



21st Century Museum Professionals

Sample Application 21MP-259409-OMS-26

North Carolina Department of Natural and Cultural Resources

Amount awarded by IMLS: \$429,121

Amount of cost share: \$595,534

The North Carolina Department of Natural and Cultural Resources (DNCR) will expand access to museum careers by facilitating up to 40 paid internship opportunities across DNCR venues. For the project, DNCR will recruit interns with various trade skills, as well as those studying information technology, business, natural sciences and other STEAM (Science, Technology, Engineering, Art, and Mathematics) majors, as well as museum studies. Internship positions will be placed throughout DNCR's 100 venues, in areas such as exhibit fabrication, virtual reality (VR) and artificial intelligence (AI) development, GIS tech, museum maintenance, and education. All interns will complete structured onboarding, develop three defined technical competencies, participate in weekly mentorship activities, complete a capstone project, and engage in professional development sessions. By providing students with internships offering applied experience in museum-based positions, the program will strengthen the talent pipeline for cultural institutions and support North Carolina's competitive labor market.

Attached are the following components excerpted from the original application.

- Narrative
- Schedule of Completion

When preparing an application for the next deadline, be sure to follow the instructions in the current Notice of Funding Opportunity for the grant program and project category to which you are applying.

Intro

The North Carolina Department of Natural and Cultural Resources (DNCR) is a Cabinet-level agency that oversees 41 parks, 28 historic sites, eight history museums, five science museums, two art museums, four aquariums (including the Aquarium at Roanoke Island), the Zoo and other cultural organizations that preserve/promote North Carolina history, art and science. With over 100 sites across the state, DNCR is a leader in the museum industry and employs over 2,000 full-time professionals in many unique positions. The Aquarium on Roanoke Island, on behalf of DNCR, hereby submits the proposal, *Consider Museums: Exploring Creative Careers* to create a pipeline of future museum professionals that are employed in a variety of competitive fields for the 21st century.

Justification

o Which 21MP program goal and associated objective will your project address? *Consider Museums: Exploring Creative Careers* supports 21st Century Museum Professionals Program Goal 2: To recruit and train future museum professionals. The project is also aligned with Objective 2.1: To expand pathways into the museum field by adapting higher education programs to be more responsive to the needs of the museum workforce.

o What need, problem, or challenge will your project address, and how was it identified? The United States faces an urgent and well-documented workforce challenge across skilled trades, information technology fields, and other jobs that require more traditional academic training. According to Economic Modeling Specialists International (EMSI), 53% of skilled trades workers are over the age of 45, and for every one person entering the trades, five are retiring. At the same time, the *Monitor Daily* reported in 2024 that the nation faces a growing shortage of IT professionals: by 2030, an estimated 4.2 million IT positions will be needed, yet the supply of qualified workers may meet only half of that demand. These gaps threaten economic competitiveness, particularly in fields that cannot be outsourced or fully automated. To sustain a strong national economy, the United States must invest in training the next generation of workers whose skills are transferable across industries.

Museums are directly affected by these workforce trends. As cultural institutions increasingly rely on digital tools, emerging technologies, and inclusive design practices, staffing needs are evolving faster than traditional training pipelines. Today's museums require professionals with competencies in interactive exhibit design (which require electrical and construction training); digital fabrication, virtual reality and artificial intelligence (which require degrees or certifications in IT), social media and comprehensive marketing, and data-driven collections management (which requires experience in cyber security)—alongside more traditional museum roles such as research, education, and curation. However, many museums lack capacity to redesign organizational structures or recruit talent with these skill sets, creating a widening gap between needs and available workforce preparation.

In 2023, the National Council of Nonprofits conducted a nationwide survey and found that nonprofits, including museums, face a workforce shortage crisis. The need for this project was identified through reports, including the National Council of Nonprofits survey, general labor market data, and documented challenges museums face in recruiting and retaining staff with modern technical and digital competencies. This need was further supported through anecdotal feedback from DNCR staff and past interns when asked for feedback during exit interviews.

Consider Museums: Exploring Creative Careers responds directly to this workforce shortage challenge by creating 40 paid internship opportunities over a two-year period that align with both Executive Order 14277 ("Advancing Artificial Intelligence Education for American Youth") and Executive Order 14278 ("Preparing Americans for High-Paying Skilled Trade Jobs of the Future"), which emphasize the importance of cultivating an innovative, skilled workforce to support long-term economic growth.

As one of the largest state cultural agencies in the country, DNCR—with more than 100 sites and 2,000 professionals—is uniquely positioned to pilot a scalable internship model that expands entry pathways into 21st-century museum careers. DNCR will recruit students from community colleges and four-year colleges and universities with backgrounds in skilled trades (including carpentry, plumbing, electrical work, construction, and

welding), IT and emerging technologies (including cyber security, virtual reality and AI), natural sciences (such as chemistry), alongside more traditional museum studies (history, art, natural sciences). Interns will apply skills in roles like museum maintenance, preservation work, GIS specialists, exhibit designers, online engagement specialists, curators, and artifact conservators—museum-based technical or trade positions that students may not otherwise have considered. *Consider Museums: Exploring Creative Careers* expands access to museum careers, strengthens the talent pipeline for cultural venues, and supports North Carolina's labor market by giving students experience in their field of study while contributing to the sustainability of the museum field nationwide.

o Who is the primary audience for your project and how have they been involved in the planning? The primary audience for *Consider Museums: Exploring Creative Careers* is students enrolled in North Carolina's two-year community colleges and four-year colleges and universities, particularly those seeking practical, paid work experience aligned with skilled trades, information technology, natural sciences and other STEAM majors, and museum-related fields. These students include individuals from rural, economically distressed, or geographically isolated communities who may have limited exposure to museum career pathways.

The design of this project is based on best practices from DNCR's long-standing participation in the state of North Carolina's internship program, which has operated for more than fifty years across more than a dozen state agencies. Under that model, interns work full-time for 10-weeks during the summer. DNCR wishes to create its own internship program to admit a targeted pool of interns who can focus on specialized areas in museums.

This project was also informed through feedback from interns. DNCR has had a number of internships funded through grant awards. Several DNCR sites piloted internships supported by IMLS funding. The North Carolina Maritime Museum in Beaufort received two consecutive IMLS awards (MA-30-16-0501-16 and MA-248939-OMS-21) to support internship positions, and the African American Heritage Commission similarly used IMLS funding to support interns (MH-249108-OMS-21). Exit interviews and post-surveys from these programs demonstrate that interns value specialized placements, citing increased confidence, stronger professional skills, and clearer career pathways. These unique internships broaden understanding about types of jobs students can obtain after school. This direct feedback played a key role in shaping *Consider Museums* as DNCR's own internship program.

By incorporating lessons learned, *Consider Museums* is intentionally structured to meet the needs of today's distinct student population while strengthening the museum workforce statewide.

o Who are the ultimate beneficiaries for this project? The direct beneficiaries will be the interns who gain valuable, on-the-job experience. A secondary beneficiary will be public audiences who reap the rewards of a new workforce applying their fresh skills to museum offerings, such as exhibits, programs or online engagement. A tertiary beneficiary will be the museum industry at large. Institutions will benefit one day from a skilled workforce who may be applying for future jobs at their organizations.

o How will the museum workforce and any associated professional networks benefit from your project?

The museum workforce will benefit from this program through an expanded pool of talent (40 interns total) trained in diverse backgrounds. While this internship program will accept students from traditional museum studies fields, this program will prioritize students studying IT, trade skills, natural sciences and other STEAM majors. In this way, the internship will provide alternative pathways to upskill early-career professionals and provide opportunities for non-traditional applicants to enter the museum workforce and gain first-hand experience in careers they may not have otherwise considered. This cross-pollination of skill sets ensures that museums are competitive and relevant and that the future workforce is trained appropriately to meet demands of the future.

Project Work Plan

o What specific activities will you carry out? *Consider Museums* will focus on quality training experiences for participants and as such, will be limited to twenty interns each summer for two summers. Once awarded, DNCR

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will communicate with participating colleges to align internship competencies with curricular learning outcomes. After the recruitment process and selections are made, students will be required to participate in a weekly TEAMS check-in meeting for mentoring and networking with their peers. Professional development opportunities will be scheduled for students to hear speakers present on topical issues, participate in etiquette training, and celebrate at a final convening at the close of the program. Throughout the program, project staff will schedule time to visit the intern at their assigned work location, see the intern in action, meet with their supervisor and ensure the arrangement is transpiring smoothly.

All interns will:

1. Complete structured onboarding
2. Develop three defined technical competencies (to be identified by their supervisor)
3. Participate in weekly mentorship
4. Complete a capstone deliverable tbd by site supervisor (eg. An exhibit or program)
5. Engage in professional identity development sessions

Specific internship opportunities throughout DNCR's venues may include but are not limited to:

Skilled Trades & Preservation

- Harvey W. Smith Watercraft Center at the Maritime Museum has a unique opportunity in its watercraft center for a student interested in boat-building, a longstanding heritage craft in North Carolina (seeking a student in a trades program for Boat Manufacturing or Welding).
- NC Historic Sites and Properties manages 28 historic sites and maintains a Craft Services division that stewards historic properties, some dating nearly 300 years. These staff engage in all aspects of carpentry, HVAC, electrical, painting, plumbing and more. This internship opportunity would seek out a trade skill student learning carpentry, HVAC, plumbing or a related field.
- North Carolina State Parks oversees 41 properties and is able to offer two hands-on internships. The Exhibits and Interpretation internship supports the exhibits program through historical research, interpretive writing, exhibit planning and fabrication, maintenance, and project management. The Natural Resource Management internship focuses on conservation, engaging interns in ecosystem restoration, prescribed fire, invasive species control, species monitoring, data management, and contributions to park-specific management plans.
- Tobacco Farm Life Museum seeks a community college student studying Horticulture Technology, Landscape Architecture Technology or Landscape Gardening to develop a pollinator garden, create a plant identification/tree guide, and design a 'home garden' to reflect small gardens used by farm families in the early 20th century. The intern will work with education staff to develop an experiential environmental science program.
- Mountain Gateway Museum will recruit an intern studying A/V Production Technology from its local community college to assist with operating audio-visual equipment, including video cameras, microphones, sound boards, sound-proofing materials, lighting, etc.; and organizing, conducting, and recording oral (and possibly videotaped) interviews with area residents about WNC people, places, and events of historical significance. A second internship opportunity will target a student studying Fish and Wildlife Management. This intern will monitor and manage the water quality of Mill Creek, which runs through the museum's property and is part of the NC Wildlife Resources Commission's "Mountain Heritage Trout Waters" program. In addition, the intern would help establish and maintain an interpretive Nature Trail around the perimeter of the museum's Mauney Memorial Field and assist museum staff with educating visitors about native plants and animals through programs and special activities.

IT & Digital Technologies

- The State Archives houses over 50,000 linear feet of materials documenting North Carolina history, including government records and non-government materials, which inform researchers in developing programs, exhibits and other offerings throughout DNCR. Archives has a wealth of GIS data but lacks GIS expertise. A GIS intern will focus on tasks including connecting records to physical locations, analyzing spatial patterns, digitizing and georeferencing maps, and making geographic data usable for researchers
- Founded in 1956, the NC Museum of Art is situated on a 164-acre campus and houses an art collection of over 4,000 objects spanning over 5,000 years of history. As a premier art museum, it has a long history of hosting interns and already has internship roles established for IT and Emerging Technologies, and Exhibition Design. Based on the availability of qualified candidates, it may also create new internships for Cybersecurity, Electrical Work, Construction and Maintenance, Business, and Hospitality and Personal Services.

STEAM, Natural Sciences & Conservation

- NC Aquariums maintains four separate sites: The Aquarium at Roanoke Island, Pine Knoll Shores, Fort Fisher and Jenette's Pier. With four locations, the Aquariums' staffing needs are vast. As such, they are able to offer multiple internship opportunities for Conversation Research (seeking a Biology/Ecology, Marine Biology, Environmental Science, Science Communication student) as well as in exhibit design and fabrication, communications and marketing, IT, animal husbandry and veterinary care, and education. Because the Aquariums' internship needs are vast and they will host the most internships, the Aquarium at Roanoke Island was selected to serve as the organizational unit for this application.
- The NC Zoo is the world's largest natural habitat zoo, almost 3,000 acres and home to nearly 2,000 animals primarily from North America, Africa, and Asia (with and Australia area currently in design). Focused on wildlife conservation and breeding programs for endangered animals, the Zoo has a history of offering internships in animal care and research but also offers positions beyond those roles, including horticulture, exhibit design, marketing, and education.
- NC Maritime Museum at Beaufort proposes to continue its long-standing internship position for an Artifact Conservator (seeking a Chemistry student) to treat artifacts excavated underwater from shipwrecks to later be displayed throughout DNCR's three maritime museums.

General/Misc.

- NC Museum of Natural Sciences is the largest natural history museum in the Southeast with over 300,000 square feet of space across two main buildings. The Museum has a long history of hosting interns and has a wide variety of roles in which interns could be placed, including exhibit development, lab assistants, summer camps for youth, animal husbandry (its living collections department always has some of the highest interest), operations administration and more.
- Museum of the Cape Fear has many internship needs and is able to host the following positions: Museum management, historical interpretation, archaeological research at arsenal park, exhibit curation, artifact preservation, hospitality services, facilities management.
- The NC African American Heritage Commission works across the state to engage the public via programs to raise awareness about African American heritage hosted at NCR sites and venues. It is responsible for programming at Freedom Park in downtown Raleigh, which creates the potential for two internships: 1. Marketing intern to develop a tourism plan for the Commission's heritage trails programs (the Oasis Spaces Green Book project, the NC Civil Rights Trail, Freedom Roads, and African American Music Trails) and implement a calendar of events and 2) Research intern to conduct research on different voices of freedom represented at the space, create narrative interpretations of these figures and eventually lead tours.

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- The American Indian Heritage Commission promotes awareness, education, and preservation of American Indian history, arts, customs, and culture across the state. Through partnerships with DNCR divisions and tribal communities, the Commission supports public programs, digital initiatives, and cultural events at DNCR sites. The AIHC could engage interns in communications and marketing, oral history and digital archiving, curriculum development, event coordination, and community outreach.
- The Graveyard of the Atlantic Museum offers several areas of interest and interns can choose to focus on marketing and outreach, assisting with programs, and social media.

Due to the mandated page limitation, the above is just a brief sample of opportunities that DNCR's sites are able to offer. If funded, DNCR will put out a call to all of its venues (nearly 100) to identify all that want to participate and the number of potential internships with detailed job descriptions for each. DNCR will only be able to accept 20 positions under this grant and will strive to create a diversity of positions in a wide geographic range. Positions that require a trade skill or technical skill aligned with federal priorities will be prioritized. Requests for internships beyond the scope of this proposal will be referred to the state's longstanding internship program.

o Who will plan, implement, and manage your project? Dr. Tamara Holmes Brothers is DNCR's Director of Program Outreach and Engagement. In this role, Dr. Brothers provides program development and technical expertise to all of DNCR's divisions. She has over 30 years of experience and holds a B.S. in Art from Hampton University and a Ph.D. in Educational Management (Higher Education Concentration) from Hampton University. Dr. Brothers heads DNCR's agency-wide internship program and will be responsible for leadership. She will work with faculty partners to review internship descriptions and ensure they align with degree competencies.

Charles Graves, Coordinator: Mr. Graves serves as DNCR's Coordinator for Program Outreach & Engagement. In this role, Mr. Graves coordinates the day-to-day statewide effort of DNCR's Internship programs, including recruitment, training and the weekly TEAMS check-in calls. Mr. Graves has a B.S. from the University of Delaware and a MPA from North Carolina Central University.

John Turner, HR: John Turner serves as DNCR's Staff Development Manager and LMS Administrator. Mr. Turner has 10+ years of experience as an Instructional Designer and Technical Writer. Mr. Turner has an A.O.S. in Word Processing & Office Technologies as well as a B.A. in Psychology with a Minor in French from Lehman College. He will assist with onboarding the interns, providing DNCR training (cyber security, etc) and other HR functions.

Kimberly Kandros is the Manager of Development and Special Projects. Holding a Masters in Public Administration, she has worked in museums for 22 years, focusing on grantsmanship and compliance and managing a number of federal grant awards—including many from IMLS. She will serve as the grant contact for this project, managing reporting requirements with IMLS and ensuring project staff adhere to goals and objectives within specified timelines, and stay within the project budget.

In addition, each of the 20 interns will be assigned to one of DNCR's 100+ sites across the state. Each will be supervised by a staff member who will be responsible for mentoring that student and supervising their daily work.

o What time, financial, personnel, and other resources will you need to carry out the activities? IMLS funds are sought to fund a paid internship program for two years. The internship program will also include honorarium for speakers to deliver training to students. These expenses incurred by this project go beyond basic operational costs that are included in DNCR's budget, approved by the NC General Assembly. All personnel needs of permanent, full-time DNCR staff are met through the state of North Carolina (this includes salaries, fringe benefits, facility costs and operational supplies like computers and phones). As DNCR is the parent agency, it works seamlessly with its subsidiary organizations to offer meaningful placements.

o How will you recruit and select participants from the primary audience? Recruiting students for summer internships is a proactive effort that begins in September of the academic year. Under the leadership of Dr. Brothers, the Office of Program Outreach & Engagement builds and sustains current university partnerships by

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participating in career fairs, presenting to faculty and department administration, and presenting to colleges, universities, and community college career service staff. Social media posts (in FY 2024, DNCR had 211.6 million impressions across all social media sites – Facebook, Twitter, Instagram, YouTube), email communications, and community outreach are also conducted.

DNCR will advertise this internship program once a funding announcement is made in August 2026 and begin accepting applications that align with trade skills (like carpentry, welding, HVAC and more), IT, natural sciences, other STEAM majors, business, and traditional museum fields in September 2026. Once the application period has closed (December 2026), DNCR will begin its internal review process in January 2027, which includes auditing applications for the following:

Supplemental attachments – All applicants must include their resume, cover letter, and transcript with their application. If a document is not attached, students will not move forward to the next phase of the review process.

North Carolina Residency – DNCR will audit applications for proof of NC residency and will also follow up with students whose NC residency status is unclear. If it is determined that an applicant is not a resident of NC, their application will not move forward to the next phase of the review process.

Current Enrollment – Applicants are required to be currently enrolled in college and planning to pursue education in the fall after the internship ends. If an applicant is not currently enrolled, they will not move forward.

DNCR will also audit applications with a GPA of at least 2.5. Once DNCR has reviewed all qualified students, names and application packets will be forwarded to project supervisors for applicant interviews in February-March 2027. Each applicant can select up to three positions with skill sets that match their field of study. If multiple internship sites interview the same student, the selected student will identify their preferred internship. After students are interviewed, DNCR sites will select the most qualified candidate for their respective positions in April 2027. Selected students will be poised to start their summer internships in June -August 2027.

o What are the risks to the project and how will you mitigate them? Risks are inherent when creating an internship program for young adults but DNCR believes this project is low-risk. Last year, DNCR had 752 applicants for only 24 positions under the state's internship program. Based on history, DNCR feels confident it will not face a shortage of qualified candidates. If an internship position requires unique skill sets for which there is no qualified candidate, DNCR will not fill that position and staff will select another internship position to meet its goal of 20 positions. Interns will only be placed in positions for which they are qualified. The bigger risk is that DNCR's 100 venues will identify internship needs far greater than the 20 positions this grant award funds. Internships not filled through this IMLS award will be referred to the state's internship program. Another risk will be disparate site supervision quality. DNCR staff will create a supervisor training toolkit to help supervisors standardize the experience for all interns (eg., a standardized competency rubric). Geographic travel challenges may pose another risk for interns. Funding has been requested to cover gas mileage reimbursement and housing for students who wish to work at a venue not close to home.

o How will you track your progress toward achieving your intended results? During the first year, 20 interns will be offered a position. Monthly check-ins via Teams will help keep interns engaged. Monthly in-person meetings will provide interns with professional development (the intern will be required to visit Raleigh once during the summer for training; staff will visit each intern once at their respective sites; and the intern will be required to attend a final convening at the end of the internship). And each intern will receive an hourly wage. Progress will be measured by the number of interns who complete their internship. At the end of their internship, students will be asked about their plans: whether they are graduating or continuing their education; whether their experience has increased their awareness of careers in museum fields; and whether they hope to apply for a full-time museum position in a museum after graduation. This data will be tracked. The same process will be followed for second-year interns.

Project Results

o What are your project's intended results and how will they address the need, problem, or challenge you have identified? *Consider Museums* will engage 20 interns during the first year and an additional 20 during the second year. In total, forty students will be impacted through this project. These students will be able to enter the job market with experience and hopefully, consider careers in the museum field. Core competencies achieved through *Consider Museums* include: Digital literacy, Technical fabrication skills, Collections stewardship, Professional communication, and Project management. Through pre- and post-surveys and a one-page essay, staff aim to report that 90% of interns will report increased awareness of museum career pathways. In addition, 80% of interns will demonstrate growth in at least 2 technical competencies from their supervisor. And a goal of 50% of interns will indicate in their post survey that they will pursue a museum-related job upon graduation.

o How will the knowledge, skills, behaviors, and/or attitudes of the primary audience change because of your project? Students will learn about the broad types of jobs available that they may not otherwise have considered. Private industries have the funds to participate in large-scale career fairs and recruit students in desired fields. Oftentimes, museums are not considered as employers – unless a student is specifically working toward a degree in museum studies or a specialized academic field. Those with certifications in trade skills, for example, may not have thought about positions in museums building exhibits or habitats for animals. Additionally, interns will gain hands-on skills that will make them more marketable once they graduate school.

o What products will result from your project, and how will you make them accessible to the primary audience? Each internship supervisor will be responsible for providing their interns with onboarding materials and if appropriate, relevant journal articles, handbooks or other resources specific to their role. Each intern will be required to write a one-page essay on what they learned at the conclusion of their internship. Excerpts of their essays will be posted on social media to increase awareness of this program for the following year's recruitment and promote different fields within the museum industry. The internship toolkit and supervisor guide will be shared as part of a publicly accessible internship framework document outlining recruitment processes, competencies, supervisory practices, and evaluation tools for use by other cultural agencies.

o How will you sustain the benefit(s) of your project beyond the conclusion of the period of performance? Grant funding will be needed to sustain this program beyond the two years funded by this grant. However, many philanthropic organizations are committed to providing youth with 21st century skill training – especially when skills relate to the trades or the sciences. In the North Carolina's Research Triangle, for example, the Golden Leaf Foundation, GlaxoSmithKline Foundation, and Burroughs Wellcome Fund are just a few organizations that may be interested in sustaining this program. Additionally, each DNCR cultural venue that participates in this project has its own 501c3 support group. In the past, some of these support groups have expressed interest in fundraising to sustain internship programs at their respective institutions. As an example, Friends of the Maritime Museum in Beaufort contributed private funds to sustain the internship initially funded through IMLS grant dollars. The pre- and post-surveys and intern essays will be instrumental in leveraging dollars to show the importance of providing students with meaningful opportunities in the workforce. During Year 2 of the grant, DNCR staff will use data collected during Year 1 to begin actively fundraising for *Consider Museums*. A minimum of ten proposals will be submitted during Year 2 of the grant to sustain this project. Friends groups will be approached in addition to corporate entities reference above and other corporate and private foundations.

Schedule of Completion for the NC Aquarium at Roanoke Island

Consider Museums: Exploring Creative Careers

September 1, 2026 – August 30, 2028

