### PROPOSAL – 1

### NEW DEGREE PROGRAM

1. **PROPOSED PROGRAM TITLE**

Environmental Resiliency, Master of Science

 2. **CIP CODE REQUESTED**

Link for CIP Codes:  <https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=56>

03.0101

 3. **PROPOSED STARTING DATE**

Spring 2024

 4. **CONTACT PERSON**

 Name (Provost/Academic Affairs Officer): Dr. Jim Gigantino

 Title: Vice Provost for Academic Affairs

 Name of Institution: University of Arkansas

 E-mail Address: jgiganti@uark.edu

 Phone Number: 479-575-2151

Name (Program Contact Person): Ken McCown

Title: Department Head Landscape Architecture

E-mail Address: kennethm@uark.edu

Phone Number: 479-575-4907

 5. **PROGRAM SUMMARY**

 Provide a general description of the proposed program. Include overview of any curriculum additions or modifications; program costs; faculty resources, library resources, facilities and equipment; purpose of the program; and any information that will serve as introduction to the program.

 List degree programs or emphasis areas currently offered at the institution that support the proposed program.

**General Description**. This program presents an advanced study of resiliency in the context of sustainability, climate, and environmental change. The program components will be divided into four core areas: 1) sustainability, 2) leadership, 3) resiliency, and 4) certifications, accounting, and metrics. Students will learn theories and methods of resiliency and sustainability as part of a broader understanding of climate change and solutions as they apply to the four topic areas above. A common core of classes in sustainability resiliency will serve as the foundation for the four topic areas.

**Curriculum Additions.** Twelve 3 hour courses will be developed to support the program, which will be augmented by three courses developed through the Sustainability Graduate Certificate program at the University of Arkansas. These will provide the basis for the Master of Science in Environmental Resiliency. The courses are discussed in greater detail in Section 7, Curriculum.

The master’s degree will require 30 hours.

The target audience is mid-level employees who understand their company, agency, or program rules, regulations, and procedures. Many of these individuals are decision makers for environmental and sustainability policies. 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. We hope to engage the target group to assist them in career advancement and making the best choices possible in responding to our changing climate to aid in sound, sustainable, and resilient practices.

 **Faculty Resources.** Faculty will make use of current distance education technology on the University of Arkansas campus. Therefore, additional classroom and technology resources will not be necessary.

 **Library Resources.** Additional library resources will not be needed.

 **Facilities and Equipment.** See above. No additional facilities or equipment is necessary.

**Program Costs.** Twelve courses will be developed for this program at a cost of $5000 per course for a total of $60,000.

A one-year budget would look like the following:

Tuition and fees paid for year one (estimated on 30 students taking 15 hours /year)

Total income $235,885.50

Tuition to program $196,893.00

Funds to program (50%) $098,464.50

**Purpose of the Program.** After a formal review of available online programs in Arkansas and the southeastern United States we found that this will be a unique program with little competition. Graduates of our proposed program 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 market analysis suggests that there is need and will be demand for this program as no institution currently fills this need in our region. Nationally, there are now over 3,000 programs related to sustainability, an increase from 13 in 2008. The southeastern United States is underrepresented and this proposal represents one of the first steps to ameliorating the paucity of such programs in the region.

According to *Forbes*, natural disasters cost $145 billion in the United States 2021. As the climate change accelerates, these costs will rise. The government has recently been taking the cost of climate change more seriously and in President Biden’s budget for fiscal year 2023 there is a record $44.9 billion targeted to address the climate crisis (this is a 60% increase from 2021). Within that budget there is $18 billion for climate resilience and adaptation programs. Employees who understand environmental systems and issues may best to address these problems with solutions that make us more resilient and allow our system to become sustainable. Nationally, jobs with sustainability in the title have grown tenfold in the past decade. Sustainability and resilience jobs grew by eight percent in our region over the last five years, but only six percent of potential employees list green skills and knowledge. So, in addition to the regional need for higher-education curricula and trained employees in resilience and sustainability, there is also a clear present and future need for employees nationally if students elect not to work in Arkansas.

This degree offers people who are in jobs where much of this change will take place to hone their skills an augment to their ability to contribute to finding the solutions needed as we move forward. These will not just be scientists, though they will be important part of the solutions; we need to provide leaders, analyst and communicators across job markets including government agencies, private business, and NGOs. addressing, evaluating, and tackling some of the most pressing climate issues. We also want to prepare students, or those changing occupations, with a basis for entering many of the new jobs being created by the influx of resources earmarked to addressing our environmental resilience and sustainability practices.

Two workforce analyses were conducted by University of Arkansas Global Campus to assess the need for this program. The types of jobs in both Workforce Analysis reports tended toward included program and project managers, compliance officers and analysts. Communication ranks at the top of employer desired skills, along with leadership (both sorely underreported on applicant resumes). To be successful in these areas the employee needs to understand the basics of sustainability and resilience, which we provide through the targeted micro-certificates, Graduate certificates, and the master’s degree program. Other skills that employers desire that are often not reported in resumes are data analysis, problem solving, planning and risk management. The four core areas we propose address these needs of employers, not only giving a background and foundation in sustainability and resilience, but providing a better understanding of how to communicate and lead projects toward those goals. Through the Certification, Accounting and Metrics core area we give students the tools they need to understand practices and evaluate them as managers, which will be critical as federal and state agencies and business work to meet the evolving industry and government standards.

List degree programs or emphasis areas currently offered at the institution that support the proposed program.

Biological Sciences

Geospatial Technologies Graduate Certificate

Operations Analytics, Master of Science

Sustainability Graduate Certificate

 6. **NEED FOR THE PROGRAM**

Submit Workforce Analysis Form or Employer Needs Survey (only when workforce data is deficient for the academic disciple within the proposal)

Both workforce analyses show the program would support specific jobs that are increasing up to 40% in Arkansas, and 60% around the country. These are good paying jobs that pay generally in the $30-$49 per hour (in the $30 range in Arkansas), with tens of thousands of new job offerings.

Employer Needs Survey should include the following:

* Submit numbers that show job availability, corporate demands and employment/wage projections, not student interest and anticipated enrollment.  Focus mostly on state needs and less on regional and national needs, unless applicable to the program.
* Survey data can be obtained by telephone, letters of interest, student inquiry, etc.  Focus mostly on state needs for undergraduate programs; for graduate programs, focus on state, regional and national needs.
* Provide names and types of organizations/businesses surveyed.

City of Fayetteville, AR

Meta

Northwest Arkansas Land Trust

 Letters of support should address the following when relevant: the number of current/anticipated job vacancies, whether the degree is desired or required for advancement, the increase in wages projected based on additional education, etc.

Workforce Analysis Report is Appendix A.

Letters of support Appendix A.

 Indicate if employer tuition assistance is provided or if there are other enrollment incentives.

For students who are working toward online degrees there is the William E. Manning Memorial Scholarship, which may provide up to $2000 toward tuition for their studies. This scholarship also gives preference to first generation and lower income students, which will be helpful in assisting a more diverse pool of potential students.

 Describe what need the proposed program will address and how the institution became aware of this need.

The Market Analyses conducted by Global Campus demonstrate a need for graduates in this area. Environmental Dynamics became aware of a need for this program through comments from our alumni of the program who work across a broad range of employment sectors. Alumni suggested courses that would be beneficial for people in their workforce. Ubiquitous net zero policies and climate change impacts impact private sector, public sector, and non-profit sector labor. These transformative policies and impacts demand new means and methods of practice.

 While it would be a conflict of interest for potential faculty to write letters of support, the fact that they reached out to contribute to this program is a testimony to its need and interest from the broader community. This includes private company owners like Edgewater Coaching and Consulting, those working for NGO’s like Environmental Defense Fund, and governmental agencies like the City of Fayetteville and USGS.

 Indicate which employers contacted the institution about offering the proposed program.

 Environmental Dynamics graduates contacted us not as official representatives of their companies but as managers hoping to increase the environmental sustainability and resiliency competency of their applicants and employees.

 Indicate the composition of the program advisory committee, including the number of members, professional background of members, topics to be considered by the members, meeting schedule (annually, bi-annually, quarterly), institutional representative, etc.

The advisory committee will include Associate Dean of Graduate School and International Education, Dean of Fay Jones School of Architecture, Head of Sustainability, and Director of Environmental Dynamics. The committee would meet once a semester or as needed to assess program progress and curriculum relevance, admit new students to the program, and discuss any adjustments needed to the program as corresponded by the Administrator or faculty.

 Indicate the projected number of program enrollments for Years 1 - 3.

Year 1: 10

Year 2: 20

 Year 3: 30

 Indicate the projected number of program graduates in 3-5 years.

We anticipate graduating 10-15 students by the end of the second year. The program will continue to grow and by the fifth-year reach between 20-25 students. We plan on a program review at that time. By the fifth year we would anticipate approximately 20 graduates per year where the program may level off.

7. **CURRICULUM**

#  Provide curriculum outline by semester (include course number and title).

#  (For bachelor’s degree program, submit the 8-semester degree plan.)

 Give total number of semester credit hours required for the program, including prerequisite courses.

The master’s degree will require 30 hours and no thesis.

 Identify new courses *(in italics)* and provide course descriptions.

 \*SUST 5103 Foundations of Sustainable and Resilient Systems (Dr. Marty Matlock)

 Exploring sustainability foundations, application, and assessment, this course provides students the skills and competencies to understand, communicate, and evaluate sustainability at multiple scales. Using core sustainability concepts, such as systems and complexity, resilience and vulnerability, we evaluate interrelationships among environmental, societal, and economic well-being and the implications for decision-making.

 SUST 5203 Decision Making, Analysis and Synthesis in Sustainability (Dr. Ebenezer Miezah Kwofie)

 Provides an applied framework for analyzing decision dynamics, supporting and promoting more sustainable decisions, and measuring the sustainability of systems. The course applies theories of change, institutional decision theory, social and institutional constructs of sustainability, indicator and metric development across social, ecological, and economic domains, and communication strategies.

 SUST 5303 Sustainable Global Food, Energy and Water Systems (Dr. Marty Matlock)

 Provides a detailed review of the existing global food production/distribution and water systems, with an emphasis on scarcity, equity, management and challenges from changing global systems. This course explores the inputs and efficiencies of existing agricultural production systems, and examines equity and value in these systems.

 \*BUSI 5023 Sustainability in Business (Dr. Diana K. Chen)

 This course covers a range of business-related topics and looks at different ways to improve their sustainability.  Features an impressive series of guest speakers who are leaders in business, religious, non-profit, and academic communities locally and nationally.

 *ENRE 5123 Foundations of Environmental Resiliency* (Professor Ken McCown)

An introduction to the concepts and strategies centered on resilience as it relates to the built and natural environment. Concepts include systems thinking, socio-ecological frameworks, Panarchy, and resilience frameworks, and diagnostics. Strategies include foundations of sustainability science and policy with ideas about dynamic environmental events and adaption methods. Case study investigations provide a summative and formative conclusion to course activities.

 *ENRE 5223 You Cannot Manage What You Do Not Measure* (Dr. Sarah E. Lewis)

This class will look at developing and using frameworks to help track, assess, and manage energy, water, biodiversity, waste, and more across their businesses and supply chains. The tools are out there, but are you using them in ways that truly make a difference? And, are you using measurement as a way to drive leadership in sustainability and resiliency?

 *ENRE 5423 Business and the Environment* (Dr. Siyao Ma)

 Business and the Environment is an interdisciplinary course in management that explores the interactions between organizations (including for-profit businesses and non-profit organizations), society, and the environment. Using an applied approach that draws on experiential and service learning exercises related to actual businesses, students will learn how organizations and society influence and are influenced by environmental factors. While it is important to understand how the environment influences organizations and societal members, it is equally important to understand what organizations can do to address environmental issues.

 *ENRE 5323 Survey of Watershed Hydrology and Water Resource Management* (Dr. Victor Roland II)

 This course is designed to be a survey of hydrology and water resources management. At the completion of this course students will have a basic understanding of water resources and the management of water resources. The course will be taught in three sections each spanning 2-3 weeks. In section 1 of the course students will be introduced to the fundamental concepts of hydrology. In the second section of the course, students will be introduced to water quantity and availability. And in the final section of the course students will learn about water quality and landmark water quality legislation. Providing students with real life examples is critical to student success in the course. Throughout the course students will receive reading assignments that include journal articles and technical reports for class discussions and writing assignments. Students will be graded on their ability to show mastery of the subject material presented in each section of the course by way of their ability to accurately articulate an understanding of the topic area and their ability to complete problem sets. Written assignments will be completed digitally via an online course platform. Problem sets will challenge students to demonstrate their ability to understand written problem statements, select appropriate methodologies to apply to given problems, and to complete assignments using common tools of the trade e.g., Microsoft Excel, R programming language.

 *ENRE 5233 Carbon Accounting* (Dr. Johnnie Chamberlin)

This course will introduce students to the concept of carbon accounting and its most common applications in the corporate and public sectors. As corporations and communities establish stronger sustainability goals and ever stricter and more detailed GHG emissions targets, the need for professionals well-versed in the standards, methodologies, protocols, and tools used for quantifying GHG emissions and offsets is growing rapidly. During this course, students will learn the basic principles of accounting for carbon emissions and offsets and will gain experience applying those concepts to an example company’s GHG data. The course will also cover popular GHG emission and offset standards and reporting platforms, in addition to GHG capture, storage, and removal technologies that are currently being utilized and some that are under development. Reading materials will consist of real-world annual Corporate Social Responsibility (CSR) reports, publications by popular carbon accounting and forest carbon standard organizations, and academic articles.

 *ENRE 5333 ESG Reporting* (Dr. John Kester III)

 Overview of current ESG Reporting landscape focusing on benchmarking, communication strategies, and data collection. The course will cover best practices for reporting and utilize case studies to review strategies of organizational approaches to annual improvements. Students will learn the skill to lead, organize, and implement reporting systems that can be applied across industries, from consumer goods to nonprofits.

 *ENRE 5433 Built Environment Certification Systems* (Professor Ken McCown)

 Introduction to the principles of built places impacting sustainability and resilience to serve as a broad theoretical overview underpinning the building and community rating systems such as LEED, LBC, BREEAM, and others. Students learn about the built environment's impact on global systems, communities of people, and individual health and well-being. Students will learn about water, energy, materials, health and air quality, and the building rating systems.

 *ENRE 5133 Science Communication for Executives* (Dr. John Kester III)

Overview of current best practices for science communication to corporate and executive level leadership focusing on ESG metrics. Companies face primarily structural challenges when pursuing long-term targets and communication is key to effectively allocating internal resources and reporting transparent progress. This course will give students the skills to assess the best approaches for their organization and role to convey the urgency of climate change and communicate essential milestones for tracking success. Through case studies and mock corporate-level communication projects to the class, students will have opportunities to practice the skills they learn and be ready to implement them in their current or future ESG role.

 *ENRE 5113 Adaptive Leadership* (Dr. Sarah E. Lewis)

 The sustainability movement requires knowledge of Earth and social systems, and it also requires strong adaptive leadership skills. Adaptive leadership is needed when taking on an adaptive challenge, sometimes called a “wicked problem.” Wicked problems are those that have no clear and obvious solution. Adaptive leadership is not about authority, but rather an ability to see the need for leadership and the courage to stand up and lead when there is no clear and obvious solution. This type of leadership comes from having a strong sense of self, awareness of group dynamics, and the ability to think politically. This type of leadership can change narratives, shifts mindsets, and moves systems towards a more beautiful and just world. These skills are needed in businesses, organizations, and in communities in order to sustain ourselves or create the resiliency we seek.

 *ENRE 5213 Leadership is convening, do you know how to convene?* (Dr. Sarah E. Lewis)

Convening is leadership, especially when taking on an adaptive challenge, meaning a challenge that has no clear or immediate solution, including such complex challenges as sustainability and resiliency. The ability to bring people together and effectively impact the way that they see the world around them requires very specific skills in managing and communicating with the people that you are trying to mobilize. This class will explore the mindsets, techniques, and methods that enable strong stakeholder engagement so that leaders can create sustainability and resiliency movements inside organizations.

 *ENRE 5313 Working with Stakeholders* (Dr. David Lyon)

Environmental professionals in both the private and public sectors regularly make decisions that impact diverse stakeholders. This course will teach strategies for effective stakeholder engagement such as understanding motivations, communicating technical information and uncertainty, and soliciting constructive ideas and feedback. Instructors will share their experiences working with stakeholders and discuss realistic scenarios. Students will learn how to make decisions informed by science and economics that protect the environment and address stakeholder concerns.

 SUST 6913 Sustainable Design and Construction: Remediation and Plants on Structure (Professor Scott Biehle)

 Plants on Structure introduces students to strategies and techniques of plant use in the built environment. Potential topics include green infrastructure (e.g., green roofs and walls), site, soil, and water remediation techniques (e.g., phyto-remediation, bioswales, and living machines), and structural considerations. Technical documentation methods and other representation and/or communication techniques as a means of conveying design intent are included.

 Identify required general education courses, core courses and major courses.

 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

 For each program major/specialty area course, list the faculty member assigned to teach the course.

 See course list above for the instructor and the CVs for each instructor are in Appendix C.

 Identify courses currently offered by distance technology (with an asterisk\*) and endnote at the end of the document.

 See above.

 Indicate the number of contact hours for internship/clinical courses.

 N/A

 State the program admission requirements.

Students admitted to the Environmental Resiliency program will need to have first successfully completed a BS/BA degree from an accredited university and meet the University 3.0 GPA or 3.0 in the last 60 hours of their studies.

 Describe specified learning outcomes and course examination procedures.

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:

* Students will have awareness of key environmental issues and have the ability to communicate the 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.
* Students will understand the triple bottom line as a metric of sustainability, the five pillars of sustainability, and the ‘infinity loop’ in resilience frameworks.
* Students will recognize general applicability of laws of physics to sustainability and resilience (e.g., conservation of energy, conservation of mass, water cycle).
* Students will be able to define what an ecosystem is and relate its carrying capacity; and determine how resource use efficiency and conservation relate to carrying capacity.  Be able to discuss reversible vs. permanent impacts on ecosystems.
* Students will be able to create a Personal Sustainability Plan (PSP) including how to apply sustainability principles to their individual field.
* Students will be able to define the concept of a carbon footprint and an ecological footprint using accepted theories, methods, and frameworks.
* Students will grow in their understanding of how sustainability and resiliency relate to their role, their work, and communities.
* Students will learn to articulate what inspires them to create change that leads to a more resilient world.
* Students will learn techniques and skills for becoming mindful leaders of bold change.
* Students will learn the skills needed to identify when there is an opportunity to lead.
* Students will know how to engage stakeholders authentically so that they can successfully convene and mobilize people to a shared vision for change.
* Students will be able to communicate the concept of uncertainty and its role in decision making.
* Students will know the types of tools and frameworks available to them for measuring and managing their organization’s impacts and how to access them.
* Students will be able to advocate for using measurement to reduce negative impacts associated with business practices.
* Students will be able to conduct surveys of certifications and build proficiency in the core set of key performance indicators that are shared across the certification metrics.
* Students will be able to define, explain, and apply the economic, environmental, and social components of sustainability and resilience.  Students will be able to present complex technical information such as scientific data clearly to multi-stakeholder groups
* Students will be globally and culturally sensitive
* Students will be able to apply functional knowledge gained in this program to solve real-world or simulated problems to it.

 Include a copy of the course evaluation to be completed by the student.

Students will complete the standard course evaluation procedure according to Academic Policy 1405.15 (<https://provost.uark.edu/policies/140515.php>).

Course Evaluation is Appendix B

 Include information received from potential employers about course content.

The new courses suggested here all stem from an assessment by potential employers who determined that these topics would provide their employees with important skill sets currently lacking in the workforce.

 Provide institutional curriculum committee review/approval date for proposed program.

 March 8, 2023

 8. **FACULTY**

 List the names and credentials of all faculty teaching courses for the proposed program. Include college/university awarding degree; degree level; degree field; subject area of courses faculty currently teaching and/or will teach. (For associate degrees and above: A minimum of one full-time faculty member with appropriate academic credentials is required.)

 See table below.

 Indicate lead faculty member or program coordinator for the proposed program.

Professor Kenneth McCown, Department Head, Landscape Architecture

 Total number of faculty required for program implementation, including the number of existing faculty and number of new faculty. **For new faculty, provide the expected credentials/experience and expected hire date.**

These faculty would be hired as instructors on a need basis. We anticipate starting the hiring process in late spring 2023 for a spring 2024 start of the program if approved. We will not have start-up costs, laboratory facilities or graduate teaching assistants needed for faculty teaching in ENRE.

|  |  |  |  |
| --- | --- | --- | --- |
| Name  | Degree/University  | Field  | Subject Area  |
| Johnnie Chamberlin  | PhD/UARK Fayetteville  | ENDY  | Carbon Accounting |
| Diana Chen  | PhD/UARK Fayetteville  | ENDY  | Business and Sustainability  |
| John Kester  | PhD/UARK Fayetteville  | ENDY  | Science Communication, ESG Reporting |
| Sarah Lewis  | PhD/UARK Fayetteville  | ENDY  | Adaptive Leadership, What is Convening, You Cannot Manage What You Do Not Measure |
| David Lyon  | PhD/UARK Fayetteville  | ENDY  | Working with Stakeholders  |
| Siyao Ma  | PhD/UARK Fayetteville  | ENDY  | Business & Environment  |
| Ken McCown | MS/ U IL- Urbana-Champaign | Architecture | Foundations of Resiliency |
| Victor Roland  | PhD/UARK Fayetteville  | ENDY  | Contamination, Watersheds, Governmental Agencies  |

 For proposed graduate programs: Provide the curriculum vita for faculty teaching in the program, and the expected credentials for new faculty and expected hire date. Also, provide the projected startup costs for faculty research laboratories, and the projected number of and costs for graduate teaching and research assistants.

Faculty CVs is Appendix C

9. **DESCRIPTION OF RESOURCES**

 Current library resources in the field

 Current instructional facilities including classrooms, instructional equipment and technology, laboratories (if applicable)

 New instructional resources required, including costs and acquisition plan

**Library Resources.** The University of Arkansas Libraries provides access to information resources that support the educational objectives and outcomes of the University of Arkansas, including the College of Engineering. The libraries house more than 2 million print volumes and over 5.5 million microforms. The annual reports can be found at <http://libinfo.uark.edu/info/annualreport.asp>. All electronic resources purchased by the libraries, including databases, are accessible from anywhere in the world on a 24 hour/7 days per week basis.

There are over 42,000 current journals and serials maintained by the libraries. The journal, book and conference publications, and other engineering societies are well represented in the libraries. Most of the current subscriptions for science and technology journals are in electronic format. The libraries also provide access to full text of newspapers, trade journals magazines, and interdisciplinary scholarly journal articles through Academic Search Complete and Business Source Complete (EbscoHost), ABI Inform (ProQuest), and Academic Universe (Lexis Nexis).

The Libraries maintain a subscription to appropriate portions of Knovel, which enriches access to interactive texts and data sources. Other texts and textbook materials may be purchased as e-books. ASTM, ASCE, and IEEE standards are fully accessible through online venues. A selected number of standards from organizations such as AASHTO, ASME, and ISO are available in the print collection.

10. **NEW PROGRAM COSTS – Expenditures for the first 3 years**

 New administrative costs (number and position titles of new administrators)

There will be no new administrators.

 Number of new faculty (full-time and part-time) and costs

There will be six new faculty hired. Instructional costs will be covered by tuition revenue.

New library resources and costs

There will be no new library resources.

New/renovated facilities and costs

There will be no new facilities and no facilities will be renovated.

New instructional equipment and costs

No new instructional equipment will be needed.

Distance delivery costs (if applicable)

There will be no distance delivery costs.

Other new costs (graduate assistants, secretarial support, supplies, faculty development, faculty/students research, program accreditation, etc.)

 There will be no additional new costs.

 **If no new costs required for program implementation, provide explanation.**

**Program Costs.** All will be delivered online to serve the 100% online student population. Approximately $60,000 will be necessary for course development ($5000 per course x 12 courses). The cost of development of the courses will be covered by Global Campus.

11. **SOURCE OF PROGRAM FUNDING – Income for the first 3 years of program operation**

 If there will be a reallocation of funds, indicate from which department, program, etc.

 There will be no reallocation of funds to support this program.

 Provide the projected annual student enrollment, the amount of student tuition per credit hour, and the total cost of the program that includes tuition and fees.

 Student tuition per credit hour is $437.54 plus 46.51 in fees for a total of $484.05 per credit hour for tuition and fees. The program requires 30 hours. The total cost of the program (over two years) would be $14,521.50 per student.

 Indicate the projected annual state general revenues for the proposed program (Provide the amount of state general revenue per student).

 There will be no annual state general revenue used for this program.

 Other (grants [list grant source & amount of grant], employers, special tuition rates, mandatory technology fees, program specific fees, etc.).

The program will follow the standard Board of Trustee approved University of Arkansas tuition /fee schedule.

* + - Tuition: $437.54 per credit hour
		- Library Fee: $3.41 per credit hour
		- Network and Data Systems Fee: $11.10 per credit hour
		- Off-Campus Fee: $30 per credit hour
		- Online Facilities Fee: $2 per credit hour

12. **ORGANIZATIONAL CHART REFLECTING NEW PROGRAM**

 Proposed program will be housed in (department/college)



13. **SPECIALIZED REQUIREMENTS**

 If specialized accreditation is required for program, list the name of accrediting agency.

 N/A

 Indicate the licensure/certification requirements for student entry into the field.

#  N/A

# Provide documentation of Agency/Board review/approvals (education, nursing--initial approval required, health-professions, counseling, etc.)

N/A

14. **BOARD OF TRUSTEES APPROVAL**

 Provide the date that the Board approved (or will consider) the proposed program.

 Provide a copy of the Board meeting agenda that lists the proposed program, and written documentation of program/unit approval by the Board of Trustees prior to the Coordinating Board meeting that the proposal will be considered.

 September 8, 2023

15. **SIMILAR PROGRAMS**

#  List institutions offering program:

##  Proposed undergraduate program – list institutions in Arkansas

 Proposed master’s program – list institutions in Arkansas and region

 Proposed doctoral program – list institutions in Arkansas, region, and nation

State why proposed program needed if offered at other institutions in Arkansas or region.

List institution(s) offering a similar program that the institution used as a model to develop the proposed program.

 Provide a copy of the e-mail notification to other institutions in the state notifying them of the proposed program. Please inform institutions not to send the response to **“Reply All”**. If you receive an objection/concern(s) from an institution, reply to the institution and copy ADHE on the email. That institution should respond and copy ADHE. If the objection/concern(s) cannot be resolved, ADHE may intervene.

 **Note: A written institutional objection/concern(s) to the proposed program/unit may delay Arkansas Higher Education Coordinating Board (AHECB) consideration of the proposal until the next quarterly AHECB meeting.**

There are no comparable programs in the State of Arkansas. Arkansas State University has an on-campus program in resiliency, but it has no distance learning option available. There are two universities offering distance programs in resilience in the region: University of Oklahoma-Norman and Louisiana State University and Agricultural Mechanical College. But these differ substantively in their basic model. The UA environmental resilience program will have a unique approach with focus on nested groups of courses modelled loosely after the UA Sustainability Graduate Certificate.

16. **DESEGREGATION**

 State the total number of students, number of black students, and number of other minority students enrolled in related degree programs, if applicable.

 N/A

1. **INSTITUTIONAL AGREEMENTS/MEMORANDUM OF UNDERSTANDING (MOU)**

 If the courses or academic support services will be provided by other institutions or organizations, include a copy of the signed MOU that outlines the responsibilities of each party and the effective dates of the agreement.

 N/A

1. **ACADEMIC PROGRAM REVIEW**

 Provide scheduled program review date (within 10 years of program implementation date).

2030-2031

1. **PROVIDE ADDITIONAL INFORMATION IF REQUESTED BY ADHE** **STAFF**
2. **INSTRUCTION BY DISTANCE TECHNOLOGY**

 If the proposed program will be offered by distance technology, provide the following information:

 Summarize institutional policies on the establishment, organization, funding and management of distance courses/degrees.

 Describe the internal organizational structure that coordinates (development, technical support, oversight) distances courses/degrees.

 Summarize the policies and procedures to keep the technology infrastructure current.

 Summarize the procedures that assure the security of personal information.

 Provide a list of services that will be outsourced to other organizations (course materials, course management and delivery, technical services, online payment, student privacy, etc.).

 **Institutional policies on the establishment, organization, funding and management of distance courses/degrees**.

 An academic department intending to propose new distance programs are required to identify the program’s anticipated costs, funding sources, demand, and need for library resources, and to present plans to address the increased workload. The proposal needs to be approved by Vice Provost for Distance Education, Academic College, University Course and Programs Committee, Graduate Council (if at the graduate level), Faculty Senate, Provost, Board of Trustees, and Arkansas Department of Higher Education. Change requests for existing distance courses and programs follow similar approval processes. Global Campus assists programs during the conceptualization, market research, and planning stage.

 **Internal organizational structure that coordinates distances courses/degrees**

Global Campus is a supporting unit that provides assistance in course development and maintenance, technical support for both faculty and students, quality assurance, and compliance with interstate regulatory requirements to all online programs across the campus.

 **Policies and procedures to keep the technology infrastructure current**

IT Services maintains the technology infrastructure to ensure the security and compatibility of enterprise systems as guided by the [Computer and Network Security Policy](https://its.uark.edu/policies/network-security/), [Data Management Use and Protection Policy](https://vcfa.uark.edu/policies/fayetteville/uits/3095.php), and [Acquisition of Enterprise Systems Policy](https://vcfa.uark.edu/policies/fayetteville/uits/3096.php). The [Computer Activities Council](https://provost.uark.edu/committees/cac.php) (CAC), the information technology governance structure at the University, facilitates participation of students, faculty, staff, and administrators in long-range planning and setting of priorities for IT Services.

 **Procedures to assure the security of personal information**

Procedures are in accordance with the [Computer and Network Security Policy](https://its.uark.edu/policies/network-security/), [Code of Computing Practices](https://its.uark.edu/policies/code/), and [Privacy Policy](https://its.uark.edu/policies/privacy/). The IT Security group monitors university systems, performs security audits of resources, and provides security services such as security information, anti-virus software, and security alerts. University systems (student information system, learning management system, etc.) require authentication. Privileged supervisory accounts are limited and managed by system administrators. Links to the [privacy policies of third-party tools used in online instruction](https://tips.uark.edu/privacy-policy-links/) are provided in the information section of online courses and support sites.

 **Services that will be outsourced to other organizations**

The only service outsourced is the online proctoring service. The University of Arkansas partners with ProctorU for online test proctoring services for some online exams.

 Endnote:

 Courses that are already created for use in Environmental Resiliency and will be a core part of the ENRE - Sustainability core area

 BISC 5023 Sustainability in Business