERS312 in the School of Earth and Climate Sciences provided data on organic contaminants to the Orono-Veazie Water Board.
- A total of 161 students (86 B.S.W., 75 M.S.W.) in the School of Social Work (SSW) contributed 60,200 hours of service to 70+ agencies across Maine and beyond.
- Conley Speech, Language, and Hearing Center served clients with speech, hearing, and language needs in conjunction with clinical practice programs for students (approximately 70 clients for speech and language and about 700 individuals for audiology screenings or services).
- Daniel Dixon, Office of Sustainability, co-organized the 15th Annual Northeast Campus Sustainability Consortium Conference.
- Research Centers and Institutes reported close to 400 tours and over 250 workshops. Community engagement is estimated to have reached over 50,000 individuals through tours and trainings.
- Center on Aging Senior Companion Program (SCP) currently operates in 10 Maine counties. Three community-based outreach coordinators support 61 Senior Companions who are currently serving 255 homebound adults. SCP coordinates 18 community-based volunteer stations that provide program support. Senior Companions have provided 46,593 hours of service, and have made 17,876 home visits and 7,461 trips.



Fogler Library is a Federal Patent & Trademark Research Center.

Economic Development

- Physics (PHY) faculty research on high-temperature wireless sensors, previously carried out at FIRST, continues at Environetix Technologies Corporation in the UpStart Entrepreneur Center.
- Warda Ashraf and Eric Landis (CIE) developed revenue-generating applications for the bioash produced by the Stored Solar LLC, a biomass power plant in West Enfield. Stored Solar generates 8,000 tons of bioash/year as a commonly landfilled by-product.
- Nuri Emanetoglu and Herbert Aumann (ECE) founded Maine Biosensors LLC, a startup to commercialize a beehive monitoring system.
- The National Institutes of Standards and Technology Manufacturing Extension Partnership (NIST MEP) Survey shows that, over the last year, the joint MEP/Advanced Manufacturing Center (AMC) projects have benefitted Maine's economy: 49 jobs created and retained; increase of \$1.4 million in capital investment; increased sales of \$1.5 million; and retained sales of \$1.5 million.
- Fogler Library is a Federal Patent & Trademark Research Center. This year, there were 33 patent and trademark assistance consultations, 210 patent and trademark reference questions, and 1,142 hits on the Patent and Trademark Resource Center web guide.
- Fogler Library staff provided support for those interested in starting a small business through Incubator Without Walls, New Ventures Maine and SCORE.
- Cooperative Extension conducted pricing workshops across the state, presented a pricing webinar in collaboration with the Maine Food Strategy and taught pricing at a statewide conference for entrepreneurs.
- The Loan Review Committee, on which Extension is an active member, approved 40 loans of over \$3 million to 27 businesses. Over \$7 million was leveraged, bringing total investment to over \$10 million. One hundred fifty-one jobs were created or retained, and the program benefited seven of Maine's 16 counties.
- FHC hosted the Belfast Area Job Fair in collaboration with the Maine Department of Labor, Our Town Belfast, the city of Belfast, Belfast Creative Coalition, the Belfast Chamber of Commerce and the Belfast Economic Development Office. Over 50 businesses and organizations participated in this event and 250 job seekers attended.
- Office of Innovation and Economic Development (OIED) staff provided coaching and counseling to community entrepreneurs, incubator tenants and affiliate companies.
- GO Lab, a Top Gun alumnus, received a \$250,000 U.S. Forest Service Wood Innovations Grant to test and market its innovative wood fiber insulation, and also received a \$750,000 Emerging Technology Challenge for Maine's Forest Resources grant from Maine Technology Institute (MTI) in partnership with the FOR/Maine initiative. The goal for GO Lab's production facility is to consume 180,000 tons of softwood chips annually, create 100 jobs and generate approximately \$70 million in annual revenue. UMaine continues to provide R&D support to the company.
- UpStart Center for Entrepreneurship has seven tenant companies and four affiliate companies, with one, Advanced Infrastructure Technologies, graduating from the incubator in May and locating in Brewer, Maine. Collectively, the companies raised close to \$3.5 million in MTI and Small Business Innovation Research (SBIR) grants and equity funding.

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Economic Development continued



Over the last year, the joint MEP/Advanced Manufacturing Center (AMC) projects have benefitted Maine's economy with 49 jobs created and retained; an increase of \$1.4 million in capital investment; increased sales of \$1.5 million; and retained sales of \$1.5 million.

- Undiscovered Maine, a student research opportunity in MBS, visited six businesses in Aroostook County to study challenges. Invited by the economic developer in Eastport, the Undiscovered Maine team researched firms to provide ways of promoting and enhancing their web presence (The Mill, The Commons, Crow Tracks Carving, Peavy Memorial Library).
- The research of Ek Tan (SBE), Jianjun Hao (SFA) and Andrei Alyokhin (SBE) contributed to a better understanding by growers of key viral diseases of potatoes.
- Seed production of Caribou Russet, a new potato variety of UMaine's breeding program, rose to 448 acres in 2019 and achieved a rank of 32 (case farm value \$5.2 million and increasing) in the U.S. just three years post-release.
- SOE faculty have been significantly involved in current statewide economic development planning by providing expertise and support to a state-level planning committee that includes the Department of Economic and Community Development, the State Economist and the Finance Authority of Maine.
- Maine Sea Grant activities generated an estimated \$10,754,180 in economic benefit to the state (based on Bureau of Labor standard metrics), including the creation and retention of 67 businesses, and 157 jobs and associated wages.
- Activas Diagnostics, a UMaine spin-off developed by Marie Hayes (PSY) and Ali Abedi (ECE), is developing an inexpensive way to study sleep and hopes to be able to detect Alzheimer's at a cost of 10% of a traditional sleep study.

One University Initiatives

UMaine supports the UMS One University Initiative through collaborative leadership and partnership with the other System campuses. As the flagship campus, UMaine embraces its distinctive responsibility in cooperation with the rest of the UMS to focus on accessibility, affordability and quality of educational opportunities for Maine citizens, and to support the state and region through research and development, as well as community engagement.

• Susan Pinette and Jacob Albert of Franco American Programs (FAP) worked intensively with USM and University of Maine at Fort Kent (UMFK) to develop a federated discovery tool

and common cataloging standards for the Franco American Portal Project, based at and funded by UMaine.

- Kate Beard (SCIS) has taken a leading role in efforts to develop a Systemwide program in Geographic Information Systems (GIS).
- COEHD and UMM collaborate on teacher education programs related to rural poverty and meeting teaching shortages.
- The Department of Chemical and Biomedical Engineering is exploring expanded reach of data science and life sciences/medicine in collaboration with USM.
- Olivier Putzeys (MEE) developed and offered a blended delivery (partially flipped) version of MEE 150 Statics for UMaine and USM. This was a mix of traditional classroom lectures and video lectures.
- The URSUS Reference Committee approved System-shared first-year information literacy objectives for credit-bearing courses. These objectives were first developed by UMaine and USM librarians.
- Extension held 4-H programs at UMM and USM integrated with local staff and students, giving youth realistic college campus experience. Programs included a Robotics Expo and Mini-Forum, both of which will be offered again in 2020.
- OIED assumed responsibility for USM intellectual property management, patent licensing, industrial contracting, and activities related to increasing and enhancing commercialization. This partnership generated efficiencies, and made additional services and resources available to USM.
- OIED is assisting with USM's MEIF-funded internship programs by providing its Innovate for Maine model and training for interns working with industry partners on innovation projects.
- OIED has engaged in innovation and outreach visits to the University of Maine at Farmington and University of Maine at Presque Isle.
- MBS completed a governance agreement with USM for the Graduate School of Business.
- EES has added faculty affiliates from several UMS campuses, including Rachel Hovel and Julia Daly both University of Maine at Farmington (UMF) and Peter Nelson and K. Rubert-Nason (both UMFK).
- SECS faculty partnered with UMF to plan and pilot an intercampus course on sustainability, supported by the UMS Collaborative Program Support Fund.
- The School of Nursing (SON) and UMM are implementing a 2+2 BSN program to support nursing in the Down East region.
- UMaine finalized a 3+3 agreement with the University of Maine School of Law and developed a marketing plan for the program.
- The UMaine Graduate School has 1,460 active graduate faculty, 35 of whom are at other UMS campuses, and 151 are at institutions outside UMS.
- As part of the evolving One University initiative, CCI collaborates with USM (e.g., "Arctic Showcase") and the University of Maine School of Law (e.g., joint business course and the Arctic Futures Institute), most recently through a workshop in South Greenland attended by 16 UMS researchers.

Reflections

he University of Maine's once-a-decade New England Commission of Higher Education (NECHE) accreditation review took place in spring 2019. While the self-study was submitted and we hosted the site-visit team in the spring semester, the work on this review began some two years ago. Under the leadership of Senior Associate Provost Jeff St. John, a tremendous amount of information was gathered, organized and curated in order to present an accurate and digestible picture of the university, including our regional campus. The site-visit team lauded the university for several things, including our enrollment management innovations, student success initiatives, integration of UMM into our operations, improved financial position and others. At the same time, the site-visit team noted some areas for improvement, including the need for an updated strategic plan, improvement in our funding model to support research growth, continued advancement of our program review processes and others. We have prepared a response to the site-visit team's report and are developing plans to address areas of concern. The accreditation review process will conclude this fall when NECHE holds its annual meeting.

The NECHE review process coincided with three major planning exercises. The public phase of the university's strategic planning process was launched with an open forum led by President Joan Ferrini-Mundy and Provost Hecker in November. The Strategic Vision and Values process engaged the university community and stakeholders in far-reaching conversations about who we are, what we do well, what we can do better, and what kind of institution we will become. *Strategic Vision and Values: A Strategic Framework for the University's Future* will be released this fall and will be a living plan for the university's future. The plan will not be stagnant. Rather, goals, strategies and actions will be added in response to challenges and opportunities, guided by our strategic values and broad goals.

Two other significant planning exercises resulted in plans that informed and integrate with the *Strategic Vision and Values Framework*. President Ferrini-Mundy led the development of a research and development plan for the University of Maine System. Ambitious and far-reaching, the plan articulates three broad goals:

- Make Maine the best state in the nation in which to live, work and learn by 2030.
- Establish an innovation-driven Maine economy for the 21st century.
- Prepare the knowledge-and-innovation workforce for Maine.

The plan calls for a significant R&D investment by the state, development of campus-based R&D implementation plans by each of the System universities, improved competitiveness for federal R&D support, and engaging students in authentic research experiences.

The other major planning exercise was the First-Year Student Success initiative led by Provost Hecker. Teams of faculty and staff members explored best practices in areas known to be key to first-year student retention, such as so-called "gateway courses," summer preparation, livinglearning communities, course placement and data-informed advising. The teams' work products have been integrated into a comprehensive report that will be released with the *Strategic Vision and Values Framework.*

Clearly, a great deal of self-assessment and planning occurred in the 2018-19 year. Between the NECHE review, the Strategic Vision and Values work, the First-Year Student Success Initiative and the R&D plan, much data has been collected and analyzed, and many minds have focused on the university's future. Fortunately, these planning activities were coordinated and communication among the key players was frequent and of high quality. The coming academic year promises to be an exciting one as the focus moves from planning into action.

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The First-Year Student Success Initiative was a collaborative effort with the Division of Student Life that involved over 100 faculty and staff working in 10 teams to examine UMaine data and practices against nationally recognized best practices and newer innovations.



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