

MAINE STATE LEGISLATURE

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Report to the Committee on Education and Cultural Affairs

Submitted by:

The University of Maine System

The Maine Community College System

Maine Maritime Academy

*In response to requests from the Committee regarding higher
education opportunities, workforce development, and funding*

January 29, 2010

Overview: Public Higher Education in Maine

Like the vast majority of states, Maine's public higher education system is comprised of several entities, each with a distinct, focused mission; each governed by an independent Board of Trustees; and all working collaboratively with one another to provide comprehensive higher education opportunities to the people of Maine.

Relatively little academic and programmatic overlap exists among the three entities: the University of Maine System, the Maine Community College System, and the Maine Maritime Academy. The vast majority of trade and technical programs offered by the community colleges are the only ones of their kind in the state. And there is very little program overlap between the university system and the academy. In fact, the two institutions share only two programs: Marine Biology (offered at University of Maine at Machias) and Marine Science (offered at the University of Maine).

The overlap in academic programming that does exist among the systems is largely intentional and designed to enable broad access across the state to higher education. This is most true in the area of the community colleges' liberal studies programs which are designed to serve as a gateway to the baccalaureate. Articulation agreements between the community colleges and Maine's public universities make it possible for students to complete an associate degree in liberal studies at their local community college and then transfer on to the University to complete their four-year degree.

Many other pathways to the baccalaureate also exist between the community colleges and universities (see Appendix A) and more are being developed each year as the two systems continue to work to improve transfer opportunities and eliminate any barriers that can make it difficult for students to achieve their academic goals as quickly and affordably as possible.

As the above suggests, although their missions and academic programs are largely distinct from one another, the three strategic partners work closely together to strengthen educational opportunities for the people of Maine, find additional economies of scale, streamline delivery of services, and ease transfer among all of Maine's public colleges and universities.

Nevertheless, rapid and ongoing technological, economic, environmental, and educational change means that Maine's public institutions of higher learning must continually seek new and better ways of doing business, serving the state and our students, and finding financial efficiencies. Now more than ever, our public colleges and universities must strengthen existing strategic collaborations among our institutions and explore and undertake new ones in order to meet these significant challenges.

Maine's Comprehensive University System Baccalaureate and Graduate Education, Research, and Outreach

Since its creation in 1968, the **University of Maine System** has conferred 183,047 degrees, 5,389 of them during the 2008-09 academic year. The System's mission is to enhance Maine

and its quality of life through education, research, and economic development. Drawing on the talent and commitment of its faculty, students, and staff, the university system pursues and fulfills its objectives through a critical range of activities:

- high-quality academic programs and opportunities, which lead to a better educated workforce and citizenry;
- cutting-edge research that helps create jobs, products, technological and medical advances, and creative ways of expression and problem-solving;
- partnerships with businesses, communities, governments, and organizations to help them overcome challenges and reach their full potential; and
- enrichment of the cultural and civic life of Maine's communities.

In 2008-2009, Maine's public universities had a fall headcount enrollment of 32,608 students (and served a total of 43,000 students over the course of the year). The vast majority of these students were enrolled in baccalaureate, masters, and doctoral programs of study. Working with \$138 million in grants and contracts primarily from federal, state, and private sources, university faculty and students directly created and supported hundreds of Maine jobs within and outside of higher education.

Maine's Two-Year College System Technical, Career, and Transfer Education

The **Maine Community College System** is the state's comprehensive two-year college system offering technical, career, and transfer programs as well as customized workforce training for business and industry. The original institutions—Maine's vocational-technical institutes—were established after World War II to provide occupational training to returning veterans. Today, the community colleges remain focused on meeting the skilled workforce needs of Maine business and industry and offer the only associate degree programs in the state in areas such as cardiovascular technology, radiation therapy, computer aided drafting and design, building construction technology, electrical construction and maintenance, surgical technology, culinary arts, computer integrated machining technology, and fire science technology.

The current System was created in 1986 when the Maine State Legislature separated the state's six vocational technical institutes from the Maine Department of Education and formed the institutions into a stand-alone system of higher education. The Legislature's intent was to ensure that the VTI's had the autonomy and flexibility necessary for them to meet effectively the workforce needs of individuals and businesses across Maine. The VTI's became Technical Colleges in 1989, and in 2003 the Legislature changed the name to the Maine Community College System to reflect its broadened mission of providing career and liberal arts transfer programs for Maine people. Today the System's seven colleges have a fall headcount enrollment of over 16,300 students. In all, in 2008-2009, they served some 21,500 students, preparing them for both transfer and for one-year diplomas and certificates and two-year associate degrees.

Maritime Education

The **Maine Maritime Academy** specializes in ocean and marine education at the undergraduate and graduate level. The Academy provides instruction in marine engineering, transportation, marine science, maritime management, international business and logistics, and small vessel operations. It also prepares a portion of its students as officers for the U.S. Merchant Marine and the armed forces of the United States. The Academy was created in 1941 by an act of the 90th Maine Legislature and now offers three degrees and 20 undergraduate and graduate academic majors. The Academy currently serves about 900 students each year.

In spite of their distinct missions and organizational structures, the University of Maine System, the Maine Community College System, and the Maine Maritime Academy are strategic partners that work in close collaboration with one another to increase both access to higher education and efficiencies within their operations.

Economic and Social Value of Public Higher Education in Maine

Return on Investment

The social, economic, and personal benefits of higher education are far reaching: higher income, increases in tax revenue, lower unemployment, better health, longer life, faster technology creation and adoption, reduced crime, increased civic involvement, and more.

The returns on public investment in higher education are equally significant. Over the course of an average lifetime, an individual with a four-year-equivalent degree will contribute \$471,000 more in income, payroll, property, and sales-tax revenue than a person with a high school diploma who lacks a college degree. At the same time, each four-year-equivalent degree results in significant government savings on welfare programs, Medicaid, Supplemental Security Income, unemployment compensation, workers' compensation, prisons, and medical care for the uninsured. Those savings over an average lifetime are conservatively estimated to be almost \$85,000.¹

In other words, public investment to assure affordable access to quality higher education is a sound and essential use of tax dollars.

What higher education means for Maine's economy and Maine people

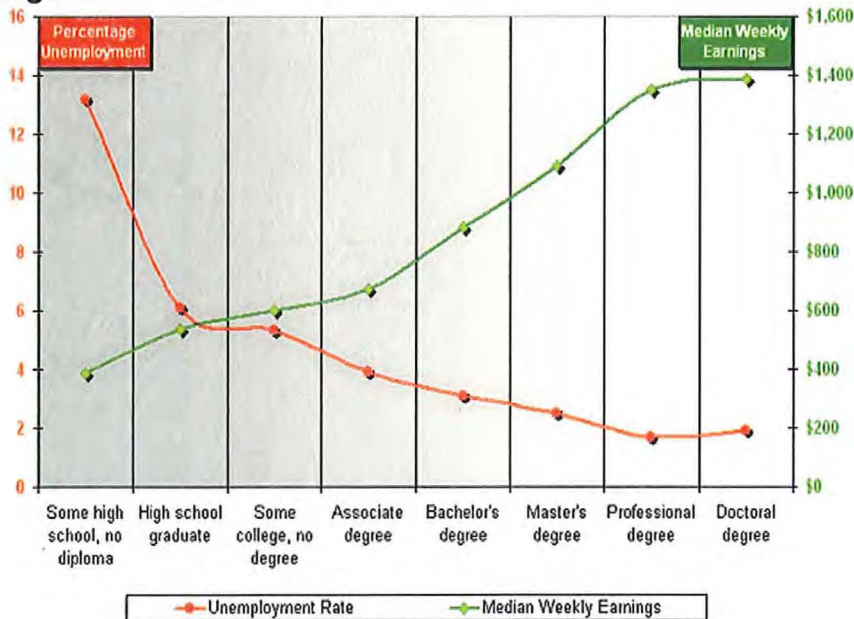
In preparing a skilled, knowledgeable, and adaptable workforce and through the application of research and development to create new jobs, products, technologies, companies, and opportunities, Maine's public colleges and universities are some of the state's most important catalysts for economic growth.

¹ *High Returns: Public investments in Higher Education*, by Philip A. Trostel, University of Maine, Spring 2008 http://www.bos.frb.org/commdev/c&b/2008/spring/Trostel_invest_in_higher_ed.pdf

The economic, social, and personal impacts of higher education are closely intertwined. Maine people with the skills and knowledge needed to compete for good paying jobs with good benefits have a significant and positive impact not only on their families and their communities, but on the state's economy as well. For those who lack the necessary skills and education, the picture is far more negative:

- The unemployment rate for Maine workers with only a high school diploma is more than a third higher than for those with an associate degree.² (See Figure 1 below.)
- A significant wage premium exists for Maine workers who have an associate degree or higher. Workers with an associate degree earn 47 percent more per hour than those with a post-secondary vocational certificate. And annual earnings of full-time workers increase significantly with each successive level of educational attainment.³
- The implications of this wage differential are evident throughout Maine. Cumberland County, with the highest proportion of working-age adults who hold at least an associate degree, has the highest per capita income in the state. Washington and Piscataquis counties have the state's lowest per capita income, and along with Somerset County, the lowest educational attainment.⁴

Figure 1



² Maine Department of Labor, Labor Market Information Services. "The Relationship Between Education and Unemployment and Earnings." Accessed 6/14/2006 at <http://mainegov-images.informe.org/labor/lmis/pdf/EducationUnemploymentEarnings.pdf>.

³ Maine Compact for Higher Education, Indicators of Higher Education Attainment in Maine, August 2007.

⁴ Maine Compact for Higher Education, Indicators of Higher Education Attainment in Maine, August 2007.

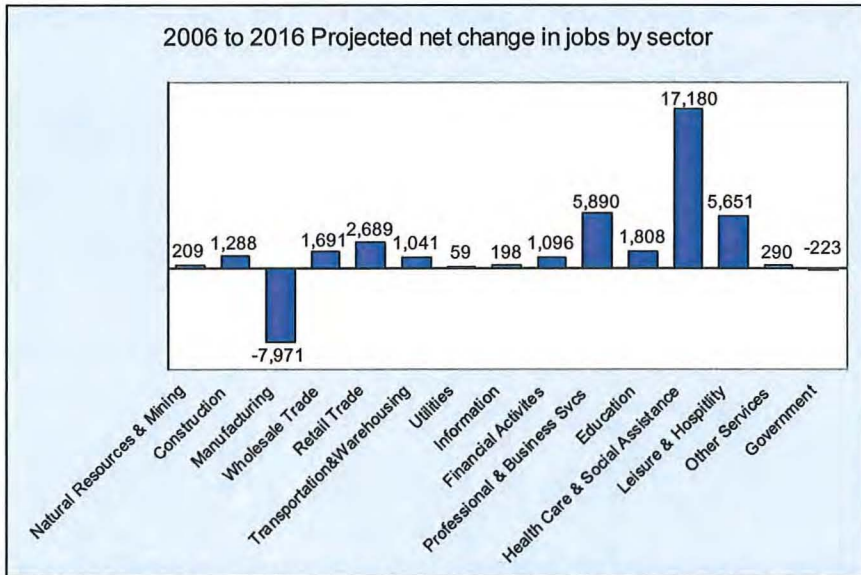
Current and Future Program Demands

In response to LD 231, the Joint Standing Committee on Education and Cultural Affairs has requested that the University of Maine System and the Maine Community College System report on the post-secondary education, training, and professional development needs of public and private sector employers in the State.

Maine’s public universities and community colleges are designed to meet the workforce needs of the state’s economy. And they are well positioned to meet the need for skilled and knowledgeable workers in the Maine industries projected to have the greatest increase in jobs between now and 2016. (See Figure 2.)

Among them, Maine’s public colleges and universities educate two-thirds of the state’s graduates in health care, the fastest growing sector of Maine’s economy. In the 2008-09 academic year, the institutions conferred over 1,300 degrees in the health professions. A similar story can be told in other high growth sectors. Maine’s public colleges and universities typically award over 850 academic credentials in programs related to professional and business management; 869 degrees in STEM-related disciplines; 1,175 in education; and 86 in parks and recreation and leisure and hospitality.

Figure 2



Source: Maine Department of Labor, Economic and Demographic Research Team, Center for Workforce Research and Information, September 2009

Other sectors critically important to the state’s economy—and to the common good—are also heavily dependent on the state’s public institutions of higher learning. Fully 50 percent of the state’s lawyers are graduates of the University of Maine School of Law, and 59 percent of teachers in Maine’s schools were educated at one of the state’s public universities.

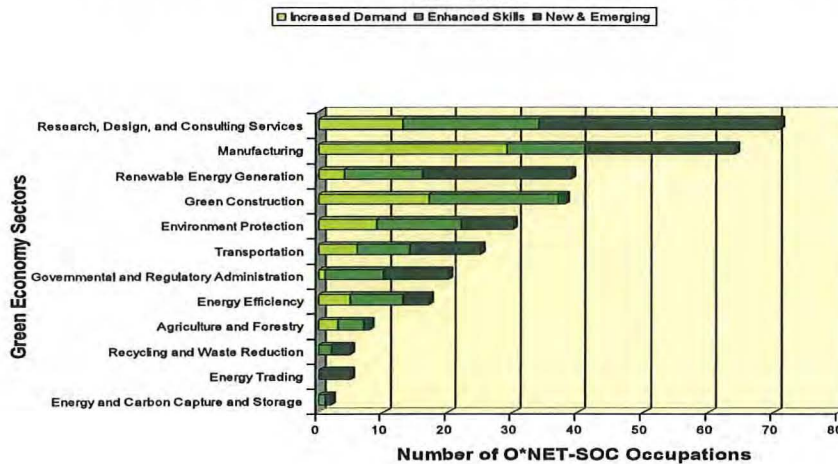
In similar ways, Maine’s community colleges graduates have a profound impact on local communities and the state’s economy. Each year, close to 95 percent of the state’s community college graduates land jobs or continue their education. Of those who immediately enter the workforce after graduation, 94 percent are working in Maine, in areas vital to the well-being of Maine people and the state’s economy, among them nursing and allied health professions, public safety, construction, precision manufacturing, tourism and hospitality, computing, business, and the trades.

Through academic program advisory panels, business partnerships, and collaborations with economic development initiatives across the state, Maine’s public colleges and universities are able to respond quickly and effectively to changing workforce needs. This means that, on a regular basis, occupational programs that no longer serve employers’ needs are removed from the academic inventory and new programs, responding to the emerging needs of business and industry, are introduced. In just the past few years, the institutions have added new academic programs in wind power technology, composite manufacturing, new media, electronic commerce, geographic information systems, robotics, and information and communication technology. These programs are serving emerging business needs and preparing Maine’s workforce to compete for good-paying jobs in a new economy.

The growth and potential of green jobs across industry sectors is the most relevant and important example of how the state’s public universities and community colleges are currently responding to and helping to foster rapid changes in our economy. As Figure 4 illustrates, the number of green jobs is expected to grow dramatically across sectors and at every skill level.

Figure 4

Distribution of Green O*NET-SOC Occupations Across Sectors



Source: Maine Department of Labor, Economic and Demographic Research Team, Center for Workforce Research and Information, September 2009.

To compete in this arena, Maine will need engineers, designers, researchers, and entrepreneurs. It will also need technicians and a skilled manufacturing workforce in order to take full advantage of the opportunities present in wind, solar, and tidal energy; in green construction and manufacturing; and in other areas. Already, the state's colleges and universities are helping to lead the way:

- In wind power technology:
 - The University of Maine's Advanced Structures and Composites Center has been awarded an \$8 million grant by the U.S. Department of Energy and a \$12.4 million grant from the U.S. Commerce Department's National Institute of Standards and Technology to develop and deploy three offshore test wind turbines that will float on composite platforms off the coasts of Maine and New Hampshire. In December 2009, the state announced the locations for the test turbines which are scheduled to be in place in 2011. Larger windmills would be deployed starting in 2013, and researchers at UMaine estimate that the state has potential wind energy of 149 gigawatts, roughly the equivalent power of 149 nuclear plants. The state's goal is to have enough offshore turbines to produce 5 gigawatts of power – about twice Maine's yearly consumption – by 2030, making Maine an energy generator for the northeast.
 - The University of Maine at Presque Isle has constructed a .6 megawatt wind turbine which reduces the university's carbon footprint by an estimated 562 tons and is used as a research subject and case study in a number of the university's courses.
 - Northern Maine Community College's new wind power technology program is the first of its kind in the northeast and is designed to meet the need for workers skilled in operating, maintaining, and repairing the growing number of turbines across the state. NMCC students enrolled in the program use UMPI's tower and turbine to learn safe climbing techniques, and NMCC faculty have provided safety training for UMPI staff.
 - Kennebec Valley Community College will soon erect a 120-foot wind turbine on its campus that will generate electricity for the campus and serve as a working model for wind power education.
- In solar power technology:
 - KVCC has recently been awarded a \$2.8 million, 5-year grant from the U.S. Department of Energy to create a multi-state training and certification program for solar energy technicians. The grant will enable KVCC to train instructors and technicians at its campus in Fairfield and—through a mobile training laboratory—at community colleges and high school technical centers across Northern New England.

- In sustainability:
 - UMaine’s College of Business, Public Policy and Health has developed a Business and Sustainability program track for students in the school’s MBA program. The track supplements the core MBA requirements with additional perspectives and skill sets focused on environmental and social responsibility.
 - UMaine and the University of Southern Maine have received a \$20 million grant from the National Science Foundation to work with other colleges and universities, businesses, and community organizations to undertake The Maine Sustainability Solutions Initiative. The initiative is focused on researching and supporting new ways of advancing economic and community development while protecting Maine’s environment and unique quality of place.
 - The University of Maine at Augusta’s architecture program has made green, sustainable building design a focus of its curriculum, providing students with the skills and knowledge necessary to lower the environmental impact of new construction.

For Maine, a greener economy has the potential not only to generate thousands of megawatts of clean energy but also thousands of new jobs in the design, development, construction, operation, and maintenance of new technologies. Maine’s public colleges and universities have sought both to meet the immediate needs of this emerging industry and to foster its growth by developing programs and initiatives that can provide Maine people with the skills and knowledge necessary to take full advantage of new opportunities. As the industry matures, our public colleges and universities will need to build on existing relationships and programs to ensure coherent programming and clear career pathways at all levels.

While Maine’s public institutions of higher education continue to develop new programs to respond to the workforce needs of a changing economy, they also remain focused on ensuring that Maine people have access to the educational opportunities they need—here and now—to secure good jobs, gain new skills, and advance in their careers.

This means that in addition to individual degree programs, the institutions must also continue to focus their attention on transfer opportunities (see next section), professional development opportunities, short-term certificate programs, non-credit courses, and training partnerships with Maine businesses.

Recognizing that many Maine people looking to take advantage of these educational opportunities are place- and time-bound, the institutions offer access to their programs in a number of ways:

- On campus;
- At regional outreach centers;
- At community-based distance education sites at which courses are provided through interactive television; and

- On-line, through internet-based courses that can be accessed from any computer with a high-speed connection.

This mix of offerings and delivery methods will need to continue to evolve as the needs of both students and employers change. Nevertheless, the mix will remain critical to the ability of Maine's public colleges and universities to address the postsecondary education, training and professional development needs of public and private sector employers in the state.

Coordination Efforts and Plans

In response to issues raised by LD 1362, the Joint Standing Committee on Education and Cultural Affairs requested that Maine's public institutions of higher education detail current efforts and future plans to ensure an articulated, coordinated, and efficient set of higher education opportunities for the people of Maine.

This section of the report focuses on that work.

As noted earlier, the three systems of higher education strive to meet their distinct missions in an efficient, collaborative, and thoughtful manner. The Systems have worked together closely to ensure that numerous academic and career pathways exist between them so that students are able to move as easily as possible among the schools and achieve their academic goals in an efficient and affordable manner.

In all, the state's public colleges and universities have developed some 150 transfer agreements that enable students who begin their education at a community college to transfer their credits on to the university to earn a baccalaureate degree. Agreements now exist for programs as diverse as early childhood education, mechanical engineering, and nursing. (See Appendix A for a complete list of these agreements.) For MCCS liberal studies students, AdvantageU offers guaranteed admission to the university system. Those who enroll in AdvantageU during their first year of community college benefit from early advising, a streamlined university application process with no university application fee, and advanced course registration. With proper planning, a student who participates in AdvantageU can complete a bachelor's degree in four years.

These coordinated efforts have resulted in a growing number of transfer students from the MCCS to the UMS. Currently, about 2,500 MCCS transfer students are enrolled within the University of Maine System, an increase of nearly 50 percent since 2002.

In spite of these significant advances, faculty and administrators at both the community colleges and within the University of Maine System remain focused on improving the transfer process. Institutional accreditation rules, program degree requirements, and curriculum design all play some role in determining how (and how many) credits can transfer from one institution to another. Some of these restrictions cannot be—or are not easily—eliminated. Nonetheless, faculty and administrators in all three systems continue to work to lessen potential barriers so

that students face as few frustrations and difficulties as possible as they move from one system to another in pursuit of their educational goals.

In addition to these efforts to align program offerings and create clear pathways between Maine's two- and four-year institutions, the three public higher education entities are also focused on efforts to reduce redundancies in course and program offerings and make higher education opportunities for the people of Maine as efficient and affordable as possible. Some of these collaborations—such as the MCCS and UMS shared higher education outreach centers in Houlton, Calais, Bath, South Paris, East Millinocket, and Dover-Foxcroft—are longstanding ones that have resulted in increased access to higher education for Maine people and significant cost savings to both systems. Other examples include the following:

Collaborative academic initiatives between the University of Maine System and the Maine Community College System:

- UMS and MCCS student services staff work in close collaboration to promote and support transfer between the systems. The joint services provided to students include, but are not limited to: transfer, admissions, and financial aid counseling; presentations; workshops; and transfer credit evaluations for individual students.
- Faculty members from UMS and MCCS regularly work together on course and curriculum development and to determine course equivalency for transfer.
- UMA and KVCC, along with USM and SMCC, are currently involved in a pilot program designed to provide greater cooperation and coordination between the UMS and the MCCS. The program is focused on improving the transfer of college credits from one system to the other and making the process as seamless as possible for students who earn an associate degree from the MCCS and then move on to the UMS to obtain a baccalaureate degree. Faculty, student support services staff, and senior administrators are involved in the pilot program which began in August of 2009.
- The UMS has recently launched a comprehensive Transfer Course Equivalency tool that is designed to help prospective applicants, current students, and faculty advisors find out how courses taken elsewhere will be treated when they are transferred to any of the seven University of Maine System universities. The tool contains course information for all UMS institutions, Maine's community colleges, and Maine Maritime Academy. It can be accessed at <https://peportal.maine.edu>.
- USM/Lewiston-Auburn and CMCC have undertaken a joint project to increase the college-going rate in Androscoggin County.
- USM and CMCC have partnered to increase the number of students with disabilities entering and graduating in math, science, and engineering.
- UMM is the lead institution in an NSF-funded project "A collaborative model for geospatial technology education in a rural region" with partners WCCC, SMCC, KVCC, USM, and UMA
- UMM provides courses and physical space in support of WCCC's delivery of its medical assisting program on the UMM campus.
- UMA delivers its nursing program to WCCC.
- Marine scientists at UMM and SMCC are collaborating in shared student learning activities.

- UMaine mechanical engineering students take their basic welding course through EMCC.
- USM's Social Justice Program provides training to SMCC residential life staff around topics of diversity and sexual assault/domestic violence first-responder training.

Existing and ongoing academic collaborations between Maine Maritime Academy and the University of Maine include:

- UMaine and MMA faculty and students are engaged in joint research projects in tidal energy, wind energy, and thermoelectric power.
- Several MMA faculty members hold joint appointments in graduate programs at UMaine, and UMaine pre- and post-doctoral students teach some engineering courses at MMA.
- MMA has a memorandum of understanding with UMaine to allow its students access to teaching certification programs at the B.S. and M.S. levels.
- The UMaine Sponsored Programs Office provides oversight and administration of MMA and MMA/UM research funding. This avoids costly duplication of research funding at MMA which is primarily a teaching college.
- Shared academic programming (currently a thermodynamics course) via videoconferencing.

Academic collaborations between the Maine Community College System and Maine Maritime Academy include:

- EMCC and the Academy have entered into an agreement that enables provisionally accepted Academy students to take required courses at EMCC.
- The Academy and MCCS are working to develop a 2-plus-2 articulation agreement between the community colleges and the Academy's Power Engineering Operations program.

Non-academic collaborations between the Maine Community College System, Maine Maritime Academy, and the University of Maine System:

In addition to academic collaborations, the Maine Community College System, the Maine Maritime Academy, and University of Maine System formed an Administrative Savings Group in 2007—in response to Public Law Chapter 240 Sec. UUUU-1—to determine opportunities for administrative savings among the three institutions and the impact of these savings on operations. That work resulted in an Administrative Savings Group Report submitted to the legislature in January 2008, which sought to identify existing efficiencies within and among the three systems; existing collaborations and their effectiveness; and new and continuing opportunities for collaboration.⁵

Since the release of that report, the Chief Financial Officers of the three entities have met to review existing collaborations, explore new opportunities, and avoid duplicative efforts in order

⁵ Public Law Chapter 240 Sec. UUUU-1, *Administrative Savings Group Report*, January 1, 2008, presented to the 123rd Legislature by Chancellor Richard Pattenaude, University of Maine System; President John Fitzsimmons, Maine Community College System; and President Leonard Tyler, Maine Maritime Academy

to achieve administrative efficiencies. Those efforts are focused in four key areas; purchasing and procurement, facilities management, information technology, and administration. More recent developments include:

- Maine Maritime Academy and University of Maine System Boards of Trustees have negotiated an arrangement under which the Academy's endowed scholarship funds are now managed within the University System's Managed Investment Pool. This has enabled the Academy to benefit from more sophisticated investment management than it could afford on its own due to economies of scale.
- Through networking with the University of Maine, MMA has been able to realize savings in its energy costs. Building upon successes at UMaine, the Academy has benefitted from the expertise of the professional energy consulting firm used and recommended by university managers.
- The University System has negotiated with Educational and Institutional Cooperative Purchasing to include the MCCA and MMA in its membership, helping to ensure that all three institutions have access to the services of this not-for-profit buying cooperative which seeks to provide goods and services to educational institutions at the best possible value.
- The university system has also extended its system-wide furniture contract with W.B. Mason to include the MCCA and MMA.

In this economic climate Maine's Systems of Higher Education must remain effective and efficient. To insure continued collaboration and coordination, the Chief Financial Officers and appropriate senior managers will continue to review strategic and operational plans with the intent of identifying opportunities for additional savings and enhanced efficiency.

Higher education funding

This section of the report addresses issues raised by LD 773: An Act to Increase Funding for Higher Education.

Twenty years ago, General Fund appropriations made up a significant proportion of the total revenues of higher education in Maine (Table 1). Those funds constituted 65.3 percent of the Maine Community College System funds, 52 percent of the budget of the Maine Maritime Academy, and 42.8 percent of the University of Maine System revenues. (See Tables 2-4.)

Since then, the proportion of General Fund appropriations has steadily decreased and now makes up 46.4 percent of the MCCA funds (Table 2), 30.8 percent of the MMA budget (Table 3), and 28.9 percent of UMS revenues (Table 4).

As levels of state appropriations have fallen, Maine's institutions of higher learning have become more dependent upon sources other than state appropriations for revenue. Those sources include:

- **Tuition and fees:** revenues from all tuition and fees assessed against students for educational purposes.
- **Federal operating grants and contracts:** revenues from federal government agencies that are for specific research projects or other types of programs and that are classified as operating revenues.
- **State operating grants and contracts:** revenues from state government agencies that are for specific research projects or other types of programs and that are classified as operating revenues.
- **Sales and services of auxiliary enterprises:** revenues generated by auxiliary enterprises that exist to furnish a service to students, faculty, or staff, and that charge a fee that is directly related to the cost of the service. Examples are residence halls, food services, student health services, intercollegiate athletics, college unions, college stores, and movie theaters.
- **Federal appropriations:** revenues received by the institution through acts of a federal legislative body, except grants and contracts.
- **Capital grants and gifts:** amounts received from gifts or grants primarily intended for the acquisition or construction of capital assets for the institution.

These sources of revenue vary in amount and proportion within each of Maine's public higher education systems. That said, tuition and fees are now the largest or second largest source of revenue within each system and, as the proportion of state appropriations to total operating costs has declined, have come to make up an even higher percentage of each entity's revenue stream.

At the community colleges, tuition and fees now comprise 31 percent of the System's FY09 revenues (up from 20 percent in FY01).

At Maine Maritime Academy tuition and fees as a percent of total revenues has increased from 53 percent in FY01 to 60 percent in FY09.

And at the University of Maine System those percentages have increased from 22.6 percent to 35.7 percent over the same timeframe.

Clearly, the state's share of funding for public higher education in Maine has decreased significantly in recent years. As a result, the mix of revenues that make up the budgets of the state's public colleges and universities has also changed dramatically, causing institutions to rely more heavily on student tuition and fees and forcing many students to take on significant debt in order to finance their education.

It is against this backdrop that the Education and Cultural Affairs Committee has expressed an interest in reviewing other states' models for funding public higher education systems and institutions and developing a plan to increase investment in higher education to benefit Maine's future. That work, while extremely important, is far beyond the scope of this report and should not be confined to our three systems.

Based on the experiences of other states, it is clear that in order to develop a higher education funding model that distributes funds in as rational and equitable manner as possible, Maine

leaders must consciously and deliberately assess what characteristics and policy outcomes are most (and least) important for public higher education. That difficult and complicated work is critical to devising a formula that supports and encourages desired outcomes. For some states, this has meant devising funding models that are tied to certain performance measures. For others, the models are based on a per student appropriation or a system in which students receive a voucher to attend the school of their choice. Each of these state models is intended to promote very specific policy objectives and is tailored to meet the unique mission and realities of the public institutions within the state.

In an increasingly global and knowledge-driven economy, Maine's economic stability will be largely dependent on the state's ability to graduate and retain residents who have the education and skills necessary to attract new businesses to Maine and enable existing companies to grow. Maine's public higher education system is working together to achieve that goal. Its members look forward to working with the Education and Cultural Affairs Committee and other stakeholders in examining and developing new approaches that will lead to an increased investment in higher education to benefit Maine's future.

Table 1: Maine Public Higher Education

	State Appr. (millions)	Total Budget (millions)	State Appr. / Total Budget
FY89	\$156.0	\$345.2	45.2%
FY90	\$168.0	\$379.8	44.2%
FY91	\$161.4	\$405.9	39.8%
FY92	\$163.1	\$415.8	39.2%
FY93	\$161.8	\$422.3	38.3%
FY94	\$163.7	\$425.1	38.5%
FY95	\$164.3	\$438.8	37.5%
FY96	\$167.9	\$458.0	36.7%
FY97	\$171.8	\$479.6	35.8%
FY98	\$175.4	\$504.5	34.8%
FY99	\$183.4	\$533.8	34.4%
FY00	\$204.4	\$571.2	35.8%
FY01	\$242.2	\$613.9	39.4%
FY02	\$224.4	\$600.5	37.4%
FY03	\$222.5	\$649.4	34.3%
FY04	\$220.9	\$697.9	31.7%
FY05	\$229.0	\$722.3	31.7%
FY06	\$233.9	\$747.6	31.3%
FY07	\$248.9	\$778.5	32.0%
FY08	\$260.2	\$790.6	32.9%
FY09	\$252.3	\$804.8	31.3%

Table 2. Maine Community College System

	State Appr. (millions)	Total Budget (millions)	State Appr. / Total Budget
FY89	\$21.4	\$32.8	65.3%
FY90	\$24.1	\$37.7	63.8%
FY91	\$22.9	\$40.7	56.4%
FY92	\$23.1	\$43.1	53.6%
FY93	\$23.0	\$46.2	49.8%
FY94	\$24.5	\$47.8	51.2%
FY95	\$26.1	\$53.5	48.9%
FY96	\$28.8	\$58.7	49.0%
FY97	\$29.7	\$59.0	50.3%
FY98	\$30.1	\$63.1	47.8%
FY99	\$34.1	\$68.1	50.1%
FY00	\$35.0	\$71.4	49.0%
FY01	\$43.2	\$76.6	56.4%
FY02	\$40.2	\$76.4	52.6%
FY03	\$41.7	\$81.2	51.4%
FY04	\$40.6	\$87.5	46.4%
FY05	\$41.5	\$92.3	44.9%
FY06	\$43.2	\$95.2	45.4%
FY07	\$47.6	\$100.6	47.3%
FY08	\$51.9	\$103.9	50.0%
FY09	\$51.5	\$110.9	46.4%

Table 3: Maine Maritime Academy

	State Appr. (millions)	Total Budget (millions)	State Appr. / Total Budget
FY89	\$5.3	\$10.2	52.0%
FY90	\$6.3	\$12.1	52.1%
FY91	\$6.5	\$13.3	48.9%
FY92	\$6.5	\$14.3	45.5%
FY93	\$6.4	\$14.9	43.0%
FY94	\$6.5	\$15.1	43.0%
FY95	\$6.5	\$15.4	42.2%
FY96	\$6.5	\$15.0	43.3%
FY97	\$6.6	\$16.0	41.3%
FY98	\$6.6	\$15.7	42.0%
FY99	\$6.8	\$16.4	41.5%
FY00	\$7.2	\$16.9	42.6%
FY01	\$11.4	\$17.1	66.7%
FY02	\$7.7	\$18.5	41.6%
FY03	\$7.5	\$19.0	39.5%
FY04	\$7.7	\$19.7	39.1%
FY05	\$7.5	\$21.1	35.5%
FY06	\$7.5	\$22.2	33.8%
FY07	\$7.7	\$24.3	31.7%
FY08	\$8.8	\$26.1	33.7%
FY09	\$8.4	\$27.3	30.8%

Table 4: University of Maine System

	State Appr. ¹ (millions)	Total Budget ² (millions)	State Appr. / Total Budget
FY89	\$129.3	\$302.2	42.8%
FY90	\$137.6	\$330.0	41.7%
FY91	\$132.0	\$351.9	37.5%
FY92	\$133.5	\$358.4	37.2%
FY93	\$132.4	\$361.2	36.7%
FY94	\$132.7	\$362.2	36.6%
FY95	\$131.7	\$369.9	35.6%
FY96	\$132.6	\$384.3	34.5%
FY97	\$135.5	\$404.6	33.5%
FY98	\$138.7	\$425.7	32.6%
FY99	\$142.5	\$449.3	31.7%
FY00	\$162.2	\$482.9	33.6%
FY01	\$187.6	\$520.2	36.1%
FY02	\$176.5	\$505.6	34.9%
FY03	\$173.3	\$549.2	31.6%
FY04	\$172.6	\$590.7	29.2%
FY05	\$180.0	\$608.9	29.6%
FY06	\$183.2	\$630.2	29.1%
FY07	\$193.6	\$653.6	29.6%
FY08	\$199.5	\$660.6	30.2%
FY09	\$192.4	\$666.6	28.9%

Notes follow on next page

Notes: Table 4

¹Includes E&G, R&D Debt Service, MEIF, Casco Bay Estuary, and all other miscellaneous one-time appropriation changes.

²Reported revenues reflect any reclassifications that were made in the subsequent year's financial statements presentation. FY89-FY92 includes total unrestricted revenues from the Statements of Current Funds Revenues, Expenditures & Transfers and appropriations, gifts, and grants, net income on pooled investments, change in gain on investments, and investment and other income from the Statements of Changes in Fund Balances; FY93-FY01 includes total revenues and other additions less expended for plant facilities & retirement of indebtedness; FY02-FY09 includes operating & non-operating revenues and other changes in net assets.

³Beginning in FY02, in accordance with new accounting standards issued by the Governmental Accounting Standards Board, the definition of revenues changed (e.g., revenues are now reduced by a scholarship allowance)

Appendix A

Collaborative/Articulation Agreements

The University of Maine System
and
The Maine Community College System

Collaborative/Articulation Agreements

Between the
Maine Community College System
 and the
University of Maine System

(Listed by Community College)

Central Maine Community College

University of Maine (UM)

CMCC Program	UM Program
AAS Architectural & Civil Engineering Technology	BS Construction Mgmt. Technology
AS Early Childhood Education	BS Child Development/Family Relations, Early Childhood Education Option
AA General Studies	BS Child Development/Family Relations, Early Childhood Education Option
AA Liberal Studies	BS Child Development/Family Relations, Early Childhood Education Option
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Augusta (UMA)

CMCC Program	UMA Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
Western Maine University and Community College Center in South Paris	Run in collaboration with University College/UMA

University of Maine at Farmington (UMF)

CMCC Program	UMF Program
AAS Business Administration and Management	BA Business & Administration
AS Early Childhood Education	BS Early Childhood Education
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Fort Kent (UMFK)

CMCC Program	UMFK Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing

University of Maine at Machias (UMM)

CMCC Program	UMM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Presque Isle (UMPI)

CMCC Program	UMPI Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Portland & Gorham (USM)

CMCC Program	USM Program
AAS Applied Technical Studies	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AAS Architectural & Civil Engineering Technology	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AAS Automotive Technology	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AAS Automotive Technology (Ford ASSET)	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AAS Building Construction Technology	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AAS Electromechanical Technology	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AAS Graphic Art & Printing Technology (Both Prepress and Press/Bindery Concentrations)	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AAS Machine Tool Technology	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AAS Medical Assistant	BS Health Sciences
AS Nursing	BS Nursing
AAS Radiologic Technology	BS Health Sciences
AAS Telecommunications Technology	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)
AAS Trade & Technical Occupations	BS Applied Technical Leadership
	BS Industrial Technology
	(Option II)

University of Southern Maine, Lewiston-Auburn College (USM/LAC)

CMCC Program	USM/LAC Program
AS Accounting	BS Leadership & Organizational Studies
AAS Business Administration & Mgmt.	BS Leadership & Organizational Studies
AAS Business & Computer Applications	BA Leadership & Organizational Studies
AS Computer Technology	BS Leadership & Organizational Studies
AS Early Childhood Education	BA Social & Behavioral Sciences
AAS Human Services	BA Social & Behavioral Sciences
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing
AAS Radiologic Technology	BA Natural & Applied Sciences

Eastern Maine Community College

University of Maine (UM)

EMCC Program	UM Program
Any associate degree	Bachelor of University Studies degree through the Division of Lifelong Learning
AAS Business Management	BS Business Administration
AS Early Childhood Education	BS Child Development/Family Relations
AS Electrical and Automation Technology	BS Electricity Engineering Technology
AAS Foods/Business Mgmt. Tech	BS Resource Mgmt. and Environmental Policy
AA Liberal Studies	BS University Studies
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing
AAS Precision Metal Manufacturing	BS Mechanical Engineering Technology

University of Maine at Augusta (UMA)

EMCC Program	UMA Program
AS Early Childhood Education	BS Mental Health and Human Services
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
Hancock County Higher Education Center in Ellsworth	Run in collaboration with University College/UMA
Katahdin Region Higher Education Center in East Millinocket	

University of Maine at Farmington (UMF)

EMCC Program	UMF Program
AS Early Childhood Education	BS Early Childhood Education
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Fort Kent (UMFK)

EMCC Program	UMFK Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing

University of Maine at Machias (UMM)

EMCC Program	UMM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Presque Isle (UMPI)

EMCC Program	UMPI Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Portland & Gorham (USM)

EMCC Program	USM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing

University of Southern Maine, Lewiston-Auburn College (USM/LAC)

EMCC Program	USM/LAC Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AAS Technical Programs	BS Industrial Technology
	BS Professional Technology Education
	BS Vocational Technology
	BS Vocational/Occupational Technology

Kennebec Valley Community College

University of Maine (UM)

KVCC Program	UM Program
Any Associate Degree	Bachelor of University Studies degree through the Division of Lifelong Learning
AAS Applied Electronics and Computer Technology	BS Electrical Engineering Technology
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing
AAS Pulp & Paper Technology	BS Mechanical Engineering Technology

University of Maine at Augusta (UMA)

KVCC Program	UMA Program
AAS Applied Electronics & Computer Technology	BS Computer Information Systems
AAS Business Administration: Accounting, Marketing/Management	BS Business Administration
Certificate - Community Social Services	BS in Mental Health and Human Services
AAS Early Childhood Education	BS in Mental Health and Human Services
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
Certificate - Mental Health Rehabilitation	AA in Social Services

University of Maine at Farmington (UMF)

KVCC Program	UMF Program
AAS Business Administration: Accounting	B.A. Interdisciplinary Studies, Business/Economics
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Fort Kent (UMFK)

KVCC Program	UMFK Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing

University of Maine at Machias (UMM)

KVCC Program	UMM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Presque Isle (UMPI)

KVCC Program	UMPI Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Portland & Gorham (USM)

KVCC Program	USM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing
AAS Health Information Technology	Bachelor of Science in Health Sciences in the College of Nursing and Health Professions
AAS Medical Assisting	
AAS Occupational Therapy Assistant	
AAS Physical Therapist Assistant	
AS Respiratory Therapy	

University of Southern Maine, Lewiston-Auburn College (USM/LAC)

KVCC Program	USM/LAC Program
AAS Advanced Emergency Care	BS Leadership and Organizational Studies
	BS Natural and Applied Sciences
	BS Social and Behavioral Sciences
AAS Business Administration	BS Leadership and Organizational Studies
AAS Health Information Technology	BS Leadership and Organizational Studies
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AAS Occupational Therapy Assistant	BS Natural and Applied Sciences
AAS Physical Therapist Assistant	BS Natural and Applied Sciences
	BS Social and Behavioral Sciences
AS Respiratory Therapy	BS Natural and Applied Sciences

Northern Maine Community College

University of Maine (UM)

NMCC Program	UM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Augusta (UMA)

NMCC Program	UMA Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
Houlton Higher Education Center in Houlton	Run in collaboration with University College/UMA

University of Maine at Farmington (UMF)

NMCC Program	UMF Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Fort Kent (UMFK)

NMCC Program	UMFK Program
AAS Business Administration	BS Business Management
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AAS Nursing	BS Nursing

University of Maine at Machias (UMM)

NMCC Program	UMM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Presque Isle (UMPI)

NMCC Program	UMPI Program
AAS Business Administration	BA Business Management
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Portland & Gorham (USM)

NMCC Program	USM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Lewiston-Auburn College (USM/LAC)

NMCC Program	USM/LAC Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

Southern Maine Community College

University of Maine (UM)

SMCC Program	UM Program
AAS Construction Technology	BS Construction Management Technology
AAS Early Childhood Education	BS Early Childhood Education
AAS Electrical Engineering Technology	BS Electrical Engineering
	BS Electrical Engineering Technology
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Augusta (UMA)

SMCC Program	UMA Program
AAS Criminal Justice	AAS Criminal Justice
AAS Fire Science	BS Public Administration
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
Mid-Coast Higher Education Center in Bath	Run in collaboration with University College/UMA

University of Maine at Farmington (UMF)

SMCC Program	UMF Program
AAS Early Childhood Education	BS Early Childhood Education
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Fort Kent (UMFK)

SMCC Program	UMFK Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Machias (UMM)

SMCC Program	UMM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Presque Isle (UMPI)

SMCC Program	UMPI Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Portland & Gorham (USM)

SMCC Program	USM Program
AS Cardiovascular Technology	BS Health Sciences
AAS Construction Technology	Construction Management Certificate
AAS Electrical Engineering Technology	BS Electrical Engineering
AAS Integrated Manufacturing Technology	BS Industrial Technology
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AS Nursing	BS Nursing
AS Radiation Therapy	BS Radiation Therapy
Collaborative delivery of Adv. Cert. in Multi-Axis Machining at the SMCC Brunswick Campus with USM	

University of Southern Maine, Lewiston-Auburn College (USM/LAC)

SMCC Program	USM/LAC Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

Washington County Community College**University of Maine (UM)**

WCCC Program	UM Program
Any Associate Degree Program	UMAINE - Bachelors of University Studies through the Division of Lifelong Learning
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Augusta (UMA)

WCCC Program	UMA Program
AAS - Business Management	UMA - BS in Administration, Business Administration Management, or Business Administration Accounting
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Farmington (UMF)

WCCC Program	UMF Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Fort Kent (UMFK)

WCCC Program	UMFK Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Machias (UMM)

WCCC Program	UMM Program
Any Associate Degree Program	UMM - Bachelor of College Studies
Any Associate Degree Program	UMM – Calais Connection Agreement; Guaranteed Admission with junior standing. All courses in which students earn grades of C- or above will transfer.
AAS - Adventure Recreation & Tourism	UMM – Calais Connection Agreement; Bachelor of Science in Recreation & Tourism Management
AAS - Business Management	UMM – Calais Connection Agreement; Bachelor of Science in Business and Entrepreneurial Studies
AS Geographical Information Systems (pending final Board Approval expected in Dec '09)	BS Environmental Studies/Geographic Information Systems Concentration
	BS Marine Biology with Geographic Information Systems Minor
	BS Tourism and Recreation Management with Geographic Information Systems Minor
	Certificate - Geographic Information Systems
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs
AA - Liberal Studies	UMM – Calais Connection Agreement

University of Maine at Presque Isle (UMPI)

WCCC Program	UMPI Program
AAS - Adventure Recreation & Tourism	UMPI - BS Outdoor Recreation/Leadership
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Portland & Gorham (USM)

WCCC Program	USM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Lewiston-Auburn College (USM/LAC)

WCCC Program	USM/LAC Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

York County Community College

University of Maine (UM)

YCCC Program	UM Program
All associate degrees	Bachelor of University Studies
AAS Early Childhood Education	B.S. Child Development/Family Relations, Early Childhood Education option
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Augusta (UMA)

YCCC Program	UMA Program
All AAS Programs	Bachelor of University Studies
AAS Accounting	B.S. in Business Administration – Management or Accounting Major
AS Accounting	B.S. in Business Administration – Management or Accounting Major
AAS Business Administration	B.S. in Business Administration – Management or Accounting Major
AAS and AS Early Childhood Education	B.S. Mental Health & Human Services
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Farmington (UMF)

YCCC Program	UMF Program
AS Early Childhood Education	B.S. Early Childhood Education
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Fort Kent (UMFK)

YCCC Program	UMFK Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Machias (UMM)

YCCC Program	UMM Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Maine at Presque Isle (UMPI)

YCCC Program	UMPI Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Portland & Gorham (USM)

YCCC Program	USM Program
AAS & AS Business Administration	B.S. in Accounting or Business Administration
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

University of Southern Maine, Lewiston-Auburn College (USM/LAC)

YCCC Program	USM/LAC Program
AA Liberal Studies *AdvantageU*	Baccalaureate degree programs

Blue highlights indicate duplicate/similar programs offered by the University System within the same Service Delivery Region.

Green highlights indicate collaborative delivery of higher education at off-campus centers.

Purple highlight indicate collaborative delivery of the major courses and an articulated program