



Northwestern Michigan College



Individual Program Transfer Articulation Agreement
Between Northwestern Michigan College
And the University of Maine System acting by and through
The University of Maine
For Transfer From
Associate in Applied Science in Surveying
To
Bachelor of Science in Survey Engineering Technology

This Transfer Articulation Agreement is governed by the general Transfer Articulation Agreement Memorandum of Understanding between Northwestern Michigan College (NMC) and the University of Maine (UMaine). Current students and graduates who have been enrolled in or earned the identified degree from NMC and are admissible to the University shall be eligible for credit evaluation under the terms of this agreement.

Admissions requirements: Successful Completion of the Associate in Applied Science in Surveying and a complete application for admission.

Scholarships and Financial Aid dates: Applying before June 1st for a fall entry allows students to be considered for transfer merit awards, June 1st is also the on-time FAFSA filing date for fall transfers.

Side by Side Course Equivalency Table as March 2021

Identifies how courses in the Associate in Applied Science in Surveying at NMC transfer to the Bachelor of Science in Survey Engineering Technology at UMaine when the required grade is earned in each course, minimum C- (C for English Composition).

General Education Requirements

NMC Courses:		Cr	UMaine Transfer Equivalent*:		Cr
ENG111	English Composition	4	ENG101	English Composition@	4
ENG220	Technical Writing	3	ENG200X	English Elective – will substitute for ENG 317 at UMaine	3
PHL Course: PHL 203	Select: PHL 203 Environmental Ethics to	3	PHI 232	Environmental Ethics	3



meet UM degree requirements.				@ Population & Environment	
NMC Courses:		Cr	UMaine Transfer Equivalent*:		Cr
MTH 122	Math Competency: Trigonometry	3	MAT100X	Math Elective (knowledge used to place into Calculus I) @Quant.	3
OR MTH 141	OR Calculus I (if prereq. is met)	OR 5	OR MAT 126	OR Calculus I @ Quantitative Literacy	OR 5
PHY105	Physics of the World Around Us	4	PHY 105	Descriptive Physics @Lab Science Substitute for PHY 107 Technical Physics I. Expected to meet prereq for UNE's PHY1011	4
GEO115	Introduction to GIS	3	SFR100X	Forest Resources elective – will substitute for SIE 509 Intro to Geographic Info Systems	3
Credits		20-22	Credits		20-22

Occupational Specialty Requirements:

NMC Courses:		Cr	UMaine Transfer Equivalent*:		Cr
AVF211	Commercial Drone Operations	4	SVT331	Photogrammetry	4
MTH131	Intro to Prob & Stats	3	STS232	Principles of Statistical Inference @ Quantitative Literacy	3
SVR110	Fundamentals of Surveying	5	CET101 & SVT110	Plane Surveying & Instrument & Data Collectors	4 1
SVR120	CAD for Surveying	4	SVT121	AutoCAD for Surveyors I	4
SVR150	Construction Survey App	5	SVT202	Route & Site Surveying	5
SVR160	Survey Calculations	3	SVT352	Practical Field Operations	3
SVR210	Surveying Positioning	5	SVT437	Practical GPS	5
SVR220	Boundary Surveying	3	SVT221	Boundary Law @ West Cult Trad/Writing Intensive	3
WSI200	GL Research Technologies	3	SFR200X	Forest Resources Elective can be used as a Program Elective	3
WSI300	Remote Sensing and Sensors	3	SFR300X	Forest Resources Elective can be used as a Program Elective	3
Approved Elective	MTH 141 Calculus I (preferred) OR MTH 142 Calculus II OR A course to meet a UMaine Cultural Diversity & International Perspective or Artistic & Creative Expression General Education requirement, degree requirement or Program Elective requirement	5 OR 5 OR 3	MAT 126 OR OR OR Gen Ed/degree req/ Program Elective	Calculus 1 @ Quantitative Literacy OR OR MAT 127 Calculus II @Quant. OR Cultural Diversity & International Perspective@ OR Artistic & Creative Expression@ OR a degree requirement OR a Program Elective	5 OR 5 OR 3
Credits		41 - 43	Credits		41 - 43

Note: Students who do not take MTH 141 Calculus I at NMC and who do not place into MAT 126 Calculus I at UMaine on



the Math Placement Test will need to take MAT 122 Pre-calculus (UMaine's prerequisite for MAT 126 Calculus I). Student are advised to take Pre-calculus the summer before starting the UMaine program if needed.

@ satisfies a UMaine General Education Requirement.

A minimum grade of C- (or C for English Composition) is required for transfer credit to be awarded.

Special Notes

Selected courses for the NMC Approved Elective, if Calculus I or Calculus II are not taken, that satisfy the following UMaine requirements:

Artistic and Creative Expression: ART 112, MUS 101, MUS 201, MUS 202

Cultural Diversity and International Perspective: ANT 113, PLS 211

Degree Requirements: COM 111, ECO 202

Program Elective: CHM 150, CHM 150R, AST 109

Other courses at NMC may also meet the above UMaine's requirements. To request that an NMC course be evaluated to see if it meets a UMaine requirement, email a copy of the syllabus to UMaine's Credit Evaluation Office at um.transfer@maine.edu.

For an up to date list of how NMC courses transfer to UMaine and which NMC courses can be used to meet UMaine requirements please consult the UMS Online Transfer Equivalency Tool found online at https://peportal.maine.edu/.

Courses taken at NMC in which the student did not earn the required grade to satisfy either transfer credit or degree requirements would need to be retaken at either UMaine or NMC in order to earn the grade needed to count toward the degree at UMaine.

Students may choose to take additional courses from outside the AAS in Surveying curriculum at NMC to satisfy UMaine program or general education requirements. These courses can be taken prior to starting the UMaine program or concurrently during the UMaine program with UMaine advisor approval.

Courses to complete the Online UMaine BS in Survey Engineering Technology as of March 2021

Remaining UMaine General Education Requirements

Cultural Diversity & International Perspectives Course can be taken at UMaine or at NMC with UMaine advisor permission (3 credits if taken after AAS degree, 0 if taken as Approved Elective in place of MTH 141 at NMC)	0 - 3
Creative & Artistic Expression Course can be taken at UMaine or at NMC with UMaine advisor permission (3 credits if taken after AAS degree, 0 if taken as Approved Elective in place of MTH 141 at NMC)	0 - 3



Credits	3-6
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Remaining Online Survey Engineering Technology Degree Requirements		
COM 200 at UMFK	Public Speaking (UMFK) OR take at NMC: COM 111 Public Speaking (with permission of UM advisor if taken after enrollment at UMaine)	3
ENG 201	Strategies for Writing Across Contexts*	3
MAT 126 equivalent	Calculus I (can be taken online from UMA, USM, or SMCC) OR at NMC: MTH 141 Calculus I – (0 credit if taken as part of the AAS in Surveying at NMC, 4 if taken after AAS degree)	0 - 4
MAT 127 equivalent	Calculus II (can be taken online from UMA, USM, or SMCC) OR at NMC: MTH 142 Calculus II transfers as MAT 100X and is used to substitute for MAT 127)	4
PHY 1011 at UNE	Physics II can be taken online from University of New England (NMC's PHY 105 is expected to meet the prerequisite for this course).	4
ECO120 OR ECO 122	Principles of Microeconomics OR ECO 202 Principles of Microeconomics at NMC OR Principles of Macroeconomics	3
COS 103	Intro to Spreadsheets*	1
SVT 122	AutoCAD for Surveyors II*	3
SVT 322	Preparing Effective Prop Description*	1
SVT 329	Site Planning & Sub-Division Design*	1
SVT 201	Adjustment Compensation*	3
SVT 332	Engineering for Surveyors*	3
ACC 201	Principles of Financial Accounting	3
EET 484	Engineering Economics*	3
SVT 418	Fund of Surveying Exam Overview*	1
SVT 341	Advanced Surveying*	3
SVT 451	Survey Business Law*	3
SVT 490	Surveying Capstone*	3
ECO 245	Small Business Economics and Management*	3
Com. Elective	Advanced Communications Elective	3
Program Elective	Program Elective - Course may be taken at UMaine or at NMC with UMaine advisor permission	3
Program Elective	Program Elective - Course may be taken at UMaine or at NMC with UMaine advisor permission	3
Program Elective	Program Elective - Course may be taken at UMaine or at NMC with UMaine advisor permission	3
Program Elective	Program Elective - Course may be taken at UMaine or at NMC with UMaine advisor permission	4
Exam	Fundamentals of Surveying Exam (passing not required)	0
	Credits	64 - 68
Total credits beyond the AAS in Surveying		70-71

*Courses used to meet UMaine academic residency requirements.

Degree Requirement Notes:



As noted above, online students may choose additional courses, beyond the requirements for the AAS in Surveying, at Northwestern Michigan College to meet UMaine General Education requirements and degree requirements. Once enrolled at UMaine, students need permission from their UMaine academic advisor prior to enrolling in NMC or other university courses. The UMaine online Course Equivalency Tool (<https://peportal.maine.edu/>) provides an up-to-date list of NMC courses that transfer to UMaine and meet degree requirements. Some required online courses will be offered by collaborating universities as noted above. Students should consult with their academic advisor when selecting courses from institutions other than UMaine to ensure that their program complies with the UMaine academic residency requirement which states that students are expected to earn a minimum of 30 credits originating from the University of Maine with at least 15 of those credits at the 300 level or higher.

Survey Engineering Technology Program Electives should be selected in coordination with the UMaine academic advisor and should come from the following list: Any Accounting, Astronomy, Business, Chemistry, Computer Science, Economics, Engineering/Engineering Technology, Finance, Forestry, Geography, Geology, Management, Marketing, Mathematics, Physics, ROTC/NROTC, or Spatial Information course that is not substantially duplicative of a required course or below the required courses in number.

Total minimum degree credit hours required for the Bachelor of Science in Survey Engineering Technology is 125 credits consisting of specific degree requirements, specific elective requirements, and general education requirements. Total credits taken between NMC and UMaine may exceed 125 because of the 4 and 5 credit courses at NMC.

Transfer students will be accorded the same standards and criteria for admission to a major degree sequence as UMaine students. All applicants accepted to UMaine’s baccalaureate programs must fulfill the graduation requirements as identified in UMaine’s academic catalog. For up to date degree information please check UMaine’s online catalog at <http://catalog.umaine.edu/>. The most recent transfer credit equivalency information is available through the online transfer equivalency listing located at <https://peportal.maine.edu/>. See appendix A for complete degree requirements.

Contacts/designee at each campus for more information:

Northwestern Michigan College

Jason Slade
Director of Technical Academic Area
jslade@nmc.edu
(231) 995-1995

University of Maine:

Sharon Oliver
Director of Transfer Admission
smoliver@maine.edu
207.581.1561

Articulation Implementation and Agreement Review



The Chief Academic Officer designee of the collaborating institutions shall be responsible for implementing this agreement, for identifying and incorporating any changes into subsequent agreements, and for conducting a periodic review of this agreement.

Signatures to this Agreement

This agreement becomes effective on April 1, 2021 and will be reviewed in July 2026 for renewal discussion.

Northwestern Michigan College:

University of Maine:

Stephen Siciliano
Vice President for Educational Services

John Volin
Executive Vice President for Academic Affairs and Provost

Stephen N. Siciliano 3/22/2021
Signature date

John Volin 3/19/21
Signature date

Marguerite Cotto
Vice President for Lifelong & Professional Learning

Christopher M. Richards
Vice President for Enrollment Management

Marguerite Cotto 3-24-2021
Signature date

Christopher M. Richards 3/15/2021
Signature date

Jason Slade
Director of Technical Academic Area

Dana Humphrey
Dean, College of Engineering

J Slade 3/23/2021
Signature date

Dana Humphrey 3/12/21
Signature date

Will Manion
Director of School of Engineering Technology

Will Manion 3/19/2021
Signature date

Ray Hintz
Professor of Survey Engineering Technology



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03-11-21

Signature

date

Appendix A

University of Maine Bachelor of Science ONLINE Degree in Survey Engineering Technology

March 2021

First Semester

Second Semester

UMaine			Cr						Cr		
COM200	Public Speaking - (UMF)	3	ENG101	English Composition - (UMA)	3						
COS103	Intro to Spreadsheets	1	MAT126	Calculus I - (USM, UMA, SMCC)	3						
MAT122	Pre-calculus	4	PHY108	Physics II - (UNE)	4						
PHY1010	Physics I - (UNE)	4	SVT101	Basic Surveying & Field Office Processes	3						
SVT100	Introduction to Surveying Technology	1	Gen Ed	Artistic and Creative Expression	3						
SVT110	Instrumentation and Data Collectors	1									
SVT121	AutoCAD for Surveyors	3									
	Credits	17		Credits	16						

Third Semester

Fourth Semester

UMaine			Cr						Cr		
MAT127	Calculus II - (USM, UMA, SMCC)	3	ENG201	Strat for Writing Across Contexts	3						
STS232	Principles of Statistical Inference	3	SVT201	Adjustment Computations	3						
SVT122	AutoCAD for Surveyors II	3	SVT221	Boundary Law	3						
SVT202	Route & Site Surveying	3	SVT331	Photogrammetry	3						
Elective	Program Elective	3	SVT332	Engineering for Surveyors	3						
	Credits	15		Credits	15						

Fifth Semester

Sixth Semester

UMaine			Cr						Cr		
		3	ECO120 OR ECO121	Principles of Microeconomics OR Principles of Macroeconomics	3						
ACC201	Principles of Financial Accounting										
ENG317	Business and Technical Writing	3	SVT352	Practical Field Operations	3						
SVT322	Preparing Effective Property Description	1	Gen Ed	Cultural Diversity	3						



SVT329	Site Planning & Subdivision Design	1	Elective	Communications Elective	3
SVT341	Advanced Surveying	3	Elective	Program Elective	3
SVT451	Survey Business Law	3			
Gen Ed	Population and Environment	4			
	Credits	18		Credits	15

Seventh Semester

Eighth Semester

UMaine		Cr			Cr
EET484	Engineering Economics	3	SIE509 or GIS300	Intro to Geographic Info Systems OR Geographic Info Systems I (UMM)	3
SVT418	Fund of Surveying Exam Overview	1	SVT490	SL: Surveying Capstone	3
SVT437	Practical GPS	3	Elective	Program Elective	3
ECO254	Small Business Economics & Mangmt.	3	Elective	Program Elective	3
Elective	Program Elective	3		Fundamentals Surveying Exam (passing not required)	0
Elective	Program Elective	3			
		16			12

Total Program Credits: 125 credits

Program elective courses should be picked from the list of Surveying Engineering Technology Program Electives (Any Accounting, Astronomy, Business, Chemistry, Computer Science, Economics, Engineering/Engineering Technology, Finance, Forestry, Geography, Geology, Management, Marketing, Mathematics, Physics, ROTC/NROTC, or Spatial Information course that is not substantially duplicative of a required course or below the required courses in number) and be approved by an advisor.

General Education Requirement Electives do not have to be taken in the order shown.