

## **Academic Program Proposals for October 27, 2023**

The following is a list of academic program proposals being reviewed for possible consideration for approval at the October 27, 2023, Arkansas Higher Education Coordinating Board meeting. The summary contents are subject to change. The finalized version of the summaries will be available in the board book.

The institution's name, program title, and program summary are listed below. Contact ADHE for a copy of the proposals.

If you have concerns, objections, questions, or comments concerning a specific proposal, please send them to **Mason Campbell, Assistant Commissioner of Academic Affairs** ([mason.campbell@adhe.edu](mailto:mason.campbell@adhe.edu)) at ADHE no later than September 15, 2023.

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### **NORTHWEST ARKANSAS COMMUNITY COLLEGE (NWACC) TECHNICAL CERTIFICATE IN PRACTICAL NURSING**

The administration and Board of Trustees of Northwest Arkansas Community College (NWACC) request approval to offer the Technical Certificate in Practical Nursing, effective Spring 2024. NWACC is accredited by the Higher Learning Commission and the proposed program is within the role and scope established for the institution. The Northwest Arkansas Community College Board of Trustees approved the program on May 8, 2023.

#### **Program Description**

Northwest Arkansas Community College, in conjunction with the Office of Skills Development (OSD) and NWACC's Secondary Career Center, propose to offer a 35 credit-hour Technical Certificate in Practical Nursing to both secondary and post-secondary students. Students completing this program of study will gain the skills necessary to perform basic patient care tasks in a variety of settings such as nursing homes, hospitals, physicians' offices, and private homes.

The proposed program will require two new, fulltime faculty members. Existing facilities, resources, and equipment will be used to support the program. Funding for the secondary program will be provided by OSD.

#### **Program Need**

Licensed Practical Nursing is listed as a high-demand occupation according to the Arkansas Division of Workforce Services. At the post-secondary, non-degree award level, the state-wide median salary for a Licensed Practical Nurse is \$45,990. In the Northwest region of Arkansas, the median salary is slightly higher at \$48,900.

Northwest Arkansas has seen continual growth for more than a decade. With such growth comes a higher demand for fundamental services such as healthcare. The

Division of Workforce Services' Occupational Projections data shows a 12% increase in demand (approximately 250 positions) for Practical Nurses over the next seven years. The proposed Technical Certificate in Practical Nursing will be one step towards meeting the current demand.

### **Program Cost**

The proposed Practical Nursing program will share existing facilities and equipment with the Registered Nursing program. Two fulltime faculty dedicated to the program will be hired during the 2024-2025 budget cycle. Renovation of one classroom is planned for an approximate cost of \$10,800. This renovation will better equip the classroom for effective instruction by upgrading the data drops, desktop computers, and desks. NWACC also plans to spend approximately \$1,000 on faculty textbooks. No additional administrative costs will be incurred since the Practical Nursing program will be housed in the same department as the Registered Nursing program.

As previously stated, the Office of Skills Development will fund the cost associated with the secondary program.

### **Program Duplication**

Practical Nursing is offered at 22 of the 33 Arkansas public institutions of higher education, with the closest being 80 miles away at the University of Arkansas Fort Smith. A Practical Nursing program is offered at Northwest Technical Institute in Springdale, which is the only public career and technical school in the state.

Although there are several Practical Nursing programs around the state, none of them were below viability standards set forth by ADHE policy.

### **Program Learning Outcomes**

Upon successful completion, a student will be able to:

1. Use fundamental knowledge and understanding of the nursing process for problem-solving, prioritization of client care, and prevention of health complications in the adult and geriatric population.
2. Identify and provide knowledge and resources necessary to complete client education regarding fundamental nursing concepts and basic nursing procedures.
3. Recognize and demonstrate effective communication in obtaining and conveying relevant information regarding fundamental nursing concepts, skills and the nursing process to faculty and classmates.
4. Discuss and correctly utilize technology in the retrieval, management, and reporting of fundamental nursing concepts, skills, and medication provision in the classroom and nursing laboratory.

5. Conduct head-to-toe holistic nursing assessments on a diverse adult client population with the recognition of 'normal' physical, behavioral, psychological, and spiritual health status.
6. Identify basic client needs and prioritize utilizing various nursing theories such as Maslow's Hierarchy of Needs, to plan care and provide nursing interventions that reflect knowledge of human growth and development, age-appropriate adult nursing care, and application of fundamental nursing principles.
7. Develop clinical reasoning and nursing judgment to make responsible client-centered care decisions at the fundamental level to ensure client safety.
8. Employ listening and communication skills to effectively promote teamwork and conflict resolution with members of the healthcare team and to promote advocacy and a therapeutic relationship with clients.
9. Demonstrate accountability and responsibility for culturally appropriate nursing care provided at the fundamental level while maintaining ethical and legal principles.
10. Apply theoretical knowledge of fundamental nursing concepts in the provision of adult and geriatric client care.
11. Always demonstrate professionalism in the laboratory and clinical setting.
12. Apply adult health nursing concepts to provide safe, quality, evidence-based, client-centered nursing care to diverse adult, obstetrics and newborn clients with acute and chronic illnesses requiring interventions.
13. Contribute to collaboration and teamwork with members of the interprofessional team, the client, and the client's support persons in the adult or maternal healthcare setting.
14. Relate quality nursing interventions to improve care for diverse adult, obstetrics and newborn clients with acute and chronic illnesses requiring interventions.
15. Apply basic information management principles, techniques, and systems, and client care technology to communicate, manage knowledge, mitigate error, and support decision-making in the adult or maternal healthcare setting.
16. Demonstrate a culture of caring when providing holistic, compassionate care to diverse adult, obstetric and newborn clients with acute and chronic illnesses requiring nursing interventions.
17. Incorporate sound management, leadership and delegation in a variety of healthcare settings in diverse settings.
18. Facilitate interprofessional collaboration to provide competent care in a variety of healthcare settings to diverse populations across the lifespan.
19. Provide safe, quality evidenced-based client centered care in a variety of healthcare settings with a diverse population across the lifespan.
20. Engage in clinical reasoning and client centered care decisions that function in a variety of healthcare settings to diverse populations across the lifespan.

21. Create a holistic, compassionate and culturally competent client care environment.
22. Identify theories and concepts for management of and ethical and legal guidelines in the nursing care of the clients experiencing common mental health conditions/disorders.
23. Recognize the importance of therapeutic communication, leadership skills, and collaboration of teamwork to meet the client's health care goal and needs of the client experiencing common mental health conditions/disorders.
24. Use self-knowledge gained through reflection on one's own beliefs and values in building and enhancing the nurse-client relationship to provide safe, high quality, evidence-based nursing care of diverse clients experiencing common mental health conditions/disorders.
25. Compare different cultures spiritual beliefs and practices of the client experiencing mental health conditions/disorders.

### **Program Enrollment and Graduation Projections**

#### NWACC Program

<b>Academic Year</b>	<b>Projected Enrollment</b>	<b>Projected Graduates</b>
2024 - 2025	16	
2025 - 2026	16	
2026 - 2027	16	48*
2027 - 2028		64*
2028 - 2029		80*

#### Secondary Career Center Program

<b>Academic Year</b>	<b>Projected Enrollment</b>	<b>Projected Graduates</b>
2024 - 2025	16	
2025 - 2026	32	
2026 - 2027	32	80*
2027 - 2028		112*
2028 - 2029		144*

\*Cumulative graduates

### **Program Requirements**

#### Pre-Requisite Courses – 10 credit hours

BIOL 2214	Anatomy & Physiology I
HIM 1403	Medical Terminology for Health Sciences
MATH 1003	Survey of Technical Math OR
MATH 1203	College Algebra

#### Practical Nursing Courses – 35 credit hours

NURS 9117	Fundamentals for Practical Nursing
NURS 9127	Fundamentals Principles and Skills

*NURS 9227 Medical Surgical for Practical Nursing I*  
*NURS 9237 Medical Surgical for Practical Nursing II*  
*NURS 9324 Transition to Practice*  
*NURS 9333 Mental Health Nursing*  
*Italics = New Courses*

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**NORTHWEST ARKANSAS COMMUNITY COLLEGE (NWACC)  
TRAILS TRADE SCHOOL AND CONSTRUCTION TECHNOLOGY ADMIN. UNIT,  
CERTIFICATE OF PROFICIENCY IN TRAIL MANAGEMENT,  
CERTIFICATE OF PROFICIENCY IN TRAILS TECHNICIAN,  
TECHNICAL CERTIFICATE IN TRAILS AND COMMUNITY DEVELOPMENT, AND  
TECHNICAL CERTIFICATE IN TRAILS CONSTRUCTION AND MAINTENANCE**

The administration and Board of Trustees of Northwest Arkansas Community College (NWACC) request approval to establish the Trails Trade School and Construction Technology administrative unit and offer the Certificate of Proficiency in Trail Management, Certificate of Proficiency in Trails Technician, Technical Certificate in Trails and Community Development, and Technical Certificate in Trails Construction and Maintenance, effective Fall 2024. NWACC is accredited by the Higher Learning Commission and the proposed administrative unit and program are within the role and scope established for the institution. The Northwest Arkansas Community College Board of Trustees approved the administrative unit on June 12, 2023, and the programs on August 7, 2023.

ADHE received two separate proposals for Trails and Construction Technology, one for the certificate programs and one for the creation of the administrative unit. ADHE staff combined the two proposals based on their contingency to one another.

**Administrative Unit and Program Description**

The proposed certificates, housed in the proposed Trails Trade School and Construction administrative unit, will provide a world class education and hands on training in trail building, maintenance, and safety, connecting passionate individuals with rewarding careers in trail construction, design and management while promoting sustainable, accessible, and innovative outdoor recreation opportunities. The Walton Family Charitable Support Foundation awarded NWACC with a generous, renewable, 3-year grant to fund the creation of the proposed entities. This investment aligns with a regional and statewide focus on outdoor recreation economic development, and it generously enables NWACC to provide its students with world-class lab facilities, equipment, and personnel.

The proposed Trails Trade School and Construction Technology administrative unit will require eight new positions. Administrative positions include an Executive Director, a Director, a Bicycle Trails Marketing Specialist, an Apprenticeship, SOC, and Placement

Coordinator, and a part-time Lab Coordinator. One full-time Trails Construction faculty and two part-time Trails faculty will be hired.

The proposed 15 credit-hour Certificate of Proficiency in Trail Management and 12 credit-hour Certificate of Proficiency in Trails Technician are stackable credentials with the 34 credit-hour Technical Certificate in Trails Construction and Maintenance. All three of these credentials will stack into the existing Associate of Applied Science in General Technology. A 36 credit-hour Technical Certificate in Trails and Community Development is designed for those students pursuing a career opportunity in community planning, economic development, non-profit trail organizations, or tourism agencies.

### **Program Need**

According to a recent article written by Joe Jones for ArkansasOutside.com, *“Northwest Arkansas continues to be a world leader in mountain biking programs. From the world-class trails to the new home for many bicycle industry businesses to bicycle repair training, and now in setting standards for trail building. Bentonville has donned the moniker, “Mountain Bike Capital of the World™,” and they seem to be working hard to earn it.”*

At this time, program need is evident from employer interest and support and employment opportunities in the region. Companies such as Trailblazers (Bentonville, AR), American Trails (Redding, CA), Sinuosity Trails (Morristown, VA), Trail Design Specialists (Danielsville, GA), Rogue Trails (Rogers, AR), and the Professional Trail Builders Association (Boulder, CO) are among those that have contacted NWACC have expressed their interest and support of this program.

Providing a formal workforce analysis for occupations in Trail Construction and Maintenance has proven to be difficult. Currently, the Department of Labor has no Standard Occupational Code (SOC) for Trail Construction and Maintenance. Additionally, the U.S. Bureau of Labor Statistics categorizes Trail Construction and Maintenance workers as Grounds Maintenance workers which doesn't accurately describe the profession.

### **Program Cost**

Over the course of three years, NWACC has received a 1.2M grant and an 8M grant from the Walton Family Charitable Support Foundation to start a Bicycle Technician and Trails Technician program, respectively. This grant-funded budget will provide the proposed academic unit and programs with generous start-up funding for personnel, direct expenses, and capital expenses including the renovation of an existing building to create a state-of-the-art lab. Once the program is alive and thriving, a more modest and sustainable budget is expected. The budget for equipment is expected to be \$900,000, personnel \$1,492,000, and building renovation \$4,192,000.

## **Program Duplication**

The proposed program would be the first of its kind in the state of Arkansas that focuses solely on the design, construction, and management of trail systems. Arkansas Tech University offers courses on Open Space Management and Trail Planning and Management within their Bachelor of Science in Recreation and Parks Management degree.

## **Program Learning Outcomes**

### Administrative Unit Objectives

1. To provide comprehensive training in trail building and maintenance techniques, including design, construction, and maintenance of trails in various environments.
2. To equip students with the knowledge and skills necessary for the safe and sustainable use, construction, maintenance, and management of trails, including the use of tools and equipment.
3. To foster partnerships with public and private organizations in the trail building and maintenance industry.
4. To provide job placement and transfer services to graduates of the trade school.
5. To establish the trade school as an internationally recognized provider of, and partner in, standardized quality training in the field of trail building and maintenance, as well as in trail innovation.
6. To collaborate with trail organizations and industry inter/nationally to share research, insights, curriculum, and resources.

### Outcomes for Credentials in Trails

1. **Critical Thinking and Problem-Solving:** Graduates will demonstrate the ability to critically analyze trail-related challenges, apply problem-solving techniques, and make informed decisions to create and maintain sustainable and user-friendly trail systems.
2. **Communication Skills:** Graduates will effectively communicate trail planning, design, and maintenance concepts to diverse audiences through oral presentations, written reports, and visual representations.
3. **Environmental Awareness and Stewardship:** Graduates will develop a strong sense of environmental responsibility and exhibit an understanding of how trail construction and maintenance can impact natural ecosystems. They will employ strategies to minimize environmental impacts and promote sustainable trail practices.
4. **Technical Competence:** Graduates will acquire hands-on technical skills in trail construction, maintenance, and equipment operation, enabling them to work proficiently in trail-related projects and effectively troubleshoot trail issues.
5. **Safety Awareness:** Graduates will prioritize safety in all aspects of trail building and maintenance. They will demonstrate knowledge of safety protocols and

adhere to industry standards to ensure the well-being of trail users, team members, and themselves.

6. Cultural and Historical Awareness: Graduates will appreciate the cultural and historical significance of trails, understanding how they contribute to community identity and recreation. They will integrate cultural heritage preservation principles into trail planning and design.
7. Collaborative and Interdisciplinary Approach: Graduates will collaborate effectively with diverse stakeholders, including government agencies, community members, landowners, and non-profit organizations, to develop inclusive and sustainable trail systems.
8. Ethical Trail Use and Advocacy: Graduates will exemplify ethical trail use practices and advocate for responsible outdoor recreation, promoting Leave-No-Trace principles and respect for the natural environment.
9. Leadership and Teamwork: Graduates will exhibit strong leadership and teamwork skills, fostering a positive work environment and effectively leading trail construction and maintenance projects.
10. Adaptability and Continuous Learning: Graduates will embrace adaptability in response to evolving trail management practices, new technologies, and environmental changes. They will demonstrate a commitment to continuous learning and professional development within the trail-building field.
11. Professional and Ethical Conduct: Graduates will uphold professional ethics, including honesty, integrity, and accountability, in all aspects of trail building and maintenance projects.
12. Community Engagement: Graduates will actively engage with local communities to understand their trail needs and preferences, ensuring that trail systems reflect and enhance community values and aspirations.

### **Program Enrollment and Graduation Projections**

#### Certificate of Proficiency in Trail Management

<b>Academic Year</b>	<b>Projected Enrollment</b>	<b>Projected Graduates</b>
2023 - 2024	12	12
2024 - 2025	18	18
2025 - 2026	24	24

#### Certificate of Proficiency in Trails Technician

<b>Academic Year</b>	<b>Projected Enrollment</b>	<b>Projected Graduates</b>
2023 - 2024	12	12
2024 - 2025	18	18
2025 - 2026	24	24



Technical Certificate in Trails Construction and Maintenance

<b>Academic Year</b>	<b>Projected Enrollment</b>	<b>Projected Graduates</b>
2024 - 2025	12	12
2025 - 2026	18	18
2026 - 2027	24	24

Technical Certificate in Trails and Community Development

<b>Academic Year</b>	<b>Projected Enrollment</b>	<b>Projected Graduates</b>
2024 - 2025	12	12
2025 - 2026	18	18
2026 - 2027	24	24

**Program Requirements**

Certificate of Proficiency in Trail Management

TRAL 1003      *Introduction to Trails*  
TRAL 1013      *Trail Planning and Design*  
TRAL 1023      *Trail Construction*  
TRAL 1033      *Trail Maintenance and Management*  
TRAL 2003      *Trail Operations and Regulations*  
*Italics = New Courses*

Certificate of Proficiency in Trail Technician

TRAL 1023      *Trail Construction*  
TRAL 1033      *Trail Maintenance and Management*  
TRAL 2711      *Heavy Equipment Operations for Trails*  
TRAL 2811      *Welding for Trails*  
TRAL 2911      *Small Engine Repair for Trails*  
EMTA 1022/1021      *Emergency Medical Responder Lecture & Lab*  
*Italics = New Courses*

Technical Certificate in Trail Construction and Maintenance

TRAL 1003      *Introduction to Trails*  
TRAL 1013      *Trail Planning and Design*  
TRAL 1023      *Trail Construction*  
TRAL 1033      *Trail Maintenance and Management*  
TRAL 2003      *Trail Operations and Regulations*  
TRAL 2711      *Heavy Equipment Operations for Trails*  
TRAL 2811      *Welding for Trails*  
TRAL 2911      *Small Engine Repair for Trails*  
CST 1323      *Introduction to Craft Skills*  
CST 2213      *Construction Methods I*  
CST 2441      *Construction Internship*

CST 2513            Surveying  
BADM 2513        Business Organization and Management OR  
EMTA 1022/1021   Emergency Medical Responder Lecture & Lab  
*Italics = New Courses*

Technical Certificate in Trails and Community Development

*TRAL 1003            Introduction to Trails*  
*TRAL 1013            Trail Planning and Design*  
*TRAL 2003            Trail Operations and Regulations*  
CST 1323        Introduction to Craft Skills  
CST 2513        Surveying  
DRFT 1233       Engineering Graphics  
DRFT 2114       Auto CAD 1  
DRFT 2183       Auto CAD Civil 3D  
GEOS2943        Intro to Geographic Information  
GEOL 1114       General Geology I  
ENSC 2003       Environmental Management  
ENSC 2001L      Environmental Management Lab  
*Italics = New Courses*

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**UNIVERSITY OF ARKANSAS FAYETTEVILLE (UAF)  
DOCTOR OF MUSICAL ARTS IN MUSIC**

The administration of the University of Arkansas Fayetteville (UAF) and Board of Trustees of the University of Arkansas System request approval to offer the Doctor of Musical Arts in Music, effective Spring 2024. UAF is accredited by the Higher Learning Commission and the proposed program is within the role and scope established for the institution. The University of Arkansas System Board of Trustees will consider the administrative unit and program for approval on September 15, 2023.

**Program Description**

The proposed, 54 credit-hour Doctor of Musical Arts in Music will give students the interdisciplinary training and robust work experiences needed to thrive in industries that value traditional music literacy, creativity, communication, collaboration, research, technology, repertoire and concert planning, and other skills. An initial concentration in Conducting will be offered with plans for additional concentrations in the future.

The Doctor of Musical Arts in Music: Conducting Concentration program is a rigorous, three-year program of study culminating in conducting public performances with a substantial capstone project in lieu of a dissertation. Applicants to the proposed program must exhibit proficiency in a number of areas including reading in French, German, or Italian, diction, music history, music theory, and research. In addition, applicants will be required to undergo an audition and/or interview process.

Existing administrators, faculty, facilities, and resources will be utilized for the proposed program. Additionally, the University anticipates zero costs to start the program.

### **Program Need**

Graduates from the proposed degree program will seek employment as a college music professor, worship leader, or composer. Occupational projections from the Arkansas Division of Workforce Services indicate approximately 350 openings per year in this field within Arkansas with a long-term growth rate of 10.21% in Arkansas. The majority of graduates will seek employment at institutions of higher education in music departments, however they may also seek employment in K-12 public schools' instrumental programs as well. Almost all institutions of higher education with music programs have a need for faculty with doctoral degrees.

### **Program Cost**

The Doctor of Musical Arts in Music program will utilize existing resources, facilities, and faculty. No additional funds will be required for this program.

### **Program Duplication**

The proposed Doctor of Musical Arts in Music program would be the first of its kind in the state of Arkansas. There are institutions within a 300-mile radius that offer a similar program. These institutions are Kansas State University, University of North Texas, University of Missouri Columbia, University of Oklahoma, and the University of Memphis.

### **Program Learning Outcomes**

Upon successful completion, a student will be able to:

1. Develop conducting skills at the highest professional level, using creative and critical thinking to inform stylistic choices and artistic expression, while demonstrating appropriate spontaneity, and will communicate their artistry to diverse audiences; in addition, students will demonstrate effective, musical, and efficient rehearsal techniques.
2. Develop a secondary area of expertise to demonstrate discipline-related breadth at an advanced level, and/or the acquisition of new professional skills.
3. Demonstrate an ability to summarize, synthesize and critique disciplinary content in relation to their major and secondary (cognate) areas of study; in the major area, students will demonstrate a thorough knowledge of the core repertoire.
4. Demonstrate effective analytical and interpretative skills in music theory, musicology and/or performance practice, as well as an ability to communicate an advanced understanding and evaluation of musical knowledge and ideas in written and/or oral forms.

5. Pursue specialized studies, to develop expertise and an ability to synthesize knowledge in areas of interest that enhance their required curriculum and/or professional goals.
6. Utilize and apply appropriate research methods to explore a focused research topic and to contribute original perspectives to discipline-related knowledge, communicating their research findings clearly and professionally in written, oral, and performative forms.
7. Demonstrate leadership and administrative skills necessary to lead at a collegiate level.
8. Develop preliminary research skills to effectively study and present topics related to conducting and related topics,
9. In addition, many DMA students will develop experience and expertise in instruction, pedagogy, and student assessment in at least one area of musical study, also gaining insights into rehearsal strategies for large ensemble in the major area, and appropriate methods of student evaluation.

### Program Enrollment and Graduation Projections

Academic Year	Projected Enrollment	Projected Graduates
2024 - 2025	2-3	
2025 - 2026	2-3	
2026 - 2027	2-3	2-3
2027 - 2028		2-3
2028 - 2029		2-3

### Program Requirements

#### Major Area – 18 credit hours

Complete 4 credit hours of wind band, choral, or orchestral literature from the following:

MUHS 6633	<i>Survey of Symphonic Literature</i>
MUHS 6693	<i>Band Literatures</i>
MUEN 6451	<i>Schola Cantorum VI</i>
MUEN 6691	<i>Wind Ensemble VI</i>
MUEN 6431	<i>Symphony Orchestra VI</i>
MUEN 6881	<i>Chamber Choir</i>
MUAP 610V	<i>Applied Voice/Instrument</i>
MUAC 6121	<i>Advanced IPA for Singers</i>

Complete 2 credit hours of score reading:

MUTH5322	Score Reading
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Complete 6 credit hours of music history (6000 level):

MUHS 6962	<i>Choral History and Literature II</i>
MUHS 6952	<i>Choral History and Literature I</i>
MUHS 6973	<i>Seminar in Bibliography and Methods of Research</i>
MUHS 6633	<i>Survey of Symphonic Literature</i>
MUHS 6693	<i>Band Literatures</i>

Complete 6 credit hours of music theory (6000 level):

*MUTH 677V Special Topics in Music Theory*

*MUTH 6343 Analytical Techniques*

*MUTH 6643 Analysis of 20th Century Music*

Electives – 6 credit hours of any UAF Music course

Concentration – 12 credit hours

*MUPD 682V Conducting*

Dissertation/Lecture Recitals – 18 credit hours

Option 1: *MUAP 6203 Graduate Recital*

*MUAP 6213 Graduate Recital II*

*MUPD 700V Doctoral Dissertation*

Option 2: *MUAP 6203 Graduate Recital*

*MUAP 6213 Graduate Recital II*

*MUAP 622V Community Project for DMA Candidates*

*MUPD 700V Doctoral Dissertation*

*Italics = New Courses*

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## **UNIVERSITY OF ARKANSAS FAYETTEVILLE (UAF) MASTER OF SCIENCE AND GRADUATE CERTIFICATES IN ENVIRONMENTAL RESILIENCY**

The administration of the University of Arkansas Fayetteville (UAF) and Board of Trustees of the University of Arkansas System request approval to offer the Master of Science in Environmental Resiliency, Graduate Certificate in Environmental Resiliency, Graduate Certificate in Environmental Resiliency Certifications, Accounting and Metrics, Graduate Certificate in Environmental Resiliency Leadership, and Graduate Certificate in Environmental Resiliency Sustainability, effective Spring 2024.

UAF is accredited by the Higher Learning Commission and the proposed program is within the role and scope established for the institution. The University of Arkansas System Board of Trustees will consider the program for approval on September 15, 2023.

### **Program Description**

The proposed degree program will offer students advanced study in the concepts in environmental resilience or the ability of humans to interact with their environment to limit the impact of environmental change. Students will be prepared to address potential economic losses by learning theories and methods of resiliency and sustainability as part of a broader understanding of climate change and solutions in a business oriented economic development environment to advance their careers as leaders in business and government.

The proposed, 100% online program will be comprised of a 30 credit-hour Master of Science in Environmental Resiliency along with stackable, 15 credit-hour Graduate Certificates in Environmental Resiliency, Sustainability, Leadership, and Certifications,

Accounting and Metrics. No new administrators, resources, facilities, or equipment is needed for the program. UAF does plan on hiring six new faculty members and to spend approximately \$60,000 on course development.

### **Program Need**

After a formal review of available online programs in Arkansas and the southeastern United States, the University of Arkansas found that no institution is currently filling the need in their region. The southeastern United States is underrepresented, and this proposed program represents one of the first steps to addressing the lack of such programs in the region. Graduates of the proposed master's program and/or graduate certificates will be in a position to advance their careers with a better understanding of what is needed to move companies, agencies and businesses toward a more resilient and environmentally friendly future.

The target audience for both the master's program and the graduate certificates is working professional students, specifically mid-level employees who understand their company, agency, or program rules, regulations, and procedures. Many of these individuals are decision makers for their company, agency, or program's environmental and sustainability policies or seek to move into that role in the future. While they may be very skilled in aspects of their professions, they need a more comprehensive understanding of the science, theory, and methods to assist in their policy decisions and to realize the potential implications of their policies.

Graduates of the proposed program will be able to seek jobs at a number of Arkansas companies who have focused on sustainability as a key driver of their business such as becoming a zero emissions company, reducing its carbon footprint, greenhouse gas emissions reductions, and water usage reductions. Workforce analysis indicates that the most common positions obtained by a student with these credentials include program and project managers, compliance officers, and analysts with 1,566 Arkansas job openings annually. The projected median salary in Arkansas is \$55,000 and \$74,000 nationally.

### **Program Cost**

The Environmental Resiliency program is designed to use pre-existing facilities, resources, and equipment. No new administrators are needed to support the proposed program. However, the University will hire six new faculty members to teach the program. The institution anticipates spending \$60,000 to develop the 12 new courses required in the curriculum.

### **Program Duplication**

Arkansas State University Jonesboro offers a face-to-face Master of Science in Environmental Sciences which trains students to be environmental scientists with limited coursework in Environmental Policy and Sustainability. The proposed UAF program differentiates itself by solving place-based problems focused on Arkansas, using case studies of communities and places to develop best practices for managing and developing mitigation, transformation, and adaptation.

Other regional, online programs include those at the University of Oklahoma – Norman, University of Oklahoma – Stillwater, and Louisiana State University.

### **Program Learning Outcomes**

Graduates of the Environmental Resiliency program will understand the science behind climate change and the part resiliency plays in mitigating its impact. They will possess skills to communicate this information to a variety of stakeholders and to effectively work toward environmental resiliency in policy and practice. Specific outcomes include:

1. Awareness of key environmental issues and the ability to communicate principal problems the built environment causes to Earth's systems for the purposes of broad ecological literacy and working towards bringing the built environment to operate within planetary boundaries.
2. Understand the triple bottom line as a metric of sustainability, the five pillars of sustainability, and the 'infinity loop' in resilience frameworks.
3. Recognize general applicability of laws of physics to sustainability and resilience (e.g., conservation of energy, conservation of mass, water cycle).
4. Ability to define what an ecosystem is and relate its carrying capacity; and determine how resource use efficiency and conservation relate to carrying capacity. Ability to discuss reversible vs. permanent impacts on ecosystems.
5. Ability to create a Personal Sustainability Plan (PSP) including how to apply sustainability principles to their individual field.
6. Ability to define the concept of a carbon footprint and an ecological footprint using accepted theories, methods, and frameworks.
7. Grow in their understanding of how sustainability and resiliency relate to their role, their work, and communities.
8. Learn to articulate what inspires them to create change that leads to a more resilient world.
9. Learn techniques and skills for becoming mindful leaders of bold change.
10. Learn the skills needed to identify when there is an opportunity to lead.
11. Know how to engage stakeholders authentically so that they can successfully convene and mobilize people to a shared vision for change.
12. Ability to communicate the concept of uncertainty and its role in decision making.
13. Know the types of tools and frameworks available to them for measuring and managing their organization's impacts and how to access them.

14. Ability to advocate for using measurement to reduce negative impacts associated with business practices.
15. Ability to conduct surveys of certifications and build proficiency in the core set of key performance indicators that are shared across the certification metrics.
16. Ability to define, explain, and apply the economic, environmental, and social components of sustainability and resilience. Ability to present complex technical information such as scientific data clearly to multi-stakeholder groups
17. Be globally and culturally sensitive.
18. Ability to apply functional knowledge gained in this program to solve real-world or simulated problems to it.

### Program Enrollment and Graduation Projections

Academic Year	Projected Enrollment	Projected Graduates
2024 - 2025	10	
2025 - 2026	20	10-15
2026 - 2027	30	10-15
2027 - 2028		10-15
2028 - 2029		20-25

### Program Requirements

#### Master of Science in Environmental Resiliency

SUST 5103 Foundations of Sustainable and Resilient Systems  
 SUST 5203 Decision Making, Analysis and Synthesis in Sustainability  
 SUST 5303 Sustainable Global Food, Energy and Water Systems  
*ENRE 5123 Foundations of Environmental Resiliency*  
 Complete 18 credit hours from the following:  
 SEVI 5023 Sustainability in Business  
 SUST 6913 Sustainable Design and Construction: Remediation and Plants on Structure  
  
*ENRE 5223 You Cannot Manage What You Do Not Measure*  
*ENRE 5423 Business and the Environment*  
*ENRE 5323 Survey of Watershed Hydrology and Water Resource Management*  
*ENRE 5233 Carbon Accounting*  
*ENRE 5333 ESG Reporting*  
*ENRE 5433 Built Environment Certification Systems*  
*ENRE 5133 Science Communication for Executives*  
*ENRE 5113 Adaptive Leadership*  
*ENRE 5213 Leadership is convening, do you know how to convene?*  
*ENRE 5313 Working with Stakeholders*  
*Italics = New Courses*

#### Graduate Certificate in Environmental Resiliency



ENRE 5123            *Foundations of Environmental Resiliency*  
ENRE 5223            *You Cannot Manage What You Do Not Measure*  
ENRE 5323            *Survey of Watershed Hydrology and Water Resource Management*  
ENRE 5423            *Business and the Environment*  
One 3-hour ENRE elective from the master's degree curriculum  
*Italics = New Courses*

Graduate Certificate in Environmental Resiliency Certifications, Accounting and Metrics

ENRE 5123            *Foundations of Environmental Resiliency*  
ENRE 5233            *Carbon Accounting*  
ENRE 5433            *Built Environment Certification Systems*  
One 3-hour ENRE elective from the master's degree curriculum  
Recommended electives:  
    *ENRE 5133 Science Communication for Executives*  
    *ENRE 5223 You Cannot Manage What You Do Not Measure*  
*Italics = New Courses*

Graduate Certificate in Environmental Resiliency Leadership

ENRE 5123            *Foundations of Environmental Resiliency*  
ENRE 5113            *Adaptive Leadership*  
ENRE 5213            *Leadership is convening, do you know how to convene?*  
ENRE 5313            *Working with Stakeholders*  
One 3-hour ENRE elective from the master's degree curriculum  
Recommended elective:  
    *ENRE 5133 Science Communication for Executives*  
*Italics = New Courses*

Graduate Certificate in Environmental Resiliency Sustainability

SUST 5103            Foundations of Sustainable and Resilient Systems  
SUST 5203            Decision Making, Analysis and Synthesis in Sustainability  
SUST 5303            Sustainable Global Food, Energy and Water Systems  
ENRE 5123            *Foundations of Environmental Resiliency*  
One 3-hour ENRE elective from the master's degree curriculum  
Recommended electives:  
    SEVI 5023 Sustainability in Business  
    *SUST 6913 Sustainable Design & Construction: Remediation Plants on Structure*  
*Italics = New Courses*

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**INSTITUTIONAL CERTIFICATION ADVISORY COMMITTEE (ICAC)/OUT-OF-STATE INSTITUTIONS**

The following applications may be reviewed by ADHE for possible consideration at the AHECB meeting in October 2023.

California State University Northridge

Master of Arts in Diverse Community Development and Leadership

Master of Arts in Humanities

Master of Arts in Instructional Design

Master of Arts in Music Industry Administration

Master of Science in Assistive Technology Engineering

Master of Science in Engineering Management

Master of Science in Nursing, Nurse Educator

Master of Science in Taxation

Campus Inc., Sacramento, California

Associate of Arts in Business Administration

Associate of Arts in Paralegal Studies

DeVry University, Naperville, Illinois

Undergraduate Certificate in Medical Office Administration

Undergraduate Certificate in Project Management

Graduate Certificate in Accounting Certification Preparation

University of Massachusetts Global, Irvine, California

Bachelor of Arts in Social Work

Master of Social Work