Exploring Innovative Models for Microcredentials in Higher Education

Digital Credentials Roundtable

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Presenters

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1EdTech
The University of Maine System Micro-Credential Initiative

Claire Sullivan, Ph.D.
Assistant Vice Chancellor for Innovation in Digital Badges and Micro-Credentials
Background

01. UMaine Engaged Black Bear; MSOL

02. BOT Strategic Priorities, UMS ADC Plan, UMS Research & Development Plan

03. Statewide ecosystem developing via our ALC-ME work
Statewide Workforce Goals and Reports
(Maine Economic Development, Maine Economic Recovery, WIOA)

04. UMS Strategic Plan (draft); Unified Accreditation

Proof of concept
Pilot phase
Growing/Scaling
UMS Guidelines

- Collaboration
- Competency-based, Focus on Workforce Development
- Quality Assured, Assessment, Aligned to Standards
- Definitions & Unified Framework
University of Maine System Framework

Level 1
Introduction and Foundational
- Introduction to topic
- Foundational work needed to succeed at Level 2

Level 2
Training and Practice
- Courses, Online Modules, Bootcamps, Certifications, Workshops, Training
- May earn micro-badges & Industry Credentials

Level 3
Application and Feedback
- Internships
- Experiential learning/PBL/SL
- Apprenticeships
- Other Work-based learning/jobs
Macro-badge

The macro-badge indicates that the micro-credential was earned

Lead to:
- Continued learning opportunities
- Other micro-credentials
- Employment
- Promotions
- Onboard into degrees/certificates
Micro-Badges: Flexibility

- Granular skill/skill set or knowledge
- Assessment
- Stand-alone or embedded within a pathway
- Added value to courses/programs
- Internally or externally created & approved
- Industry-Recognized Certifications or Third-party badges
Computer Support Specialist

Level 1  Level 2  Level 3  Macro Badge

University of Maine System
Computer Support Specialist

University of Maine System
Computer Support Specialist

University of Maine System
Computer Support Specialist

University of Maine System
Computer Support Specialist

IC3
Digital Literacy Certification

CompTIA
A+

TestOut
PC PRO

CERTIFIED
CERTIFIED
CERTIFIED
CERTIFIED
Flexibility in Skill Development

Hunter Safety, Boating Safety, ATV Safety
Wilderness First Aid
Red Cross or American Heart Association first aid/CPR
Other to be approved by 4-H staff

Lakeside Leadership I & II (Bryant Pond 4-H)
Junior Maine Guide
Leadership I, II, III (Tanglewood and Blueberry Cove 4-H)

Maine 4-H Camp and Learning Center Leadership Programs

Relevant Certification

KPE 209 Wilderness First Responder
KPE 265 Outdoor and Adventure Activities
LDR 100 Foundations of Leadership

University of Maine Early College Program
Youth Aquaculture Pathway Integration

Youth Aquaculture Pathway

Enrollment in Youth Aquaculture Pathway

Aquaculture Level 1 Badge

Youth Pathway completion results in Level 1 Aquaculture Badge

Aquaculture Pathway

Level 1 badge results in Aquaculture Pathway Enrollment
UMS Micro-Credential Development & Implementation: Training

Level 1
Overview
- Reflection
- Quiz

Level 2
Development
- Worksheets
- Assignments
- Meta-Data Template

Level 3
Implementation
- Issuing & Marketing
  - Communication Plan
  - Infographic
  - Campus/Organization Website

Macro Badge
University of Maine System
UMS Micro-Credential Development
What We Are Working On

• Cluster Courses: Stacking toward certificates/degrees
• CPL/PLA (academic credits)
• More third-party certifications, IRCs
• Employer/Industry Partnerships
• Registration site
• Marketing/Communication
• Continuous improvement
• FUTURE: Comprehensive Learner Record
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UMS Badging Public Page - ums.badgr.com

Microcredentialing & Incremental Credentialing

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Ad Hoc group presents white paper to College Senate

College Senate convenes faculty group to explore

College Senate charges ASPC to develop policy

College Senate approves micro-credential resolution

Board of Trustees approves micro-credential policy

First micro-credentials developed through NSF project & approved
The National Science Foundation Funded Development of Three Remotely Piloted Aircraft System Microcredentials at SUNY’s Mohawk Valley Community College (MVCC)

Remotely Piloted Aircraft Systems (RPAS) Associate Degree Seeking Student Entrance Points

- **9 Credits**
  - Drone Maintenance Technician

- **12 Credits**
  - Drone Pilot

- **15 Credits**
  - GIS Technician

Program Relevant Gen Ed Requirement 20 Credits

Capstone Experience 8 Credits

Microcredential Seeking Student—Flexible Entrance AND Exit Points

Requirements for the Remotely Piloted Aircraft Systems Associate Degree Met!

Employment as:
- Data Collection Technician
- Site Survey Technician
- Environmental Field Technician
**FABRICATION WELDING MICRO-CREDENTIAL**
18 credits

**STRUCTURAL WELDING MICRO-CREDENTIAL**
14 credits

**ORNAMENTAL WELDING MICRO-CREDENTIAL**
14 credits

**CNC MACHINIST TECHNOLOGY CERTIFICATE PROGRAM**
35 credits

**METAL FABRICATION AOS DEGREE**
64 credits

*Note: Separate micro-credentials have some overlap in course requirements

*Note: CNC Machinist Technology certificate program shares 1-course in common with the Welding certificate program

Lead to employment as metal fabricators and ornamental & structural welders

Lead to employment as metal machinists and toolmakers
13-Module, employer mandated, automation technician onboarding training

non-credit to credit pathway

Advanced standing in Electrical Service Technician program

Employer tuition reimbursement

Industrial Wiring Specialist Micro-credential (13-credits) + Motors and Controls Specialist Micro-credential (9-credits) + Programmable Logic Controllers Micro-credential (11-credits) + Mechanical coursework, math, & English (18-credits)

Electrical Service Technician Associate’s Degree
NYSDOL Registered Apprenticeship Industrial Manufacturing Technician Trade

⇒ Electrical Theory & Modern Industrial Practices (9-credits) = NYSDOL Journeyworker credential

NYSDOL Registered Apprenticeship Electro-Mechanical Technician Trade

⇒ Industrial Controls & Mechanical Coursework (23-credits) = 2nd NYSDOL Journeyworker credential & SUNY-recognized Mechatronics Certificate

Employer tuition reimbursement

Advanced Electronics & Industrial Controls Coursework (32-credits) = Electrical Service Technician Associate’s Degree
Thank You

Tim Thomas–Chief Strategy Officer

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About NMSU Micro-Learning

- What is NMSU Micro-Learning
- Microcredentials Offered
- Learning Experiences
- Badging
- Teamwork Makes the Dream Work
NMSU Micro-Learning

NMSU Micro-Learning is New Mexico State University’s platform designed to provide relevant and flexible learning experiences that support market needs in the form of online courses using a 1 credit:1 competency learning model. Our courses help learners develop new skills in specialized areas to support businesses that are looking to:

- Reskill, upskill, or develop new skills within their workforce.
- Recruit and retain highly skilled talent
- Reach strategic business goals
- Support growth

Micro-credentials are qualifications that demonstrate:
- Skill
- Competency
- Achievement
- Knowledge
Micro-Learning Experiences

Micro-learning is a short-term learning experience that provides essential information about a topic in engaging and practical ways.

- Micro-learning participants will build skills in a specialized area throughout the duration of the course and demonstrate they have mastered these skills through engaging activities and projects.
- As participants complete the course through NMSU On-Demand, they will earn micro-credentials that will be recognized through a digital badge.
- Customized length depending on necessary engagement hours or competency attainment.
• Alignment with degree programs.

• Tagged content, assessments, skills, competencies.

• High quality industry-driven and portable.
Badges
Electronic badges that allow sharing digital credentials in an industry-recognized format

Certificates
Certificates for module, course, and program completion

Long-life Skills
Long-life skills to apply in professional environments, to earn a promotion, or to enter a new field
Value of the Digital Badge

What’s the value?
- Badges provide evidence of knowledge, skills, and accomplishments.
- Badges recognize learning as a lifelong pursuit.
- Badges can be shared on websites, blogs, social media profiles, online portfolios, and resumes.

What’s in a NMSU On Demand Digital Badge?
- Badge Name
- Description
- Earning Criteria
- Demonstrated Skills
- Standards Alignments
- Issuer & Organization
- Issued Date
- Expiration Date
- Recipient
Teamwork Makes the Dream Work
ID and the SME Relationship

- Instructional Designer Role
- Subject Matter Expert Role
- Collaboration
  - Audience
  - Learning Experiences
  - Future Planning
Course Design

- Clear navigation
- Faculty engagement
- 1:1 consultation with instructional design staff
- Chunked content – ease of processing and applying
Interested in Learning More?

Contact:
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Continuing the conversation

- [Share](#) any feedback
- [Register](#) for the next Digital Credentials Roundtable, May 22
- [Learning Impact Conference](#), June 5-8, 2023, Anaheim, CA