

Date: April 16, 2025

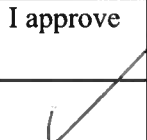
To: Dannel Malloy, Chancellor
University of Maine System (UMS)

From: Jeffrey St. John, VCASA } }

Regarding: New Program Addition, Bachelor of Science in Forest Management, UMFK

Please find the attached program proposal from the University of Maine at Fort Kent to offer the Bachelor of Science in Forest Management. The attached materials include documentation of university-level support, including approval from the President and the full program proposal.

The Chief Academic Officers Council reviewed and recommended the proposed addition of the Master of Science in Digital Marketing Analytics on November 21, 2024. I also recommend this program addition.

I approve	I do not approve for the reasons listed below	Additional information needed for decision	Action
			Recommend B.S. in Forest Management at UMFK


Chancellor Dannel Malloy

4.16.25
Date

Maine's Public Universities

University of Maine • University of Maine at Augusta • University of Maine at Farmington
University of Maine at Fort Kent • University of Maine at Machias • University of Maine at Presque Isle
University of Maine School of Law • University of Southern Maine



Date: November 15, 2024
To: Jeff St. John, Vice Chancellor for Academic and Student Affairs (UMS)
From: Deb Hedeon, President and Provost *Deb Hedeon*
RE: B.S. in Forest Management Proposal

Program Rationale

The Bachelor of Science (B.S.) in Forest Management offered by the University of Maine at Fort Kent (UMFK) responds to the increasing statewide and national demand for professional foresters with a thorough knowledge of forest science theory and practice. The rural environment surrounding the UMFK campus and the strong presence of industrial and non-industrial forests in the region lend themselves to experiential education, undergraduate student and faculty research, and internships and career pathways in forestry that are unmatched in Maine and the northeastern US. A B.S. in Forest Management at UMFK better serves the state's and region's forestry community by offering alternative, experiential approaches to forestry education that will build on and complement a strong forestry A.S. degree program.

Meetings to Discuss Proposed UMFK B.S. in Forest Management

December 18, 2023	UMFK Forestry Faculty, Egan and Hedeon
January 8-12 2024	St. John and Hedeon
January 25, 2024	St. John, Egan and Hedeon
January 29, 2024	St. John, Volin and Hedeon
March 27, 2024	Rowland and Egan
April 26, 2024	Thompson and Hedeon
April 26, 2024	UMFK Forestry Advisory Board, UMFK Forestry Faculty and Hedeon
June 27, 2024	CAOC Meeting: Hedeon – Intent to Plan: BS Forest Management
August 8, 2024	Rowland, Daigneault and Egan
September 5, 2024	Volin and Hedeon
October 1, 2024	Letter: CAOC support and St. John support/approves Intent to Plan

St. John: Vice Chancellor for Academic and Student Affairs (UMS) Jeff St. John

Hedeon: UMFK President and Provost Deb Hedeon

Volin: UMaine Provost John Volin

Egan: UMFK Dean Andy Egan, Division of Arts & Sciences and Professional Studies

Rowland: UMaine Dean Diane Rowland, College of Earth, Life and Health Sciences

Daigneault: UMaine Director Adam Daigneault, School of Forest Resources

Thompson: UMFK Dr. Neil Thompson, Applied Forest Management Program Lead

Campus Approval Process

October 21, 2024	Natural Sciences Unit Chair Approved
October 21, 2024	Arts & Sciences and Professional Studies Dean Approved
November 5, 2024	Academic Council Approved
November 14, 2024	Faculty Assembly Approved
November 14, 2024	Provost Approved

October 2024



A Proposal:

**Bachelor of Science in
Forest Management**

Prepared and submitted by:

Andrew Egan, PhD

Dean | Arts and Sciences and Professional Studies | UMFK

With contributions from:

Samantha Beaulieu, Dr. Steve Hansen, Dr. Stephanie Landry

UNIVERSITY OF MAINE
FORT KENT

Proposal
University of Maine at Fort Kent
Bachelor of Science in Forest Management

I. Program title: Bachelor of Science in Forest Management

II. Program objectives

- a. *Program rationale.* The Bachelor of Science (B.S.) in Forest Management offered by the University of Maine at Fort Kent (UMFK) responds to the increasing statewide and national demand for professional foresters with a thorough knowledge of forest science theory and practice. The rural environment surrounding the UMFK campus and the strong presence of industrial and non-industrial forests in the region lend themselves to experiential education, undergraduate student and faculty research, and internships and career pathways in forestry that are unmatched in Maine and the northeastern US. A B.S. in Forest Management at UMFK better serves the state's and region's forestry community by offering alternative, experiential approaches to forestry education that will build on and complement a strong forestry A.S. degree program.

In addition, consistent with UMFK's experience, national data suggest that associates degree programs in forest technology have been in a decline during the years 2017-21 and that projections for student demand in these programs are categorized as "low growth." [UMFK's A.S. in Applied Forest Management has experienced declining enrollments: n = 16 total students in fall 2024 and 13 in the spring 2024. In the past eight years fall enrollments have been: 24, 20, 14, 16, 13, 16, 17, 16]. UMFK's Forest Management B.S. will likely bring new students to its A.S. Applied Forest Management program, since the two curricula will be connected.

Moreover, community college tuition in Maine is, for now at least, free. This may encourage community colleges to offer two-year degrees, such as forestry, that could compete with UMFK's associated degree in applied forest management. For example, see the partnership between WCCC and Maine's forest industry to deliver a free 3-credit, 10-week asynchronous online training in both English and Spanish on the business of forestry, with financial assistance of up to \$500 to reduce barriers to learning (e.g., access to the internet and child care). Participants earn a credential that recognizes their participation.

To meet the growing demand for professional foresters and recognizing the challenges associated with many A.S. forestry programs nationwide, several colleges and universities have successfully (a) transitioned from 2-year (A.S.) forestry programs to offering both 2- and 4-year (B.S.) forestry programs (e.g., Paul Smith's College (NY)); (b) transitioned from 2-year to 4-year-only forestry programs (e.g., Abraham Baldwin Agricultural College (GA)); and (c) maintained a 2-year forestry program as both a "terminal degree" program and as a "feeder"

program to a 4-year program within the same university (e.g., SUNY ESF/Ranger School (NY); UNH/Thompson School (NH)). UMFK plans to maintain and grow its A.S. in Applied Forest Management while attracting new students to its B.S. in Forest Management.

UMFK's location in the heart of Maine's north woods and industrial forest and its proximity to the Allagash Wilderness provide opportunities for experiential field work in natural resource management in a variety of forest ownerships, habitats, and rural land uses. The strong presence of industrial and non-industrial forests and a healthy forestry sector in northern Maine provide opportunities for forestry experiential education and internships at a scale that is not available elsewhere in Maine and the northeastern US. In addition, UMFK currently enjoys strong support from Maine's forestry sector. For example, J.D. Irving provides financial and in-kind support to UMFK's forestry program through its funding of the *Irving Woodlands Professorship of Forestry*.

b. *General program goals* include offering a B.S. in Forest Management that:

- i. provides an experiential forestry bachelors program alternative that is based on forest science and practice and exceeds the accreditation standards of the Society of American Foresters (SAF), while preparing graduates for licensure in the state of Maine and beyond;
- ii. builds upon and complements UMFK's A.S. degree in Applied Forest Management;
- iii. exploits UMFK's location in Maine's northern forest comprising significant working forests and wilderness, as well as its proximity to a strong forest products industry in the solid wood, pulp and paper, and biomass sectors; and
- iv. offers the option for graduates of UMFK's A.S. degree in Applied Forest Management to continue toward a B.S. in Forest Management that, together, can be completed in a total of four years.

c. *Learning outcomes*. Students who graduate from UMFK's B.S. in Forest Management program will be able to demonstrate:

- i. a thorough understanding of the ecological, logistical, ethical, legal, and economic underpinnings of forest science and practice;
- ii. proficiency in the field, computational, and analytical skills and knowledge associated with all aspects of forestry planning and practice;
- iii. professional oral and written communication skills appropriate to a variety of stakeholders and audiences;
- iv. an appreciation for the complex social and economic dimensions of forest management and the role of the profession to meet the forest-related demands of a diverse society; and
- v. an appreciation for the collaborative processes used to integrate forest values in the context of multiple-use management.

III. Evidence of program need

- a. *Market analysis.* Consistent with UMFK's experience, national data suggest that A.S. programs in forest technology have been in a decline during the years 2017-21 and that projections for student demand in these programs are categorized as "low growth" (Table 1). However, based on the same data source, B.S. programs in forest management are showing signs of slow growth, classifying projected student demand as "emerging."

Table 1. Degree completion growth (2017-21) and projected student demand for the following degree programs: A.S. in forest technology; B.S. in forest management (from Hanover Research).

degree program	degree completion growth (2017-21)	projected student demand	UMFK fall 2024 enrollment
forest technology A.S.	- 6.4	low	16
forest management B.S.	+2.9	emerging	NA

- b. *Educational, economic and social needs.* Almost 70 percent of UMFK students are 1st-generation/low income/qualify for accommodations. UMFK offers degree programs at lower tuition rates than anyone in the northeast US offering a forestry B.S. degree. This provides opportunity for economically and socially marginalized students from Maine and beyond to earn an SAF-accredited forestry degree.

Per credit hour tuition rates for universities in New England/NY with forestry BS programs are (data from individual university websites: in-state/out-of-state):

UMFK: \$260/442; SUNY ESF: \$295/835; UMaine: \$388/1,108; UNH: \$645/1505; UMass: \$708/1,653; UVM: \$678/1,780; Paul Smith's College: \$1,099.

- c. *Indicators of workforce demand for graduates.* The Bureau of Labor Statistics describes "overall employment of conservation scientists and foresters" as having a projected growth rate of four percent, "about as fast as the average for all occupations," for the period 2022-2032. According to the BLS, the median annual wage for those with a B.S. in forestry was \$64,000 in 2021. Other data suggest that "forester jobs are in demand," with a growth rate of five percent for the period 2018-28, with Maine the second most common state for foresters as a percent of the population (<https://www.zippia.com/forester-jobs/trends/>). More anecdotally, the division dean, a former industry forester and forestry educator and administrator, has spoken to forestry sector employers in other states, especially across the South, who have not been able to fill their need for professional foresters, especially from degree programs that emphasize experiential learning that complements the science of forestry.

- IV. Program overview.** Structurally, the B.S. in Forest Management will build on the courses comprising UMFK's A.S. in Applied Forest Management, adding courses that (a) broaden the curriculum's focus on forest management; (b) broaden the curriculum's general education requirements for bachelor degree programs consistent with UMFK policies; and (c) are consistent with the curriculum standards approved by the SAF (see: https://www.eforester.org/Main/Certification_Education/Accreditation/Main/Accreditation/Accreditation_Home.aspx?hkey=acede682-0ce7-4202-85e6-e3371eb38cdc).

SAF guidelines for accreditation outline competencies in four disciplinary areas: ecology and biology; measurement of forest resources; forest resource policy, economics, and administration; and silviculture and forest management. With the exception of forest economics, policy, and administration, most of these competencies are already met in the SAF-accredited A.S. in Applied Forest Management degree. Courses in these areas have been added to round out UMFK's B.S. in Forest Management curriculum (Appendix A).

Students in UMFK's Applied Forest Management program will have fluid transfer into the Forest Management B.S. program (i.e., that track will constitute a 2.5 + 1.5 program), while other students may choose to enter the forestry B.S. program directly in their first year.

V. Program resources

- a. *Personnel.* Discussions with the SAF office in Washington D.C. confirm that UMFK has adequate teaching capacity to successfully house a B.S. degree in Forest Management. UMFK has a fully staffed A.S. in Applied Forest Management degree program, currently comprising approximately 2.5 teaching FTEs in forestry subject matter areas. In addition, UMFK's Natural Sciences unit, in which forestry curricula are housed, employs a faculty member who holds a B.S. in Forestry and subsequent degrees (M.S. and PhD) in wildlife management. He currently teaches courses in wildlife management in the Applied Forest Management curriculum. Finally, the arts and sciences division dean will teach courses in the B.S. in Forest Management program, as needed, including courses in Advanced Forest Measurements and Silviculture, Natural Resource Policy and Law, and Forest Finance and Procurement, courses he has taught in the past at other universities. There is currently no need for additional faculty.
- b. *Financial considerations.* From a financial perspective, a BS in Forest Management at UMFK is very low risk (no new full-time or part-time faculty hires are needed; UMFK's forestry faculty numbers exceed that required for accreditation by the SAF). Initial costs will include (a) costs on an adjunct basis for Advanced Forest Measurements and Silviculture, Natural Resource Policy and Law, and Forest Finance and Procurement; and (b) the purchase of additional forestry-related tools and equipment to accommodate an increase in forestry enrollment. There are currently no additional space requirements. However, future enrollment growth may necessitate additional manpower, including a field technician, and renovated classroom space.

VI. Program assessment and evaluation

The B.S. in Forest Management will follow (a) all program assessment procedures outlined by UMFK and (b) the accreditation guidelines and procedures prescribed by the SAF.

Appendix A. Bachelor of Science in Forest Management curriculum map

A.S. in Applied Forest Management / first five semesters of the B.S. in Forest Management

Fall Semester First Year - Total 15 credits

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- | | |
|--|-----------|
| • ENG 100: English Composition I | 3 credits |
| • MAT 128: College Algebra | 3 credits |
| • FOR 100: Introduction to Forestry | 4 credits |
| • FOR 131: Spreadsheets for NR Professionals | 1 credit |
| • FOR 109: Dendrology | 4 credits |

Spring Semester First Year - Total 16 credits

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- | | |
|--|-----------|
| • ENG 101: English Composition II | 3 credits |
| • FOR 132: Forest Protection I | 2 credits |
| • FOR 242: Map and LiDAR Interpretation | 3 credits |
| • FOR 208: F. Products, Harvesting, and Transportation | 3 credits |
| • FOR 290: Forest Mensuration | 4 credits |
| • GEO 103: Introduction to Global Positioning Systems | 1 credit |

Fall Semester Second Year - Total 13 credits

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- | | |
|--|-----------|
| • FOR 203: Surveying for Foresters | 3 credits |
| • FOR 226: Forest Operations | 4 credits |
| • FOR 332: Forest Inventory and Analysis | 3 credits |
| • BUS 211: Introduction of Business | 3 credits |

Spring Semester Second Year - Total 15-16 credits

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- | | |
|-------------------------------------|-------------|
| • COM 200: Speech | 3 credits |
| • ECO 100: Macroeconomics | 3 credits |
| • FOR 260: Silvics (Forest Ecology) | 3 credits |
| • FOR 360: Silviculture | 3 credits |
| • GIS 300: GIS Applications I | 3-4 credits |

Fall Semester Third Year - Total 13 credits

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- | | |
|---|-----------|
| • ENV 302: Wildlife Conservation & Management | |
| or | |
| ENV 354: Wildlife Habitat Interactions | 4 credits |
| • SSC 327: Interpersonal Skills for Supervisors | 1 credit |
| • FOR 330: Forest Protection II | 3 credits |
| • FOR 350: Forest Management Practicum | 3 credits |
| • FOR 361: Silvics/Silviculture Lab | 2 credits |
-

TOTAL 72 credits (19 gen ed; 22 UL)

Additional courses for the BS in Forest Management: Spring Semester Third Year through Spring Semester Fourth Year

Spring semester third year – total 16 credits

- **BIO 100: Biology I** **4 credits**
- **MAT 351: Statistics** **3 credits**
- ***FRE 1xx: Applied French for NR Professionals*** **3 credits**
- ***FOR 3xx: Forest Finance and Procurement*** **3 credits**
- **General Education electives. Choose from each of the following three domains: History; Literature; Visual and performing arts** **3 credits**

Fall semester fourth year – total 15-16 credits

- ***FOR 4xx: Advanced silviculture and mensuration*** **3 credits**
- **Physical Science (or restricted elective?)** **3-4 credits**
- **ENV 310: Soil Science** **3 credits**
- **Restricted elective** **3 credits**
- ***FOR 3xx: Forest Management Internship* or **BIO 498: Research Methods**** **3 credits**

Spring semester fourth year – total 16-17 credits

- **Restricted elective** **3-4 credits**
- **CRJ 346: Environmental Law** **3 credits**
- **General Education electives. Choose from each of the following three domains: History; Literature; Visual and Performing arts** **6 credits**
- ***FOR 4xx: Integrated Forest and Watershed Mgt*** **4 credits**

TOTAL AS program:	72 ch
TOTAL additional courses:	48 ch
TOTAL BS program:	120 ch

Restricted electives: Research Methods, Botany, Calculus, Chemistry, Physics, Ecology, Mammalogy, American Nature Writing, Limnology, Vertebrate Biology, Wildlife Forensics, Wildlife Science, business courses, or advisor approval.

[NOTE: (a) Courses in italics are proposed/new courses. (b) Course sequencing outlined above represents suggested sequencing for students pursuing the BS degree as an “add-on” to the AS degree. Students pursuing the BS degree at the beginning of their program of study may follow a different sequencing, while being mindful of adhering to course prerequisites. (c) Core forestry course coverage for the first five terms is as currently staffed – that is, staffing for the A.S. degree doesn’t change.]

**UNIVERSITY OF MAINE SYSTEM
ACADEMIC PROGRAM REQUEST
PRO FORMA STATEMENT**

EXECUTIVE SUMMARY

The BS in Forest Management at the University of Maine at Fort Kent predicts enrollment of approximately 10 new FTE students per year with an estimated \$447,158 in predicted tuition and fee revenue. This program will add \$74,988 in additional costs, which includes overload expenses at the associate professor rank. These incremental costs will be offset immediately. The BS in Forest Management is expected to cover direct costs in FY27.

PROJECTED FULL TIME EQUIVALENT (FTE) ENROLLMENT

	Year 1	Year 2	Year 3
Cohort A	15	6	4
Cohort B	-	10	7
Cohort C	-	-	12
TOTAL FTE ENROLLMENT	15	16	23

PROJECTED GROSS REVENUE

	Year 1	Year 2	Year 3
Projected Tuition	\$70,200	\$127,140	\$182,598
Projected Fees	\$12,420	\$22,494	\$32,306
Projected Differential Tuition	\$0	\$0	\$0
Other Revenue	\$0	\$0	\$0
TOTAL REVENUE	\$82,620	\$149,634	\$214,904

Note: Simplified to include total new and returning student revenue estimate at the in-state rate only.

PROJECTED NEW EXPENSES ASSOCIATED WITH PROGRAM ADDITION

	YEAR 1	YEAR 2	YEAR 3
New Faculty personnel	\$0	\$0	\$0
Adjunct Faculty	\$11,968	\$30,968	\$32,052
Course Development Expenses	\$0	\$0	\$0
Travel Expenses	\$0	\$0	\$0
Staff personnel	\$0	\$0	\$0
Other non-personnel	\$0	\$0	\$0
TOTAL EXPENSES	\$11,968	\$30,968	\$32,052

PROJECTED NET REVENUE

	YEAR 1	YEAR 2	YEAR 3
Projected Revenue	\$70,652	\$118,666	\$182,852