THE UNIVERSITY OF MAINE

Academic Affairs Annual Report 2018

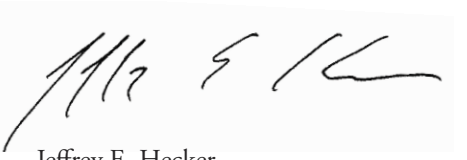
UMaine students on the mall.

Academic Affairs Annual Report

In April 2018 we released *Blue Sky Outcomes: Reaffirming Public Higher Education at Maine's Flagship University*, the report of our assessment of the Blue Sky Strategic Plan. I was honored to have led the UMaine community through this yearlong examination of what was accomplished, where we fell short, and how we changed as an institution over the five years during which the plan served as a guide. If you have not already done so, I encourage you to review the report. I suspect that, like me, you will be amazed at the myriad ways in which our institution advanced as we fulfilled our research, education and service missions. Preparing the *2018 Academic Affairs Annual Report*, I was filled with that same sense of amazement.

As has been the tradition, the 2018 Annual Report samples the many ways in which our faculty, staff and students realize UMaine's tripartite mission. The report is not comprehensive, but rather highlights accomplishments and activities that are illustrative of the great work being carried out across campus, throughout the state and around the world under UMaine's flagship banner.

The faculty and staff that make up the Division of Academic Affairs at the University of Maine are a diverse group of people who have in common a remarkable dedication to students, scholarship and communities. As you read this report, I hope that you will recognize and take pride in your contributions to the accomplishments summarized herein.



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

2018
Academic Affairs Annual Report

I. Overview

On census day in fall 2017, UMaine's total enrollment was 11,240 undergraduate and graduate students, with first-year students accounting for 2,299 of the total — the largest first-year class in UMaine's history. Here are a few facts about that first-year class: 1,103 are "from away," 296 are students of color, 38% had a high school GPA of 3.5 or higher, 62% graduated in the top quartile of their high school class, and their mean SAT score was six points higher than the previous year's first-year class. Enrollment in graduate programs has grown for the second consecutive year with 1,961 graduate students enrolled, representing a 20% increase over two years. UMaine students earned 270,141 credit hours in 2017–18 — over 3,500 more than in the prior academic year. UMaine awarded 2,416 degrees — the most awarded in the past six years — including 1,895 bachelor's, 375 master's, and 56 doctoral degrees.

UMaine faculty, staff and students continue a record of remarkable productivity in research and scholarship with well over 1,000 publications and thousands of presentations, performances and exhibits. Between July 1, 2017 and June 30, 2018, a total of $72,787,685 was received from extramural sponsors, a 28% increase over the prior fiscal year. The university received $9,868,848 in indirect cost recovery, 13% more than in fiscal year 2017. Total research expenditures for FY18 were $129.9 million.

Our campuswide focus on moving more students from matriculation to graduation in a timely fashion is paying off. The Think 30 initiative has resulted in a 10% increase in the number of students who earn 30 or more credit hours in their first year. Our four-year graduation rate has risen 5% in the past five years.

In 2017–18, 42 outstanding academics joined the faculty resulting in a net increase in the overall faculty by more than 10 full-time equivalent. Twenty-one of these new faculty members are on the tenure track, raising the total number of tenure-track faculty above 400 for the first time in six years. The infusion of new faculty members — over 100 in the past two years — is essential to the continued success of our great university.

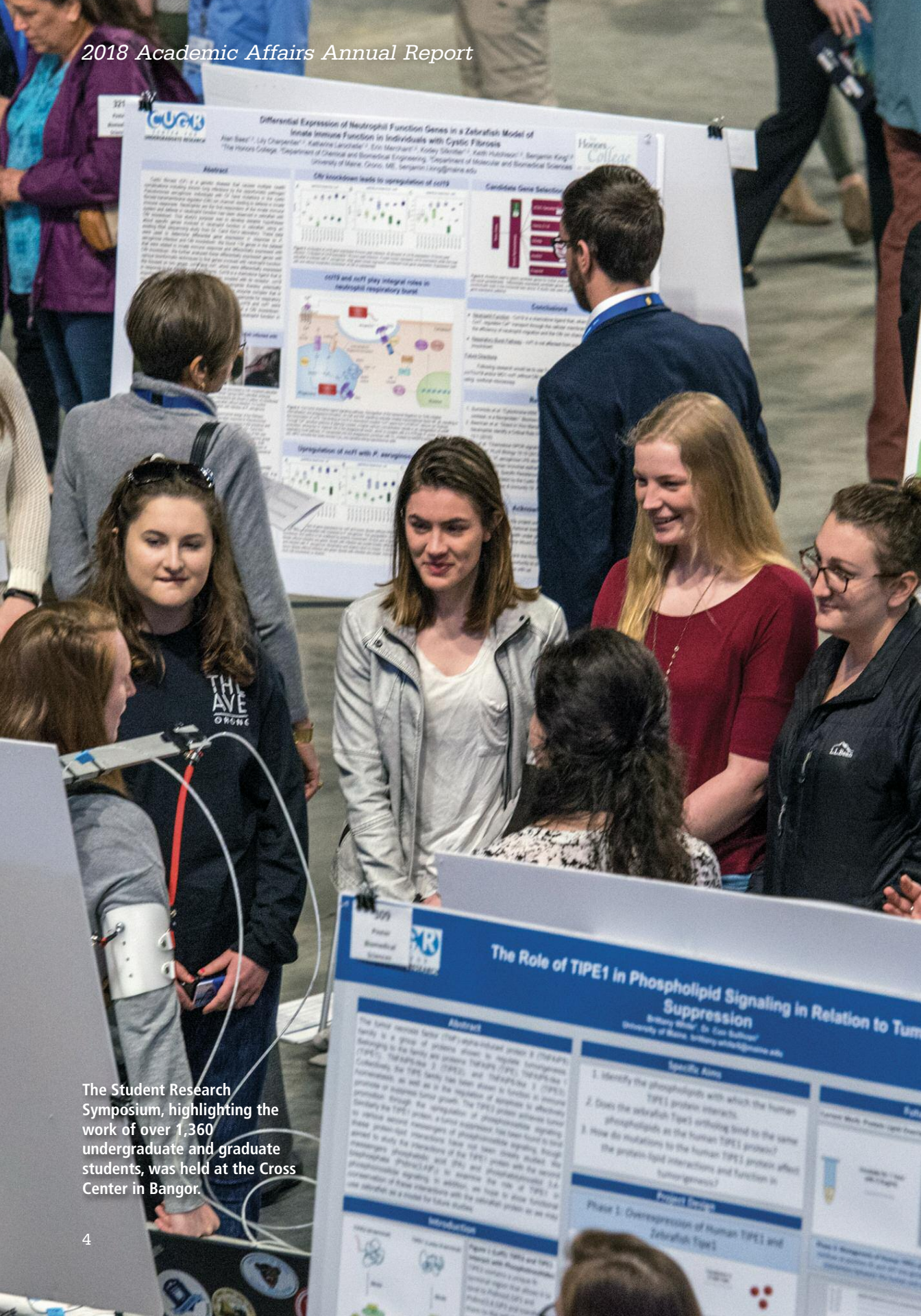
II. Serving Maine

As Maine's land and sea grant university, UMaine is deeply committed to community engagement, economic development and workforce development. Increasingly, we work with our sister UMS campuses to serve the state. UMaine provides accessible, affordable and high-quality educational opportunities, as well as the cultural and economic advancement of Maine and the region.

Community Engagement

UMaine faculty, staff and students partner with hundreds of companies, agencies and organizations.

- Bonnie Newsom (Anthropology — ANT) worked with a grassroots group promoting Penobscot River restoration through art and heritage-based activities.
- Through the Clement and Linda McGillicuddy Humanities Center, Jennifer Moxley and Katrina Wynn led a six-week Penobscot Valley Senior College course on the theme of "Juvenescence/Obsolescence."
- Rebecca Schwartz-Mette (Psychology — PSY) worked in several schools implementing FRIENDS prevention programming to foster resilience, and offered continuing education training with the Penobscot River Education Partnership.
- The Theatre/Dance Division of the School of Performing Arts (SPA) co-hosted a professional development workshop for 18 Maine high school drama instructors, and worked with the Maine Department of Education to create and offer a course, "Methods of Teaching Theatre," in summer 2017.
- David Sturm (Physics — PHY) partnered with Blake Lipton at ABC 7/FOX 22 to televise a monthly "Physics Friday" segment on the Good Morning Maine show.
- The Mainely Physics Road Show (Engineering Physics — EPS) presented physics demonstrations to approximately 9,500 students on and off campus.
- Sheila Edalatpour (Mechanical Engineering — MEE) participated in Girls Engineer Maine, Sustainable Energy Leaders of the Future Program, panel discussion for 13 high school girls.
- Sheila Pendse (College of Engineering — COE) coordinated on- and off-campus tours and hands-on activities for more than 2,000 students from 50 K–12 schools.
- Richard Ackerman, Catharine Biddle and Ian Mette (College of Education and Human Development — COEHD) participated in the Transforming Rural Experience in Education (TREE) Steering Committee.
- Cooperative Extension (CE) faculty and staff trained 139 new Master Gardener (MG) Volunteers, bringing our statewide active MG Volunteer corps to 1,030. They donated over 39,000 hours, and involved 7,054 youth in horticulture. In 2017, donations of 213,770 pounds of fresh produce from over 100 Maine farms went to 165 hunger alleviation distribution sites.
- Provost Jeffrey Hecker served on the Board of Directors for the Maine Math and Science Alliance and the Challenger Learning Center
- The Division of Lifelong Learning (DLL) provided outreach to 60 high schools throughout Maine to partner on Early College enrollments.
- The Frederick E. Hutchinson Center (FHC) continued to support the Belfast Senior College Program, which now serves more than 800 adults over the age of 50.
- Staff manage acquisitions for Fogler Library's role as the State Research Library for Business, Science, and Technology that provides research databases available to public, academic and school libraries, and residents of Maine.
- Lecturer Martha Broderick (Maine Business School — MBS) is involved with the Volunteer Lawyers Project, Maine Legal Services for the Elderly and Spruce Run volunteer lawyer, VITA coordinator.



The Student Research Symposium, highlighting the work of over 1,360 undergraduate and graduate students, was held at the Cross Center in Bangor.

- Office of Innovation and Economic Development (OIED) staff Jake Ward, Renee Kelly and James Beaupré have been actively engaged in the federal Forest Opportunity Roadmap (FOR/Maine) initiative to address the crisis in the forest products industry caused by the closure of several paper mills in the state.
- A total of 158 students in the School of Social Work (SWK) contributed 54,713 hours of service to more than 70 agencies across Maine and beyond.
- Approximately 750 individuals statewide seek services from the Conley Speech, Language and Hearing Center's Audiology Clinic annually. In addition, free speech and language screenings were provided to six local schools and preschools.
- Jessica Leahy's (School of Forest Resources — SFR) development of local wood banks has expanded to multiple locations and provides wood for heating to needy families.
- The Office of Sustainability participated in the WindowDressers 2017 Bangor Community Builds.
- The Office of International Programs (OIP) organized programs for 70 Chinese students from Washington Academy, 20 Chinese students from Stearns High School and 20 students from Daegu Girls' High School in Korea.
- Maine Impact Week showcased the depth and breadth of UMaine's research and creative activity, and its effect on Maine's workforce and economic development through a series of public events, including: the Student Research Symposium (highlighting the work of over 1,360 undergraduate and graduate students); Business Connect (student/business networking event with Bangor Region Chamber of Commerce); Celebrating Scholarship; Maine Sea Grant Research Symposium; and the Stephen King Chair Lecture.
- The Honors College (HON) played a lead role in the Maine Day Meal Pack-out in which over 250 volunteers packed more than 87,000 meals for area food banks.

Economic Development:

UMaine supports the economic well-being of Maine communities in a variety of ways.

- Hemant Pendse (Chemical and Biomedical Engineering — CBE), working with Steve Fitzpatrick, managing director of Biofine Technology, upgraded the Biomass to Bioproducts Pilot Plant (B2P2). B2P2 was gifted to UMaine by ABB LLC in October 2017.
- The Advanced Structures and Composites Center's (ASCC) offshore deepwater wind energy research and development efforts continue to impact Maine's energy landscape.
- Ali Abedi (Electrical and Computer Engineering — ECE) and Marie Hayes' (PSY) startup company, Activas Diagnostics, completed their product development last year and started the clinical tests in collaboration with area hospitals.
- The Advanced Manufacturing Center (AMC) assisted 46 Maine companies including: General Electric, Caron Engineering, Fiber Materials Inc, Labree's Bakery, Grover Gundrilling, Mobility Technologies, Mölnlycke Healthcare, Packgen, Possum Hollow Farm Soap, Evonik, Progress Engineering, Hinckley and Compotech.
- Art faculty serve on boards and committees to enhance the creative economy in Maine, including: Bowdoin College Museum of Art, Camden International Film Festival, Farnsworth Art Museum, Maine Art Education Association, Maine Arts Commission, Maine Curator's Forum, Maine Film Commission, Maine Humanities Council, Northeast Historic Film, Points North Institute, Schoodic International Sculpture Symposium, The Strand and the University of Maine Museum of Art.
- The emerald ash borer research program, led by Darren Ranco (Anthropology — ANT/Native American Programs — NAP), has a deep partnership with the Maine Indian Basketmakers Alliance and is engaged with a number of forestry-related industries.

Economic Development *continued*

- The economic impact from CE's pest monitoring and educational programs for Maine's 2017 potato industry season is estimated to be more than $8.8 million.
- A UMaine School of Economics (SOE) study found Maine breweries added $228 million to the state's economy and employed 2,177 people. CE's hops variety plantings and trainings at the Maine Agricultural and Forest Experiment Station at Highmoor Farm resulted in the establishment of at least three new commercial plantings and the formation of a hops grower association.
- The University of Maine Animal Health Lab (UMAHL) provides services to Maine veterinarians, livestock producers and animal owners. The Cooperative Extension Diagnostic and Research Laboratory that opened in June 2018 has expanded UMAHL's services, reach and positive impact on Maine's more than 8,000 farms.
- FHC hosted Belfast's Nordic Aquaculture information sessions regarding the proposed $450 million–$500 million economic development project to build one of the largest land-based salmon farms in the world.
- Fogler Library is the Tri-State Regional Depository for Federal Government Publications. This collection is far-reaching in scope and provides valuable resources for businesses of all types.
- The UpStart Center for Entrepreneurship in Orono has eight tenant companies and two affiliate companies, out of which two graduated from the incubator. OIED staff works closely with these companies, which added five new jobs. Collectively, the companies raised $2.25 million in MTI grants and equity funding.
- The OIED business incubation staff provides support at the Union River Center for Innovation incubator in Ellsworth and has partnered with the Maine Aquaculture Innovation Center to help support its business incubation activities at UMaine's Center for Cooperative Aquaculture Research (CCAR) and the Darling Marine Center.
- Adam Daigneault (SFR) provided three separate sustainable biomass supply analyses for various stakeholders interested in economic development and energy independence in Millinocket, East Millinocket and Mount Desert Island.
- Heather Leslie (School of Marine Sciences — SMS) chaired the Alliance for Maine's Marine Economy, a partnership involving university and nonprofit research institutions, commercial fishing and aquaculture interests, community-based organizations and private-sector businesses in Maine.
- Susan Gardner (Rising Tide Center — RTC and Women's, Gender, and Sexuality Studies — WGS) served on the Maine Career Connect Advisory Board.

A UMaine School of Economics study found Maine breweries added $228 million to the state's economy and employed 2,177 people

The newly renovated UpStart Center in Orono, Maine

Economic Development *continued*

- The Innovation and Economic Development Council (IEDC) is composed of cabinet-level and other campus leaders. Reporting to the President, IEDC is charged with ensuring that economic development is a strategic priority for the institution.
- In FY18, the UMS Research Reinvestment Fund (RRF) focused on enabling research commercialization activities connected to Maine's industries and priority research areas. The new RRF Phase II Accelerator Program has the goal of identifying projects within the existing RRF funding portfolio that could achieve measurable commercial outputs after a 16-week time frame (spring 2018 semester) with an infusion of technical assistance and funding.

Workforce Development

UMaine graduates more students every year than any other institution in the state and our graduates are prepared for success. Over 79% of students who earned a UMaine baccalaureate degree in 2015–16 are employed full time and another 18% are enrolled in graduate school full time. Almost 60% of the students employed full time are working in Maine, earning a median income of $43,000 in their first jobs.

- Wabanaki Youth in Science (WaYS) seeks to establish a pipeline of Native scientists from middle school through high school and to college and graduate school. WaYS participation more than doubled this year to 30 summer camp participants, 60 seasonal camp participants and 10 interns across three tribes.
- Master's students in the School of Policy and International Affairs (SPIA) interned at Adaptation Fund Project Field Research, the Council on Foreign Relations, the European Union Delegation to the United Nations General Assembly, Impact Network International, International Republican Institute, Maine International Trade Center, Permanent Mission of the Republic of Korea to the United Nations, Reclaim Childhood, The Cohen Group, and the United Nations Capital Development Fund.
- WGS majors were interns with the Maine People's Alliance, Hardy Girls Healthy Women, Healthy Communities of the Capital Area, Mabel Wadsworth Center, Rainbow Resource Center, and the Women's Resource Center.
- CBE worked with 24 employers to provide co-op and internship opportunities for students.
- In Civil and Environmental Engineering (CIE), over 85% of 2018 graduates had an internship, co-op, or engineering research assistantship while undergraduates.
- AMC worked with numerous companies on expanding workforce training for their staff and hosted tours for over 1,000 K–12 students.
- Maine Medical Center in Portland contracted with Conferences and Institutes to host PIER Program: Voices of Recovery and Lessons Learned in Early Treatment of Psychosis, a training program for 200 clinical workers.
- Amanda Paradis, MBS Internship Coordinator/Professional Advisor, has established relations with over 120 employers to facilitate internships.
- The Innovate for Maine Fellows program placed 34 interns on 39 company projects. To date, 181 companies have been served with 187 fellows, representing 33 colleges and universities.
- In FY18, Angela McCue, OIED's Innovation Outreach Manager, joined the FocusMaine Internship Executive Committee to help lead the effort to expand the program and opportunities to interns and companies in the Bangor region.
- CCAR has the unique capacity to offer hands-on training and operation of recirculating aquaculture systems growing fish at commercial scale conditions. Recent announcements by two companies of plans

to build land-based salmon farms in Maine (Belfast and Bucksport) highlight the critical importance of aquaculture for Maine's economy.

- Mary Walker (School of Nursing — SON) in conjunction with co-PIs at University of Maine at Machias (UMM) are developing an Advanced Standing B.S.N. option to facilitate accelerated completion of the degree with a focus on Washington County.
- SOE continued its productive partnership with Farm Credit East to increase interactions of students in finance majors with that company.
- Maine EPSCoR is housed at UMaine and administers the state's NSF EPSCoR programs. The current RII Track 1 project is the Sustainable Ecological Aquaculture Network (SEANET), which is building a network of interdisciplinary researchers to help advance aquaculture in the jurisdiction. Highlights of FY18 SEANET activities include: 85 undergraduates and 36 graduate students supported across the partner institutions; recruitment of 13 Innovate for Maine Aquaculture Industry Interns, in partnership with the UMaine Foster Center for Student Innovation and the Aquaculture Research Institute; and reaching 10,438 K–12 students with STEM programming.

Maine EPSCoR's Sustainable Ecological Aquaculture Network (SEANET) is building a network of interdisciplinary researchers to help advance aquaculture.

One University

UMaine provides collaborative leadership in support of the UMS One University initiative. As the flagship campus, UMaine embraces its unique responsibility in partnership with its sister campuses to ensure continued 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.

- Ryan Dippre and Dylan Dryer (English — ENG) lead a project to calibrate outcomes for first-year composition across UMS universities.
- With assistance from Nigel Pitt and Bob Franzosa, Natasha Speer (Mathematics and Statistics — MAT) leads the UMS Program Integration team for mathematics. As a result of their efforts, all sections of Calculus I at UMaine, University of Maine at Augusta (UMA), and UMM have the same student learning outcomes, and are run with a uniform syllabus, textbook and pedagogical approach, calibrated through weekly coordination sessions.
- Maine Studies and Maine Folklife Center director Kreg Ettenger (ANT) is exploring with University of Southern Maine (USM) possible participation in UMaine's M.A. in interdisciplinary studies, and with UMM about contributing to the minors in Maine studies, and in folklore and the traditional arts.
- Faculty and staff in NAP administer the systemwide Native American Waiver and Education Program, serving approximately 500 students. They also coordinate a systemwide Native American Waiver advisory group.
- The Entry Level Engineering Community (ELEC), with representation from across UMS, developed a 1+3 program to allow students to start their first year of engineering study at University of Maine at Presque Isle (UMPI), UMM, UMA or University of Maine at Farmington (UMF) before transferring to UMaine or USM to complete their degree.

Growing engineering education and research to grow Maine's economy

One University *continued*

- Masoud Rais-Rohani (MEE) led the development of a proposal (involving 10 UMaine and one USM faculty) to UMS Program Innovation Fund for "Boosting Enrollment, Employability and Career Readiness by Expanding Pathways Toward a Master's Degree in MEE."
- A report issued February 2018, entitled "Growing Engineering to Grow Maine's Economy," is a five-year plan to build up engineering in the UMS. The following COE personnel participated in this effort: Dana Humphrey, Mohamad Musavi, Aria Amirbahman and Clay Wheeler.
- The Maine Leadership and Policy Development Council, a consortium of faculty members from USM, UMF and COEHD, promoted the implementation of Positive Behavior Intervention and Support in Maine schools.
- Since 2015, the Executive Director of CE has served as a resource to the UMS team that is addressing the five-year food services contract for six of the seven campuses. At this time, over 23% of the food served is sourced locally, exceeding the UMS-BOT goal.
- CE's 4-H continued to coordinate the STEM Ambassadors program, a collaboration among all seven UMS universities, to reach 1,026 youth at 63 community sites in 2017, and 105 college students trained in the development and delivery of informal STEM-based educational experiences, committing 2,100 hours to the program.
- DLL staff are collaborating with UMS colleagues to develop recommendations for distance education coding to the UMS Data Advisory Committee, including development of guidelines for online/blended descriptions for consistency across UMS campuses.
- UMS libraries continue to work together to provide services and resources to the System. Committees work on collaboration issues, such as collections, circulation policies, reference and cataloging.
- The Maine Business School was restructured to comprise the Undergraduate School of Business and the Graduate School of Business. The faculty of the Graduate School of Business will be made up of UMaine and USM business faculty members.
- OIED has been tasked with expanding technology transfer and commercialization capacity throughout UMS, and expanding industry engagement and partnerships. UMaine and USM entered into a memorandum of understanding for shared business development

services and commercialization initiatives between the campuses.
- Ecology and Environmental Sciences convened a meeting at the Schoodic Institute to build interest in a statewide winter ecology network with faculty from UMaine, UMF and USM attending.
- SON faculty members continue to work with USM colleagues to develop integrated programming at the graduate level.
- RTC worked with all UMS campuses on a collaborative $1M proposal to the National Science Foundation (NSF).
- The Office of Student Records (OSR) worked with other UMS registrars to establish a Name Usage Policy, allowing students and employees to indicate their preferred names to the university community, even if they have not changed their legal names.
- In collaboration with Bigelow Laboratory for Ocean Sciences, UMM, and USM, UMaine developed a five-year, $20 million NSF EPSCoR RII Track 1 proposal that was submitted July 2018.
- The Graduate School has appointed 34 faculty from other UMS campuses to graduate faculty status at UMaine so that they can participate in graduate programs. More full and associate graduate faculty appointments are expected in UMS with the creation of the joint MBA program between UMaine and USM and the possible expansion of 4+1 pathways.
- Research Administration Services to other UMS Campuses — UMaine's Office of Research Administration (ORA) now provides research administration services to the University of Maine at Fort Kent (UMFK) and UMM.
- The objective of the Research Reinvestment Fund (RRF) is to strengthen research, development and commercialization activities tied to Maine businesses and industries that are critical to the future of the state of Maine. FY18 represented the fourth year of RRF support from UMS BOT. A total of $1,459,601 was awarded to UMS researchers (80% or $1,300,631 to UMaine PIs) through its competitive grants programs.

III. Culture of Excellence

Faculty Mentoring and Professional Development

- The first UMaine faculty accelerator, Maine Innovation, Research and Technology Accelerator (MIRTA), was piloted in spring 2018 as part of the RRF initiative. Five teams were selected to advance their projects from basic and applied research and development stages to commercialization. Each team significantly advanced their commercialization readiness level and developed a commercialization plan for their innovation, with two teams now planning to pursue startups, two teams developing partnerships for licensing opportunities and the fifth team planning to start with direct licensing from the university to end users that may lead to a startup company.
- The Office of Research Development (ORD) conducted 38 separate training sessions during FY18, which provided grant writing and research commercialization professional development opportunities to 330 faculty, staff, and graduate and undergraduate students. Offerings included workshops on writing competitive proposals to selected federal programs, support for faculty research commercialization training, new researcher orientation, guest lectures, invited panel speakers and facilitation of grant-writing circles.
- The first named faculty award is being established in the College of Liberal Arts and Sciences (CLAS): the Wickham Skinner Award for Humanities Scholarship.

Faculty Fellows

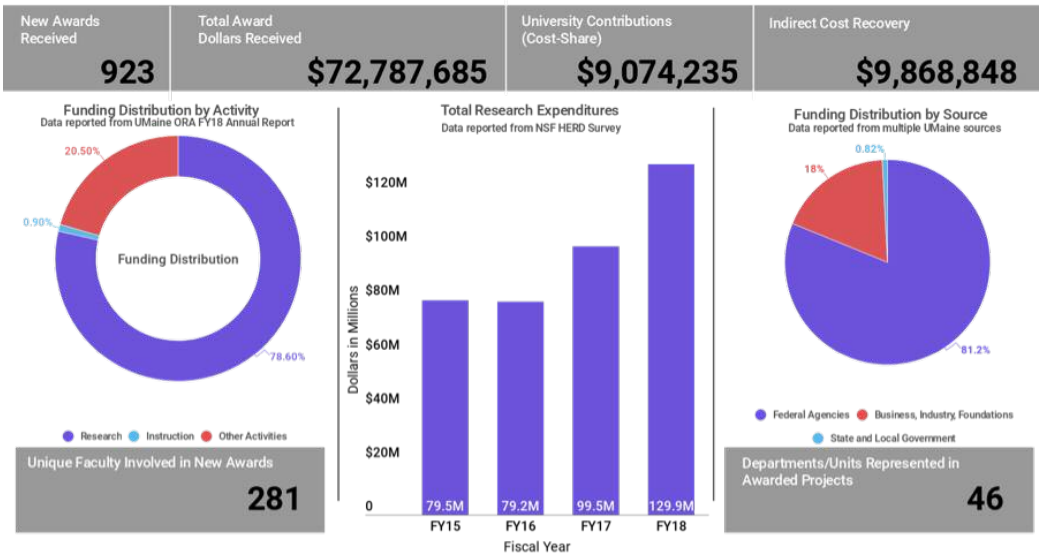
Faculty Mentoring and Professional Development *continued*

- ORD makes a concerted effort to provide support to faculty in their pursuit of NSF CAREER awards through workshops, 1:1 technical assistance, and linking with faculty reviewers. In FY18, a total of 10 CAREER proposals were submitted and two were funded (Kristy Townsend (School of Biology and Ecology — SBE) and Jacquelyn Gill (SBE, Climate Change Institute — CCI)), representing a notable increase from FY17's five submissions and one funded proposal.
- All new COE faculty members are assigned a senior faculty mentor with whom they work throughout the probationary period.
- Center for Innovation in Teaching and Learning (CITL) facilitated a monthly Community of Practice open to new faculty hires (hired after 2016). These faculty met monthly to read about evidence-based teaching practices and discuss how to incorporate these practices, known to increase retention and learning, into their teaching.
- All CE faculty participate in mentoring and diverse professional development, including the creation of a written professional development plan.
- The Provost's Council for Advancing Women Faculty worked with the Rising Tide Center on key initiatives related to faculty mentoring, including: revised departmental mentoring plan materials, the inclusion of questions about faculty mentoring in annual reports and in the faculty profile database, and a focus on faculty mentoring in a Marketing and Communications story.
- New Researcher Orientation was offered for the first time in FY18 by the Office of the Vice President for Research and Dean of the Graduate School (OVPRDGS), providing an in-depth view into research support services available to new faculty, and promoting interaction between faculty and staff.
- The Provost's Committee on Chairs and Director Training offered five breakfast events, two one-half day workshops with external guests, and a reception of these academic leaders at the President's House.
- The College of Natural Sciences, Forestry, and Agriculture (NSFA) annually supports three to five faculty members to attend Cornell University's Faculty Development Program.
- Jordan Labouff (PSY/HON) is a UMaine Faculty Fellow and won a competitive fellowship to participate in Maine Development Foundation's Leadership Maine program in 2017–18.

Research Excellence

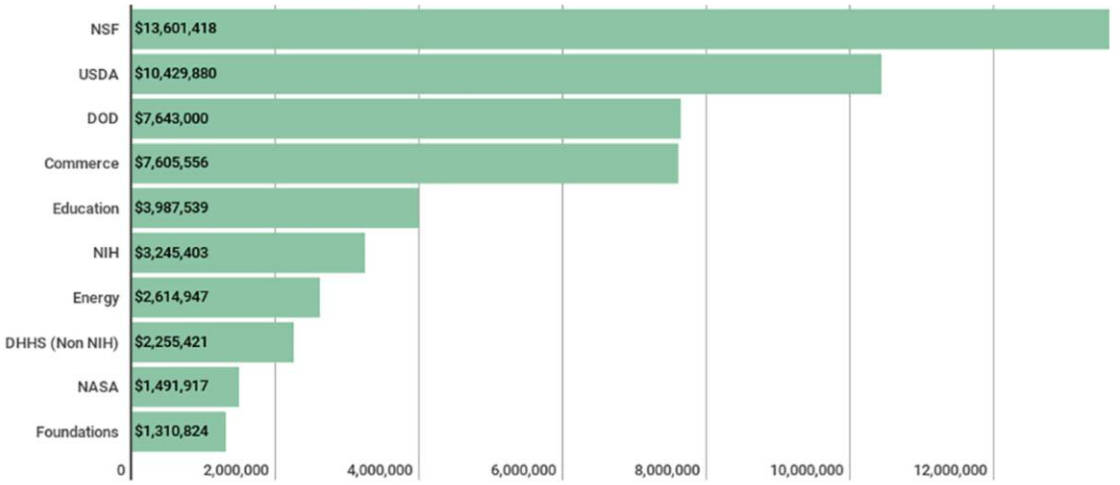
UMaine is consistently ranked among the top third of public universities engaged in research through the NSF Higher Education Research and Development (HERD) Survey and we are classified as a Higher Research Activity Institution by Carnegie. The graphic (right) illustrates the most recent four-year trend data for UMaine research awards and expenditures, including total awards of $72.8 million and research expenditures of $129.9 million for FY18. Recent investments have been made to increase faculty support for proposal development and grant writing, assistance with grant submissions, and professional development related to grants in order to increase the number and quality of grant submissions to external sponsors. A concerted effort is being made to further diversify UMaine's funding portfolio, including increasing proposal activity to nonfederal sponsors.

Funding by the Numbers FY18



Of the new $57.8 million extramural funding received during FY18, 81.4% was from federal agencies, 3.1% from state and local government, and the remaining 15.5% was from other sources, including private business, industry and foundations. The graphic below illustrates the Top 10 external sponsors for FY18. See Executive Summary for further details.

Awards by Funding Agency

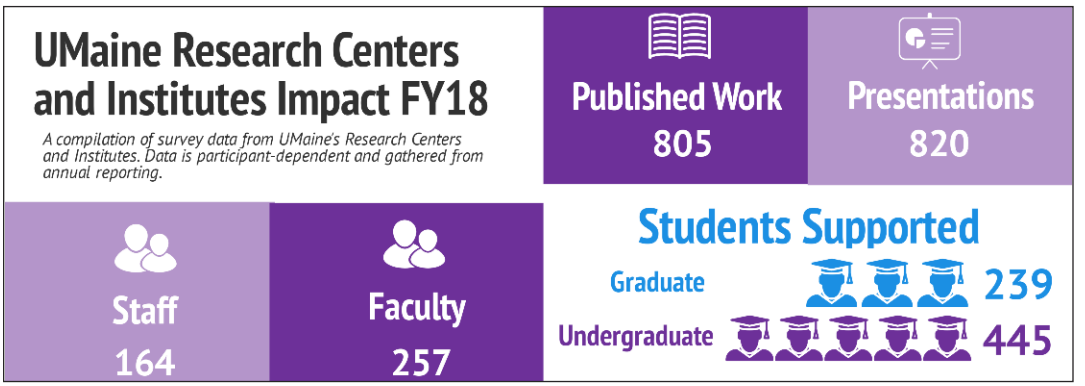


Highlights of UMaine Research Centers and Institutes

- The Advanced Structures and Composites Center (ASCC) was allocated a $40 million milestones-based grant to build the New England Aquaventus floating offshore wind demonstration project by U.S. Department of Energy (DOE).

Research Excellence *continued*

- The Forest Bioproducts Research Institute (FBRI) opened a Biomass to Bioproducts Pilot Plant (B2P2), with a design capacity to process one dry ton per day of biomass.
- The Aquaculture Research Institute (ARI) constructed a new $2.8 million Aquatic Animal Health Laboratory (AAHL), one of only a few high-containment aquaria facilities in the U.S. designed to conduct research on aquatic animal pathogens.
- The NSF Teaching Fellowship Program, offered through the Maine Center for Research in STEM Education (RiSE), continued with seven of the fellows teaching in high-needs rural districts. Fifteen of the 22 fellowship positions have been awarded to date and the remainder will be selected within the coming year.
- National Center for Geographic Information and Analysis (NCGIA) doctoral student Hari Palani started a Maine-based company, Unar Labs, that is a spin-off of his dissertation research, and was the entrepreneurial lead on a 2017–18 NSF I-Corp project to perform customer discovery for product commercialization.



Notable external grants secured by UMaine faculty and researchers include:

- "Technology Maturation of Wireless Harsh-Environment Sensors for Improved Condition-Based Monitoring of Coal-Based Power Generation," U.S. Department of Energy/National Energy Technology Laboratory, PI: Mauricio Pereira da Cunha, Award: $2.5 million.
- "CAREER: Environmental Change and Extinction on the Mammoth Steppe," National Science Foundation, PI: Jacquelyn Gill, Award: $794,000.
- "Investing in Waterfront Infrastructure to Power Maine's Economy Through Applied Research & Development, Workforce Training, and Business Incubation," U.S. Department of Commerce Economic Development Administration, PI: Heather Leslie, Award: $1.5 million.
- "Maine Mass Timber Commercialization Center," U.S. Department of Commerce Economic Development Administration, i6 Regional Innovation Strategies Program, PI: Stephen Shaler, Award: $1 million.
- "CAREER: Hypothalamic Tanycytes and Neuronal Plasticity in the Regulation of Energy Balance," National Science Foundation, PI: Kristy Townsend, Award: $1 million.
- "The role of G alpha signaling in gradient tracking," National Institutes of Health (AREA R-15), PI: Josh Kelley, Award: $424,000.
- The University of Maine at Machias received a $200,000 Davis Educational Foundation grant to improve student retention and academic performance.

- "Fostering climate change resilience: A socio-ecological forest systems approach," U.S. Department of Agriculture, PI: Sandra De Urioste-Stone, Award: $150,000.
- "Potato Breeding and Variety Development for Improved Quality and Pest Resistance in the Eastern U.S.," U.S. Department of Agriculture, PI, PI: Greg Porter, Award: $388,000.

Faculty Achievements

- Michael Socolow (Communication and Journalism — CMJ) received the 2018 Broadcast Historian Award for his book *Six Minutes in Berlin* from the Library of American Broadcasting Foundation and the Broadcast Education Association.
- Frédéric Rondeau (Modern Languages and Classics — MLC, and the Canadian-American Center — CAC) was awarded the 2017 Jean-Éthier-Blais prize for best book of literary criticism in Quebec, for *Le manque en partage: La poésie de Michel Beaulieu et Gilbert Langevin*.
- Douglas Allen (Philosophy — PHI) gave the keynote address to the General Assembly of the United Nations on the UN International Day of Nonviolence.
- Emily Haigh (PSY) was selected to participate in the 2017 National Institute on Aging Butler-Williams Scholars Program.
- Shaleen Jain, Aaron Gallant and Melissa Landon (CIE) all took and passed the Professional Engineers Exam, and are now licensed engineers in Maine.
- Clay Wheeler (CBE) received COE Ashley Campbell Award, the highest award given by the college to one of its faculty.

Faculty Awards

Presidential Public Service Achievement Award
Ivan J. Fernandez
Research Professor in Anthropology, the Climate Change Institute and the Margaret Chase Smith Policy Center

Presidential Outstanding Teaching Award
Senthil S. Vel
The Arthur O. Willey Professor of Mechanical Engineering

Presidential Research and Creative Achievement Award
Yong Chen
Professor of Fisheries Population Dynamics

Distinguished Maine Professor Award
Francis A. Drummond
Professor of Insect Ecology, and Insect Pest Management and Wild Blueberry Pollination Specialist

Faculty Achievements *continued*

- In COEHD, Phil Pratt was awarded the Excellence in Adjunct Teaching Award, and Erin Straine received the Excellence in Staff Service and Engagement Award.
- Catharine Biddle received the Graduate Faculty Mentoring Award for COEHD from the UMaine Graduate Student Government (GSG).
- Tori Jackson (CE) received the 2018 Distinguished Service Award from the National Association of County Agricultural Agents.
- James McConnon (CE) was appointed to a three-year term on the Technical Advisory Committee for the Northeast Regional Center for Rural Development.
- Brad Beauregard (Fogler Library) was the winner of 2018 PR Xchange Award from American Library Association for his interactive building map.
- Edward Grew (School of Earth and Climate Sciences — ERS) was elected a Foreign Honorary Member of the Russian Mineralogical Society.
- Michael Coffin (ERS) was awarded the 2018 International Prize of the Geological Society of Japan.
- Andrei Alyokhin (SBE) won the National Association of County Agricultural Agents Communication Award.
- Joyce Longcore (SBE) received the 2017 American Academy for the Advancement of Science Golden Goose Award.
- Melissa Maginnis (Molecular and Biomedical Sciences — BMB) received NSFA's UMaine GSG Mentor Award.
- Linda Silka (SOE) and Kathleen Bell (SOE) were both recognized by the Rising Tide Center with the Career Award and Mentoring Award, respectively.
- Mimi Killinger (HON) was selected as Visiting Honors Scholar at the U.S. Air Force Academy for 2018–19.

Student Achievements

- "Black Dog," a story published by M.A. student Alex Terrell (ENG) in *Black Warrior Review* was awarded a 2018 PEN/Robert J. Dau Short Story Prize for Emerging Writers.
- Dair Cruz (International Affairs — INA) was selected to attend the Out4Undergrad LGBT engineering mentorship program at Stanford University and received the USA United Nations Global Advocate Scholarship to attend the Global Engagement Summit at UN Headquarters.
- Matt Ireland (MEE) received the J. Morris Weinberg Student Innovation Award.
- Graduate Student Kayla Marquis (CBE) won a NASA Graduate Fellowship.
- The Student Investment Portfolio Fund (SPIFFY) won first-place in Quinnipiac Global Asset Management Education (GAME) for "Value Portfolio."
- Tyler Cote (MBS) won a $500 prize at the Big Gig Pitch Off business competition, a partnership of municipalities/universities/organizations in the Penobscot River Valley.
- Zephyrus Simulation, a student spin-off company formed from a UMaine biomedical engineering undergraduate capstone course, won the Big Gig finale and the UMaine Business Challenge. The company was chosen to receive VentureWell funding and participate in their innovator training program. Zephyrus also received MTI TechStart and Seed grants and a Libra Future Fund grant.
- Robert Boenish (SMS) received the 2018 NSFA Graduate Student Research Excellence Award and Mackenzie Mazur (SMS) received the Chase Distinguished Research Assistantship.
- School of Food and Agriculture (SFA) students Lindsey Robbins, Angela Masse and Tyler LeBlanc designed and built a landscape exhibit that earned the People's Choice Award at the 2018 Bangor Flower and Garden Show.
- Eleven of 15 UMaine Black Bear teams had multi- or single-year NCAA academic performance scores, exceeding those of all Division I programs or public institutions.

2018 Valedictorian and Salutatorian

Graham Van Goffrier

Graham Van Goffrier of Norwell, Massachusetts was the 2018 valedictorian. Van Goffrier majored in physics, with minors in electrical engineering, mathematics and nanotechnology. He earned a bachelor's degree in physics and a master's degree in electrical engineering in his four years at UMaine. In addition to other honors, Van Goffrier was one of 240 outstanding sophomores and juniors nationwide to receive a 2017 Goldwater Scholarship. In October, Van Goffrier will enter the MASt program in applied mathematics at Cambridge University.

Brianna N. DeGone

Brianna N. DeGone of Turner, Maine was the 2018 salutatorian and the Outstanding Graduating Student in the College of Engineering. DeGone is a first-generation college student who majored in bioengineering, with a minor in business administration. DeGone has been accepted into UMaine's MBA program, and may return in the fall to complete her graduate degree and throw for the track team another year. She also is pursuing entry-level positions with biomedical companies.

2018 Outstanding Graduating Students

Yousuf Ali
International Student
College of Engineering

Austin D. Blake
Maine Business School

Marie France-Georges
International Student
Maine Business School

Callie W. Greco
College of Natural Sciences, Forestry, and Agriculture
Honors College

Tina M. Hedrick
Division of Lifelong Learning

Katelyn J. Manzo
College of Liberal Arts and Sciences

Duc Ngoc Hong Nguyen
International Student
College of Natural Sciences, Forestry, and Agriculture

Rachel E. Sirois
College of Education and Human Development
Honors College

Aliya Uteuova
International Student
College of Liberal Arts and Sciences
Honors College

Student Achievements *continued*

- For the 15th straight year, over one-half (approximately 63% in 2017) of our student-athletes were honored for academic success, with 190 named UMaine Scholar-Athletes for achieving or maintaining a 3.0 GPA, and 78 new students were named Rising Stars for achieving a 3.0 GPA or higher in their first semester.
- Women's Cross Country achieved a perfect score of 1,000 for the 13th consecutive year, marking every year the award has been in existence. Women's Cross Country is one of only 85 teams out of 6,700 nationwide to have earned this score every year over that period.
- Outstanding Student Awards were presented to Stacy Beal, Rebecca Blodgett, Josie Champagne, Sierra Colson, Tomohiro Ebihara, David Glasberg, Teresa McGuire, Amelia Reinhardt, and Rachel Sirois in COEHD.
- Eight UMaine graduate students are active NSF Graduate Research Fellows.
- AAUW Nontraditional Women Student Scholarships were awarded to DLL students Nancy Desjardin, Nastacia LaVerde and Anna Cabellero.

Now in its fourth year, the Think 30 initiative is an important component of UMaine student success.

Student Performance on State and National Exams

- School of Social Work M.S.W. graduates continue to exceed the national averages for licensing exam pass rates. For 2017, 90% (n=30) of M.S.W. graduates passed the Licensed Master's Social Work Exam on the first attempt, compared to 81% nationally. 95% (n=43) of M.S.W. graduates passed the Licensed Clinical Social Work Exam (taken one-year post-graduation), compared to 81% nationally.
- Communication Sciences and Disorders students have achieved a 100% pass rate on the Praxis II Speech-Language Pathology Exam for four straight years. The national pass rate is 86%.
- In the School of Nursing, the first-attempt pass rate on the RN national licensure exam (NCLEX-RN) for B.S.N. graduates was 87%, up from 82% last year. May 2017 graduates of the M.S.N. family nurse practitioner program had a 100% pass rate on the national certification exam.
- 100% of COEHD students in the elementary and secondary education teacher certification programs passed the Praxis II exam this year, as did all students in special education. In addition, 100% of students who took the BOC exam in athletic training passed.

IV. Student Engagement and Success

Enrollment

- Ongoing collaborations with UMaine's six colleges include participation in on-campus, in-state, and out-of-state open house events; campus tours; accepted student days; and other recruitment activities. New events in 2017–18 include two open houses hosted by the Darling Marine Center in partnership with the Office of Admissions.
- MBS staff made phone calls to each of its accepted students in summer 2017. MBS also folded its pre-business population directly into the school over the summer, resulting in an additional 101 students who were able to start their MBS careers without delay.

Degrees Granted (Excluding post-baccalaureate certificates)

	Bachelor's	Master's	Doctoral	Total
Education and Human Development	212	127*	6	345
Engineering	371	52	10	433
Honors College *(80 bachelor's degrees with Honors)*				
Liberal Arts and Sciences	442	51	9	502
Maine Business School	319	28	–	347
Natural Sciences, Forestry, and Agriculture	527	132	25	684
Division of Lifelong Learning *(Bachelor of University Studies)*	214	–	1	25
Other programs	–	8	5	13
University of Maine totals:	**2,085**	**398**	**56**	**2,349**

*Includes 23 certificates of advanced studies

Student Credit Hour Production

	Undergraduate	Graduate	Total
Education and Human Development	17,177	5,254	22,431
Engineering	26,503	1,486	27,989
Honors College	4,753	–	4,753
Liberal Arts and Sciences	121,684	3,537	125,221
Maine Business School	19,664	801	20,465
Natural Sciences, Forestry, and Agriculture	59,734	6,945	66,679
Other programs*	1,848	755	2,603
University of Maine totals:	**251,363**	**18,778**	**270,141**

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

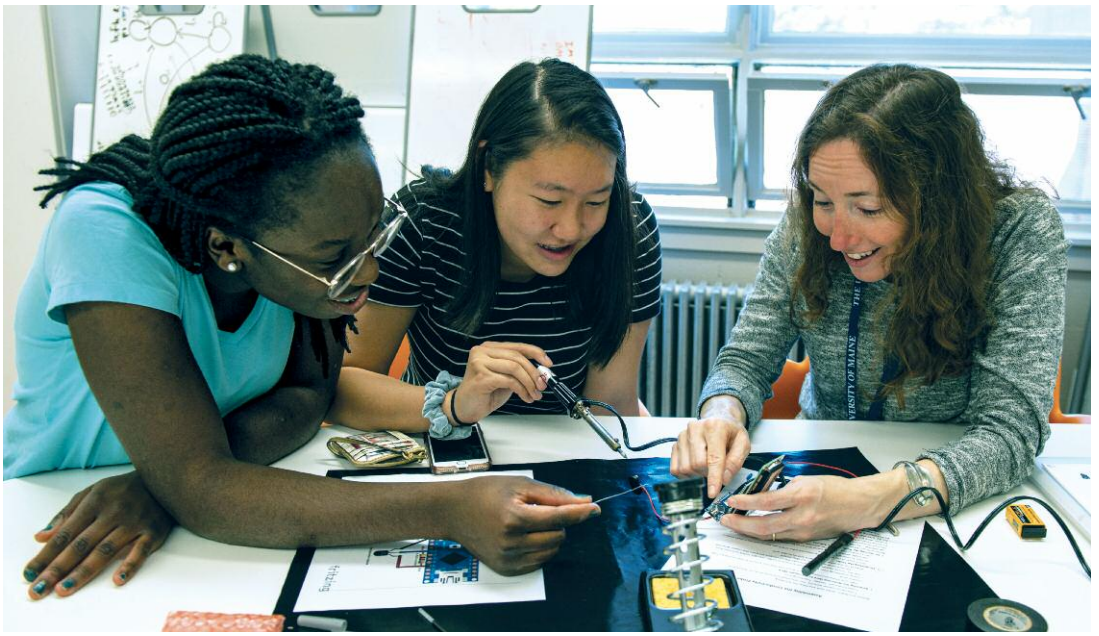
Student Achievements *continued*

- The Provost and all college deans contacted admitted students in spring 2018 to answer questions and encourage them to come to UMaine. The call sessions were organized by the Office of Admissions.
- The DLL partnered with the Graduate School and Enrollment Management to better serve prospective students by using a new customer relationship management software. DLL staff are collaborating with Enrollment Management to set up email campaigns and track inquiries, applications and matriculations.
- A nine-member group of UMaine faculty served as scholarship judges at the Maine State Science Fair in March. Category winners from high schools in all regions of the state were offered Maine Top Scholar awards: four-year, full-tuition scholarships, admission to the Honors College, assignment of a UMaine faculty research mentor and a $500 annual stipend for research activity.

Curricular Innovations

- MBS continues to develop new online or hybrid courses each semester in support its online MBA program.
- SPIFFY students in MBS attended two national forums in New York this year, funded by private donations. The student-led SPIFFY portfolio currently manages assets in excess of $3 million.
- Innovations in the CLAS include a 4+1 agreement between International Affairs and SPIA, a new climate change concentration, and a new B.S. in mathematics.
- Provost Hecker participated in a yearlong Digital Fellowship, funded by the Bill and Melinda Gates Foundation, to explore ways to use digital technology to increase the retention and graduation rates among undergraduates, especially those who are first generation, low income or students of color.
- Jen Tyne and Natasha Speer (MAT), led a team to revamp the curriculum for Calculus I, incorporating the seven "Characteristics of Successful Programs in College Calculus" identified by the Mathematics Association of America.

UMaine's Stormwater Management Research Team (SMART) program trains high school and college students in water sampling techniques.

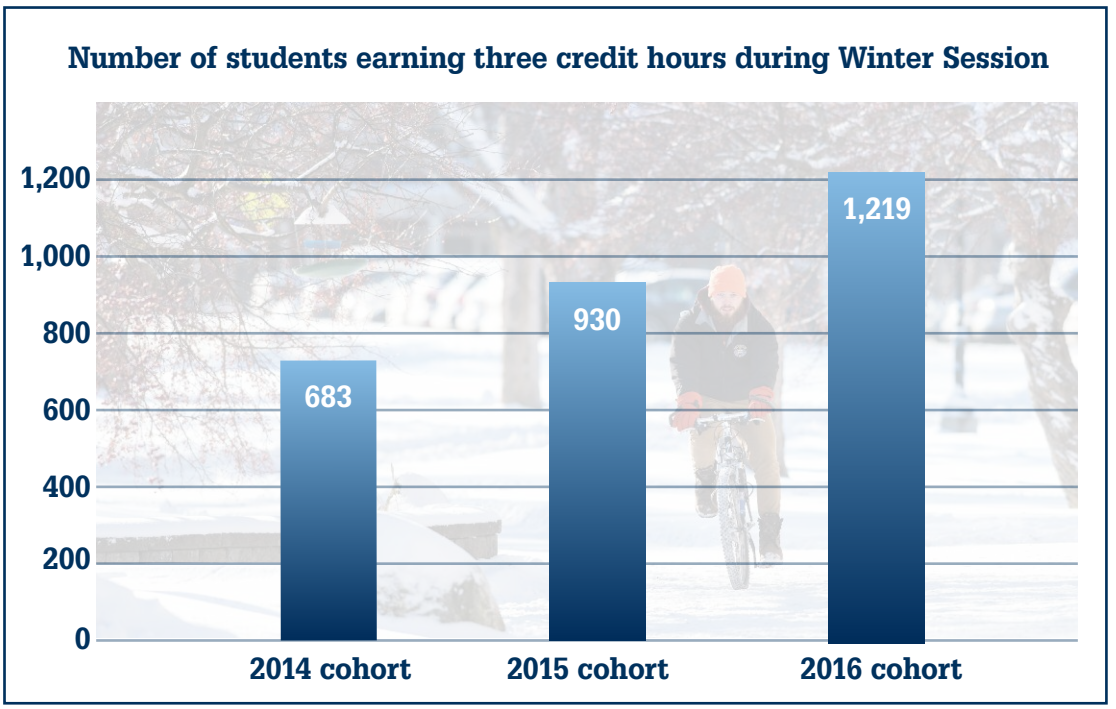


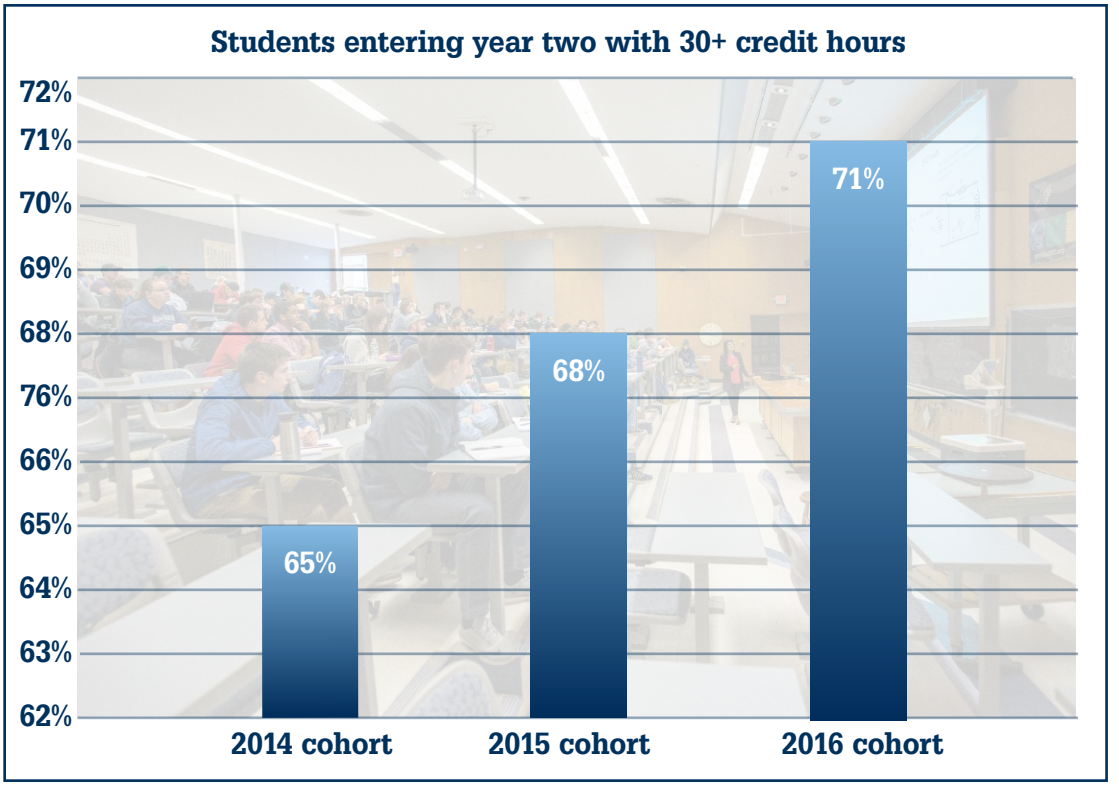
The Gerald S. Cassidy Capital Markets Training Laboratory in the Maine Business School.

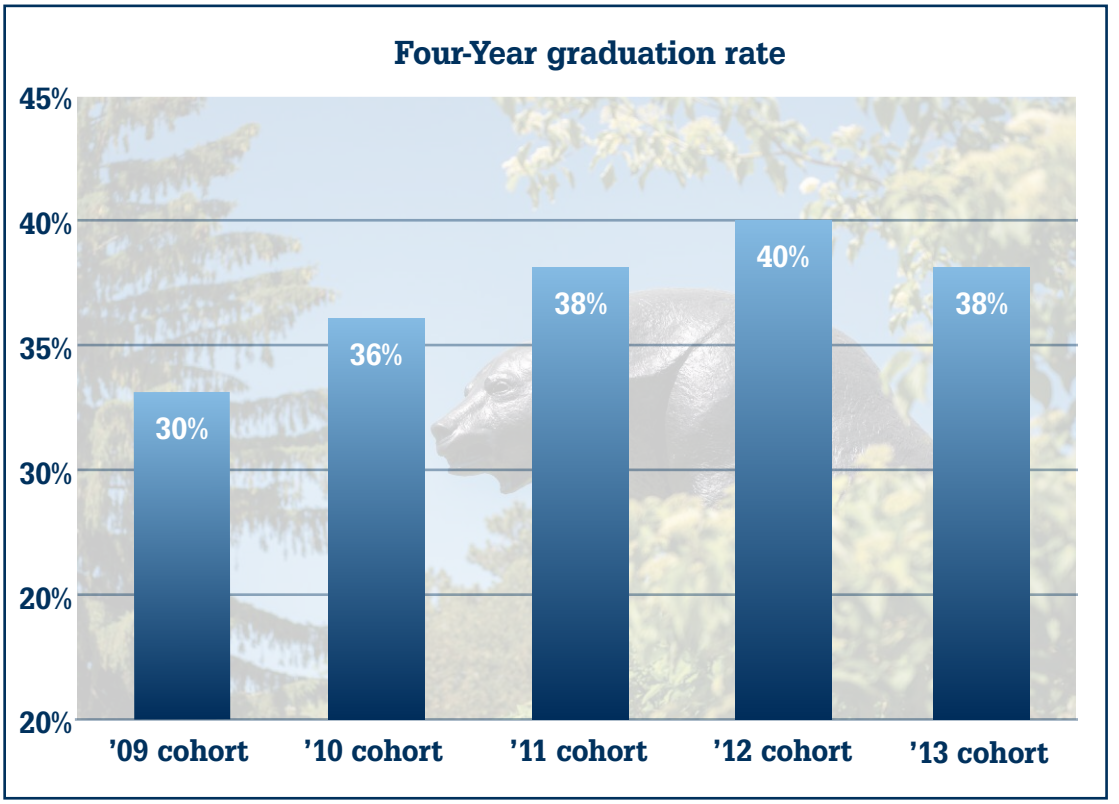
- CBE introduced a Clinical Observation Rotation program for biomedical engineering students. This non-credit component connects CBE students with real-world opportunities for biomedical engineering applications.
- ECE faculty engaged numerous undergraduates in projects connected to externally funded high-altitude balloon activities. Sixteen launches involving anywhere from two to a dozen students each were conducted in AY18. A highlight was a launch at Clemson University in which two faculty and 19 students participated.
- COEHD's School of Learning and Teaching developed three of the six programs approved for participation in the UMaine GOLD initiative.
- COEHD's School of Kinesiology, Physical Education, and Athletic Training is working with USM and UMPI on an M.A. in athletic training, which will replace the undergraduate program on all three campuses.
- CE and UMaine collaborators continue to offer the Follow A Researcher® (FAR) program. FAR seeks to increase young people's understanding of research processed by engaging them directly with UMaine researchers in the field. Since 2015, the program has attracted 4,200 young people and 120 educators from Maine and eight other states, and has been featured on National Public Radio's "Science Friday" program.
- The Flagship Internship Program is now in its second year. In 2017–18, the program saw more than 20 employers commit to the core cohort, while nine UMaine students took part in an internship boot camp in May 2018.
- The Center for Innovation in Teaching and Learning delivered or supported the following programming:
  - 62 educational technology workshops drawing 229 attendees
  - 38 pedagogical workshops drawing 344 attendees
  - 320 different persons attending workshops and trainings for a total cumulative attendance of 573, and communities of practice met monthly throughout the year.

Retention and Graduation

- NSFA became the first college at UMaine to text incoming students as a means of improving communication, supporting the transition to college, and reducing summer melt. MBS and COE will join NSFA in texting initiatives in 2018–19. College Success Programs in DLL also successfully texting TRIO-supported students.
- Winter Session enrollments continue to grow, with over 1,200 students completing a Winter Session course in 2018.
- The campuswide Think 30 initiative continues to impact student credit hour earnings. The percentage of students entering their second year of study with 30 or more earned credit hours continues to increase.
- The most recent Life After UMaine survey results (Office of Institutional Research, April 2018) reveal that among recent graduates reporting full-time employment, 88% indicated that their job is related to their UMaine degree. Of respondents employed full-time in a job related to their degree, 93% believe their UMaine experience prepared them "very well" or "moderately well" for their job.
- Nearly 95% of respondents who graduated from MBS reported full-time employment, followed by 87% of COE graduates.
- The four broad occupational sectors where respondents who reported full-time employment are most likely to be holding jobs are architecture and engineering (20.5% of all full-time employed graduates), health care practitioners and technical occupations (12.9%), education, training and library occupations (12.6%), and business and financial occupations (10.4%).







University of Maine Office of Institutional Research (8/10/18)

V. Reflections

The University of Maine ended the 2017–18 year in the strongest fiscal position that it has been in decades, and the 2018–19 budget includes strategic investments required for continued success. Importantly, the budget for the coming year was built without making operating or personnel cuts to any major unit within the university. Our financial stability has allowed us to invest in crucial faculty lines so that, for the second consecutive year, there has been net growth in the overall faculty size. This fall we will welcome 60 new faculty members to the UMaine community, which will result in a third year of net faculty growth. UMaine's positive financial picture did not occur by accident. As a community, we identified strategic goals and worked together to achieve them. With shrinking state appropriation and a freeze on the in-state tuition rate, it became clear that strong enrollment would be the foundation of our financial house. We have built enrollment strategically, recruiting larger, academically strong first-year classes, and focusing on student retention and degree progress. Development of new revenue streams has been important as well. As an example, enrollment in fully online graduate degree programs increased 96% over the past three years. Looking forward, our dependence on healthy student enrollment to maintain a healthy fiscal position will continue. Fortunately, we have in place the essential ingredients for continued success: quality academic programs, faculty and staff committed to student success, and a strong Enrollment Management team with a dynamic new leader, Vice President for Enrollment Management Lizzie Wahab.

As Maine's only research university, we have a special responsibility to advance knowledge, spawn innovation, and support economic development. This past year, tremendous strides were made to advance UMaine's research mission. In his first year, Vice President for Research and Dean of the Graduate School Kody Varahramyan led a transformation of our research operations that included significant reorganization to better support the research enterprise. Some of the key tenets of this transformation included:

- Removal of silos, including those between academic and research units, through close alignment and integration of university research and academic programs.
- Emphasis on interdisciplinary research addressing grand socioeconomic challenges.
- High-impact experiential learning programs through undergraduate research.
- Core/shared research resources and facilities that are widely accessible to the university and outside community.

Support for commercialization of research is also undergoing transformation. Highlights of the

past year include launching of the Innovation and Economic Development Council (IEDC) and the Maine Innovation, Research and Technology Accelerator (MIRTA). The IEDC is advisory to the president and is charged with ensuring that economic development is a strategic priority for the institution. MIRTA was a 16-week program in which five faculty-led teams advanced basic and applied research projects through development stages to commercialization.

The University of Maine continues to play a lead role in advancing the University of Maine System's One University concept: 1) University of Maine at Machias became a regional campus of UMaine on July 1, 2017. In year one, the financial aid, enrollment management, finance, and student service operations have been coordinated; 2) The Maine Business School reorganized into the Undergraduate School of Business and the Graduate School of Business which was important for the development of a joint UMaine-University of Southern Maine graduate business faculty; 3) UMaine continues to offer the M.Ed. in instructional technology in collaboration with USM and the University of Maine at Farmington. This three-year-old collaboration has resulted in significant growth in the online degree program; 4) the College of Engineering developed collaborations with the other UMS universities to align curricula so that students can start their studies at one of our sister campuses and transfer to UMaine (or USM) to earn an engineering degree in four years; 5) this fall, 35 students who applied to UMaine, but fell short of our standard acceptance criteria, will enroll at the University of Maine at Augusta (Bangor Campus) to complete a Foundations programs over three semesters. Students who successfully complete the required coursework will automatically matriculate at UMaine.

The University of Maine is constantly evolving in the ways that we advance our tripartite mission. Given the rapid cultural, technological, demographic and economic changes that characterize the 21st century, constant evolution is necessary if we are to remain vital. Transition of leadership is one form of healthy evolution. On June 30, UMaine bid farewell to President Susan Hunter, whose presidential tenure saw unprecedented successes in enrollment, fundraising, legislative support and other areas. On July 1, we welcomed President Joan Ferrini-Mundy who brings with her a stellar record of scholarship, administration and leadership at research universities and the National Science Foundation. In President Hunter's final year, we completed our assessment of the Blue Sky Strategic Plan, marking the end of that document's formal status as the guide for strategic actions. In the coming year, with President Ferrini-Mundy's leadership, we will re-examine who we are as an institution, establish a new set of goals and create a new strategic vision for the future.

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