Request for Authorization to Establish
Bachelor of Science (BS) in Environmental Studies
CIP 03.0103
East Carolina University

I. Program Highlights

- East Carolina University proposes the establishment of a Bachelor of Science degree in Environmental Studies.
- The primary objective of the program is to equip students with a multidisciplinary understanding of environmental processes and challenges, and a broad skill set that will prepare them for a wide range of careers. The curriculum provides students with the ability to analyze environmental issues from multiple perspectives — scientific, cultural, ethical, and technical. Students also gain practical experience through internships and research opportunities, preparing them for the workforce with hands-on experience and the ability to apply classroom knowledge in real-world settings.
- The degree program will support ECU's mission in a number of ways. The flexibility of the program, with a wide range of course options, maximizes access for students with different academic interests and career goals. The curriculum integrates innovative learning strategies such as experiential learning, internships, and fieldwork, and as such the degree cultivates leadership skills by engaging students in projects that require problem-solving, ethical decision-making, and collaborative work. Students in the program will learn to develop and implement strategies that promote sustainable development and community resilience and can address pressing environmental issues in eastern North Carolina and beyond. The degree coursework emphasizes the role of the environment in cultural and community well-being, aligning with ECU's mission to improve quality of life through academic and cultural enrichment.
- The degree will support a growing need for environmental experts who can analyze and communicate complex issues across different domains. The skills and knowledge acquired by students can aid in informed decision-making and innovative approaches to issues related to sustainability, resource management, disaster resilience, and other challenges.
- The BS in Environmental Studies provides students a solid grounding for understanding complex relationships between humans and their environment and equips them with the skills and knowledge necessary to pursue a variety of in-demand careers or graduate school. Graduates will gain interdisciplinary knowledge that can bridge the gap between different sectors — science, policy, and community — allowing for more holistic and effective environmental solutions in a wide range of public and private sector settings.
- The projections for year five add 10 students per year, moving the enrollment from 49 in the current concentration to 100 students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** A multidisciplinary program in Environmental Studies has been established at ECU since 2021 as a structured concentration within the BS in Multidisciplinary Studies. The development of the concentration was intended to leverage ECU's existing research expertise and coursework across multiple departments to provide students with an integrated and multidisciplinary program of study. The program is distinctive for its focus on teaching, research, and outreach activities in coastal environments. The core departments in the

program have strong ties to the Coastal Studies Institute, and a number of courses in the curriculum are taught by coastal researchers with links to ECU's integrated coastal programs and the resources and facilities of the ECU Outer Banks Campus. Students in the program have the option to incorporate a "Semester at the Coast" experience and/or to add a popular minor in Coastal and Marine Studies.

2. **Student Demand.** The structured concentration in Environmental Studies enrolled its first students in the fall of 2021, and enrollment has grown steadily from two students in fall 2021 to 49 currently. The initial success of the program and growing student demand convince us that a stand-alone BS degree in Environmental Studies will be a significant asset for ECU in support of its mission of student success, public service, and regional transformation.

3. **Employment Opportunities for Graduates.** The program's multidisciplinary character and emphasis on hands-on learning will set up graduates for success in a range of career paths as environmental scientists, managers, consultants, and policymakers. Graduates will be well qualified for public sector careers in state and federal agencies as well as careers in the private sector with environmental consulting or engineering firms. The Bureau of Labor Statistics projects a seven percent growth in environmental scientist and specialist jobs over the next decade (faster than the U.S. average) with a median pay of nearly $79,000 per year.

4. **Impact on Access and Affordability.** ECU is not requesting any program-specific fees or tuition differential for this program. The student return on investment for existing environmental studies programs within the UNC System (CIP code 03.0103) is positive, with a lifetime ROI of $156,682.

   Tuition and fees for the AY2025-2026 full-time (12+/9+ credit hour) rates are as follows:
   Full-Time Undergraduate Tuition and Fees per Year (In Dollars)

Category	**Resident**	**Nonresident**
Tuition	4,452.00	20,729.04
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	2,908.00	2,908.00
Special Fees	--	--

5. **Expected Quality.** The curriculum emphasizes multidisciplinary learning and the flexibility of students to tailor coursework to their individual interests. Students select a concentration in either environmental science or societal dimensions of environmental issues, and all are required to take a course in research methodology and complete an internship or capstone experience. The degree requires 45 credit hours, leaving students with ample opportunity to complete the required minor or a second major. The program is characterized by an active regime of academic advising, which ensures that students develop a coherent program of study and finish successfully in a timely fashion. The degree is overseen by a multidisciplinary faculty advisory committee, which meets regularly to ensure program quality and currency.

6. **Faculty Quality and Number.** The administrative home for the degree will be the Department of Earth, Environment and Planning (DEEP) within the Thomas Harriot College of Arts and Sciences.

DEEP will be a new department formed by a merger of the current departments of Geography, Planning and Environment and Geological Sciences. The new unit will have 23 full-time faculty spanning across academic fields of atmospheric science, geography, geology, and planning. Courses offered by the combined department constitute 64 percent of the classes taken by current students in the Environmental Studies concentration. Unit faculty are highly research-active, and grant-funded projects provide ample opportunity for Environmental Studies students to engage in environmentally focused research, particularly on issues relevant to ECU's coastal setting. Cohorted student research opportunities also are available through department-affiliated research centers, including the water scholars program in the Water Resources Center and the semester experience at the coast within the Coastal Studies Institute.

7. **Relevant Lower-level and Cognate Programs.** Environmental Studies is a multidisciplinary program, and the degree leverages significant environmental expertise that already exists across multiple academic disciplines. The curriculum builds upon a selection of lower-level courses that also serve other programs. Depending on student interest, some of these courses may be prerequisites for advanced study.

8. **Availability of Campus Resources (Library, Space, etc.)** As an interdisciplinary program, Environmental Studies will be able to rely upon services and resources that already exist to support the constituent academic areas. The program will make use of existing library holdings, space, IT services, staff, and other infrastructure, and will not require new campus resources.

9. **Existing Programs (Number, Location, Mode of Delivery).** There are four existing programs within the UNC System, all offered on campus. University of North Carolina at Chapel Hill, BA in Environmental Studies; Appalachian State University, BA/BS in Sustainable Development; University of North Carolina at Greensboro, BA in Environment & Sustainability; University of North Carolina at Pembroke, BS in Geo-Environmental Studies.

10. **Potential for Unnecessary Duplication.** ECU's degree would be only the second BS degree in the eastern half of the state, joining UNC Pembroke. UNC-Chapel Hill offers only the BA and represents a somewhat distinct student market from ECU. ECU is also distinctive for its focus on teaching, research, and outreach activities in coastal environments, particularly when compared with the two larger programs in the western part of the state (App State and UNC Greensboro).

11. **Feasibility of Collaborative Program**. Environmental Studies is an inherently multidisciplinary field and the core faculty in the program are comfortable working collaboratively across disciplinary boundaries. ECU envisions good opportunities to share ideas and perspectives with colleagues at sister institutions through shared conference participation, guest lectures, invited colloquium talks, and the like. Given the flexibility of the degree program, students should be able to find relevant coursework at other UNC System institutions. ECU will welcome transfer credit and will encourage students to take advantage of such opportunities where applicable.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** This degree received approval at each level of the following: Departmental Curriculum Committee; department chair; College Curriculum

Committee; college dean; Educational Policies and Planning Committee (Faculty Senate Subcommittee); Faculty Senate; provost; chief financial officer; and chancellor.

2. **UNC System Office Review Process and Feedback.** Throughout the review process, ECU provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommend that the Board approve East Carolina University's request to establish the Bachelor of Science (BS) in Environmental Studies (CIP 03.0103) effective fall 2025.

Request for Authorization to Establish
Bachelor of Science (BS) in Neuroscience
CIP 26.1501
East Carolina University

I. Program Highlights

- East Carolina University proposes the establishment of a Bachelor of Science in Neuroscience. It is designed to elevate the existing neuroscience structured concentration in multidisciplinary studies (the "neuroscience concentration") to a stand-alone degree program in the Department of Psychology at ECU. The course infrastructure of the neuroscience BS program will be inherited from the course infrastructure of the neuroscience concentration.
- The neuroscience BS degree will prepare undergraduates for graduate training, medical school training, and careers in medicine and biomedical health sciences fields. The unique aspect of this degree will be its focus on the cognitive and behavioral correlates to brain changes. Students will be trained to understand scientific methodology, clinical perspectives, and the interplay between these approaches to knowledge about neurocognitive phenomena such as learning and memory, drug addiction, neurotoxicology and teratology, neurodevelopmental disorders, traumatic brain injury, and neurocognitive disorders. The curriculum allows students to acquire foundational knowledge in STEM areas and to meet minimum admission requirements to medical schools, dental schools, graduate schools, and other advanced programs of study within the biomedical and health sciences umbrella.
- The neuroscience BS degree aligns with the ECU mission of "transformative experiences for all students during their time at ECU and beyond," and the related sub-mission of "expand access to and participation in transformative experiences and experiential learning."
- Students in the neuroscience BS degree program will be trained in analytical and communication methods and strategies through coursework and experiential learning opportunities, which allow them to have guided conversations that inform others about a variety of phenomena involving brain-behavior correlates.
- Employment opportunities for students with a neuroscience BS degree, as they explore the overall biomedical science job market, are expected to increase over the next 10 years.
- The conservative estimate for projected enrollment by year five is 123 students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The neuroscience BS degree program aligns with the ECU mission and vision priority of "transformative experiences for all students during their time at ECU and beyond" and the related sub-mission of "expand access to and participation in transformative experiences and experiential learning." To this end, students in the neuroscience BS program will have access to mentored-research experiences, mentored-clinical experiences, internship opportunities with partners from the biomedical sciences, sponsored-research training programs, and professional development opportunities such as ECU-sponsored symposia and conferences that are vertically integrated with the program. Additionally, students will have the opportunity to participate in study-abroad courses and research experiences in neuroscience. The neuroscience BS program inherits many existing mechanisms for students from the neuroscience concentration. This includes a two-year curricular requirement to complete a combination of research and thesis courses with faculty mentors, participating in the annual Neuroscience Symposium at ECU (in its 27th year), a

monthly Neuroscience Seminar Series (in its sixth year), a weekly Neuroscience Journal Café seminar (in its 20th year), and other campus-sponsored symposia (Research and Creative Achievement Week, Summer Undergraduate Research Symposium) that altogether allow students to explore, extrapolate, and synthesize new knowledge through high-impact opportunities. Because research and thesis courses are required for graduation, 100 percent of students will have these forms of experiential learning. For research and thesis courses, ECU faculty mentors specialize in behavioral neuroscience, cellular/molecular neuroscience, health psychology, neuropsychology, pharmacology, and physiology. This wide array of faculty specialization allows for developing the next generation of scientists and thinkers who can make substantial impacts in the state and beyond.

2. **Student Demand.** The neuroscience BS program has its foundations in the neuroscience structured concentration in multidisciplinary studies at ECU. Enrollment data for the neuroscience concentration from fall 2019 to fall 2023 (ECU IPAR Business Intelligence) indicates high student demand for a neuroscience major. Since its inception, the neuroscience concentration has experienced significant growth (from three majors in fall 2009 to 94 in fall 2023) and its enrollment is stable with a five-year (2019-23) average of 85 majors. Over this five-year span, the neuroscience concentration constituted an average of 49 percent of the majors across the three structured concentrations within multidisciplinary studies.

3. **Employment Opportunities for Graduates.** According to data from the University of North Carolina System Evaluation of University Programs, undergraduate programs in neurosciences have a median lifetime return on investment of $1,163,339. Neuroscience is in the top 42 of 242 undergraduate programs where the median lifetime ROI earned is greater than $1 million. The study also indicated that the median incremental lifetime ROI for an undergraduate student who completes a degree is $494,091. This number nearly doubles to $930,515 if undergraduates complete a graduate training program. According to *Lightcast* analysis of state and national trends, employment opportunities should increase from 2023 to 2028, exceeding the national trend in 2023, and continue to do so through 2033. Furthermore, recent trends in occupational endpoints stemming from undergraduate instruction show that basic research scientist, clinical laboratory technician/ scientist, and medical laboratory scientist positions are in high demand. The data may include positions within academic, government, and private sector settings. Common job titles for undergraduates earning a BS degree in neuroscience and subsequently completing advanced training programs are biotechnician, dentist, neuroengineer, neuropsychologist, optometrist, pharmacologist, professor (with specialization in molecular neuroscience, behavioral neuroscience, neurobiology, neurotoxicology, and physiology, for example), physician, research scientist, and research technician.

4. **Impact on Access and Affordability.** The average annual cost for an undergraduate education at ECU is $17,000, which is $2,555 less than the midpoint ($19,555) for four-year universities (U.S. Department of Education College Scorecard). The scorecard provides statistics regarding average earnings (five years after graduation) for undergraduate student borrowers of federal loans and their median debt (federal loans only). Neither neuroscience nor a related field (neurobiology, neuropsychology, multidisciplinary studies) could be filtered for the scorecard, but data for biology, chemistry, and psychology majors at ECU are available. Based on these majors, which are the foundations of neuroscience, and the median earning for neuroscientists in North Carolina at $73,530 (*Zippia*), the earnings-to-debt ratio is likely to fall well within the average (or better) of the aforementioned majors with a mean of 5.3 percent, as a conservative

estimate. This estimate is lower than the average for UNC System schools (5.5 percent). The neuroscience BS program thus offers a cost-effective means for students to be competitive in the job market and advance their careers. In addition, this program will be in a strategic position to capture the interest of student populations that are emphasized in the UNC System's Strategic Plan — adult learners, military personnel, and students from underserved counties, particularly throughout eastern North Carolina.

5. **East Carolina University is not requesting any program-specific fees or tuition differential for this program.**

Full-Time Undergraduate Tuition and Fees per Year (In Dollars)

Category	Resident	Nonresident
Tuition	$4,452	$20,729
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	$2,718	$2,718
Special Fees	--	--

6. **Expected Quality.** The neuroscience BS program will continue established practices of the neuroscience concentration that prepare students to be competitive for advanced training programs in medicine and the biomedical health sciences. The program's objectives are: (1) students will be able to interpret and apply current and major concepts in neuroscience; (2) students will engage in experiential learning experiences through research and thesis courses; (3) students will demonstrate proficiency in design and application of methodology in neuroscience; (4) students will demonstrate proficiency in applying and interpreting statistical analysis of neuroscientific data; (5) at minimum, students will share, communicate, and articulate the language of their research and theses experiences through program and campus-sponsored symposia (Annual Neuroscience Symposium at ECU, Summer Biomedical Research Symposium at ECU, SNCURCS), conferences (ECU Research and Creative Achievement Week), and seminars (Neuroscience Seminar Series, Journal Café).

7. **Faculty Quality and Number.** Three core faculty members from the Department of Psychology contribute their teaching efforts toward core courses (Introduction to Neuroscience, Neuropsychopharmacology, Neuropsychology, Neuroscience Capstones) in the neuroscience concentration. At the inception of the neuroscience BS program, they will continue to teach these courses, providing seamless continuity in instruction and student learning objectives. Additional faculty members in the Department of Psychology contribute to the teaching of select core courses (Research Methods, Statistics, Abnormal Psychology, Psychology of Learning, Cognitive Psychology). Approved electives are taught by various faculty in the departments of Biology, Chemistry, Philosophy, and Physics. Lastly, required research and thesis courses allow students to be mentored by 42 contributing faculty across 14 departments at ECU. Faculty mentors have expertise in anatomy and cell biology, biochemistry and molecular biology, biology, communication sciences and disorders, chemistry, engineering, internal medicine, kinesiology, microbiology and immunology, pharmacology and toxicology, physical therapy, and physiology.

8. **Relevant Lower-level and Cognate Programs.** The neuroscience BS program inherits the course infrastructure of the neuroscience structured concentration multidisciplinary studies program,

which consists of core courses with multidisciplinary studies (NEUR) and psychology (PSYC) prefixes. These courses are housed in the Department of Psychology, affording a wide range of topics that represent a neurocognitive core. The 18 hours of approved electives allow students to prepare for advanced study in graduate, medical, and biomedical health sciences training programs, as they involve fundamental and upper-level specialized courses in biology, chemistry, philosophy, and physics. These courses are housed in their respective departments within the College of Arts and Sciences. Altogether, the coursework in the neuroscience BS program emphasizes student preparation in becoming educators, scientists, thinkers, practitioners, and physicians.

9. **Availability of Campus Resources (Library, Space, etc.).** Existing building infrastructure and campus library resources are sufficient to support the new program. The library provides the ECU community access to communication workshops, research tools, databases, and training workshops that enrich the creative activity and scholarship of the university community.

10. **Existing Programs (Number, Location, Mode of Delivery).** There is one other undergraduate degree in neuroscience within the UNC System. It is located at University of North Carolina at Chapel Hill and offered on campus only.

11. **Potential for Unnecessary Duplication.** ECU is the only school within the UNC System east of Interstate 95 that offers an interdisciplinary major with a concentration in neuroscience. The neuroscience BS program rides on the strengths of the neuroscience concentration, namely delivering unique content that focuses on the link between brain changes (cellular, molecular, and anatomical) and behavioral-cognitive changes in humans and lower animals, where life and natural science courses (biology, chemistry, neuroscience, physics) are balanced with social science courses (psychology). The neuroscience program at UNC-Chapel Hill also offers interdisciplinary training in understanding the nervous system. However, its curriculum leans more toward the life and natural sciences, particularly with computer science and physics as they relate to biotechnology and human-machine interactions.

12. **Feasibility of Collaborative Program**. The neuroscience BS degree program serves as a pipeline for enrollment in a variety of pertinent graduate programs at ECU. ECU has six doctorate programs (anatomy and cell biology, clinical health psychology, interdisciplinary doctoral program in biology, biomedicine, and chemistry, pharmacology and toxicology, physical therapy, and physiology) and one biomedical science MS with a concentration in neuroscience program. There are also four doctorate programs and three master's programs in neuroscience or biomedical sciences in other universities within North Carolina.

13. **Other Considerations.** After the neuroscience BS degree program is approved, ECU will discontinue the neuroscience structured concentration multidisciplinary studies program. Current students in the neuroscience concentration (N = 101, fall 2024) will be given the opportunity to switch their major course of study to the neuroscience BS program.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposal was reviewed by the Departmental Curriculum Committee, psychology department chair, College Curriculum Committee, college dean, Educational Policies and Planning Committee (Faculty Senate Subcommittee), Faculty

Senate, provost, chief financial officer, and chancellor.

2. **UNC System Office Review Process and Feedback.** Throughout the review process, ECU provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommend that the Board approve East Carolina University's request to establish the Bachelor of Science (BS) in Neuroscience (CIP 26.1501) effective fall 2025.

Request for Authorization to Establish
Bachelor of Science (BS) in Security Studies
CIP 45.0902
East Carolina University

I. Program Highlights

- East Carolina University proposes the establishment of a Bachelor of Science in Security Studies. The purpose of the Security Studies program is to provide undergraduate students with theoretical and practical knowledge related to international and homeland security issues and prepare them to compete in academic and career fields where security awareness, global understanding, and analytical and writing skills are in high demand (Program Mission Statement from Assessment Plan).
- This program takes a unique approach to the study of national security-related threats, policies, institutions, and practices in the United States. The security challenges the country faces and the actions necessary to defend against and respond to them are incredibly complex. The program addresses this complexity with an interdisciplinary approach, in which students take classes in their major from as many as six different departments (eight programs). In addition to being interdisciplinary, the program also explores security at all levels of government (local, state, federal, and international). This interdisciplinary and multilevel approach sets the program apart from other programs that tend to focus more narrowly.
- Through ECU's partnership with Project Kitty Hawk, the entire degree program will be available online in addition to a face-to-face instructional format.
- Given the significant number of military bases and personnel in North Carolina, there is a lot of interest in security-related issues among prospective students. Related career fields include emergency management, law enforcement, military service, intelligence, and nonprofit and private sector research analysts. This program prepares students to meet the challenges of these careers, regardless of where they are employed.
- The program provides students with a strong return on investment, as demonstrated by the UNC-System Office ROI study. The new CIP code (45.0902) is not found at other universities within the UNC System, but student ROI data in similar fields with this two-digit CIP code (45) showed positive student ROI, as did those with the current 30 CIP.
- Projected enrollment in year five is 222 full-time students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The BS in Security Studies closely aligns with ECU's student success and regional transformation missions; it responds to the demands of a dynamic, innovative economy and evolving workforce. The program has a strong record of student completion in a timely manner. It aligns with ECU's public service mission, as many students in the program are already employed in public sector agencies (military and law enforcement) and most intend to enter or advance their careers in state and local government, the military, or the U.S. intelligence community. The public service ethic is strong among ECU students, and this will continue and strengthen as more students can engage in the program through our Project Kitty Hawk (PKH) offerings.

2. **Student Demand.** The program has been run as a multidisciplinary studies concentration since 2014, with strong enrollments.

Enrollments in the BS in Multidisciplinary Studies: Security Studies, 2019-23

Year	Fall 2019	Fall 2020	Fall 2021	Fall 2022	Fall 2023
Concentration Enrollment	44	38	35	30	31
Parent Program Enrollment	187	174	149	174	188

Online: According to research provided by Project Kitty Hawk, there are about 60,000 adult learners in North Carolina who choose to get their online education outside of the state. It estimates an additional one million adults in the state have some college-level education but no degree. Project Kitty Hawk has projected that 162 students will be enrolled in the online program by year five.

3. **Employment Opportunities for Graduates.** According to a *Lightcast* analysis of state and national trends, employment opportunities will increase from 2023 to 2028 from 35,872 at the regional level and continue to rise through 2033.

4. **Impact on Access and Affordability.** The BS in Security Studies will increase access to student populations that have been emphasized in the UNC System's Strategic Plan, including adult learners, military personnel, and students from underserved counties. This will particularly be the case for the online component of the program, which will provide a 100 percent online undergraduate degree option that is specifically targeted at adult learners who are interested in security-related careers. The program will also contribute to the UNC System Strategic Plan's education affordability goals. According to the U.S. Department of Education's College Scorecard, ECU's average annual cost is $17,000, which is less than the reported midpoint for four-year schools, $19,555. According to the same source, the median debt for undergraduate borrowers who completed their degrees in political science and government (CIP 45.1001) was $23,250. Median earnings for students who received financial aid 10 years after entering ECU was calculated to be $57,537, which exceeds the Scorecard's reported midpoint earnings of $53,617. Their estimated monthly earnings were $4,795, and the monthly payment on the debt was $246. This results in an estimated earnings-to-debt ratio of 5.13 percent, lower than the 5.5 percent average for UNC System schools. A table of these data is provided on the last page of this summary.

5. East Carolina University is not requesting any program-specific fees or tuition differential for this program. Undergraduate tuition and fees for the (2024-25) full-time (12+ credit hour) rates are as follows.

Full-Time 2024-2025 Undergraduate Tuition and Fees per Year (in Dollars)

	On Campus Program		Online (PKH) Program	
Category	**Resident**	**Nonresident**	**Resident**	**Nonresident**
Tuition	4,452	20,729	9,264	11,112
Tuition Differential	--	--	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	2,718	2,718	408	408
Special Fees	--	--	--	--

6. **Expected Quality.** The program will continue to provide a high-quality educational experience to its students. Its faculty are dedicated to challenging students to attain and enhance the knowledge, skills, and abilities they will need to compete for security-related careers. They will continue to research, publish, and attract external funding, to assure that their own knowledge is not only up to date, but at the cutting edge in their subfield. The program will continue to bring professionals from a wide range of career fields to campus to talk to students about their areas of expertise and career paths. Students are encouraged to take advantage of life-changing opportunities, including study abroad, internships, collaborative research with faculty members, and independent studies. Top-performing students have the opportunity to enroll in the BS in Security Studies to Master of Science in Security Studies accelerated program.

7. **Faculty Quality and Number.** Faculty members from six departments contribute classes to the BS in Security Studies. The program is housed in the Department of Political Science, which has eight faculty who regularly teach classes in the program. In fall 2024 there were 16 additional faculty members in other departments whose classes are often available to students in the multidisciplinary studies security studies concentration program. The departments include Criminal Justice and Criminology; Philosophy and Religious Studies; Environmental Health and Safety; Geography, Planning and Environment; History. This approach results in our students being taught by award-winning faculty from across campus and learning across broad fields relevant to national security.

8. **Relevant Lower-level and Cognate Programs.** The BS in Security Studies degree has six core classes. The remaining hours in the program allow students to explore security-related interests across eight fields of study. This will help our students prepare for the complex challenges and policy solutions they will encounter in their careers. The curriculum emphasizes the importance of students developing their analytical and written communication skills, which will be vital to their success in relevant career fields. In addition, ECU and PKH provide student support opportunities outside of their classes, including updates about their performance in classes, tutoring, and assistance with developing research and writing skills.

9. **Availability of Campus Resources (Library, Space, etc.).** Existing online and campus-based library resources are sufficient to support the new program. No new space will be required. ECU's Joyner Library supports our students and faculty by providing access to research tools and digital and physical resources. Librarians are dedicated and willing and able to support the campus community in their research.

10. **Existing Programs (Number, Location, Mode of Delivery).** There are no other programs in the state using the same CIP as the proposed BS in Security Studies. The closest is 30.0501: Peace Studies and Conflict Resolution. There are two undergraduate degree programs offered within the UNC System (1) University of North Carolina at Chapel Hill (on campus), and (2) University of North Carolina at Greensboro (on campus and online). There is also a BA in Peace and Conflict Studies offered at Guilford College. There are two graduate programs in the 30.0501 CIP: (1) Peace and Conflict Studies at UNC Greensboro and (2) Peace, War and Defense at University of North Carolina Wilmington.

11. **Potential for Unnecessary Duplication.** The proposed ECU curriculum is unique in North Carolina in that it incorporates security-related issues and responses impacting both the homeland and international levels, while others focus on just one level (e.g., the homeland security degree offered by Campbell University; Emergency Management at Elizabeth City State University and Western Carolina University; and International Studies at NC State University, UNC Wilmington, and WCU). In addition, most programs focus on just one disciplinary perspective, such as the cybersecurity degrees and concentrations offered by Appalachian State University, Fayetteville State University, University of North Carolina at Pembroke, and UNC Wilmington.

12. **Feasibility of Collaborative Program**. One important collaborative effort over the course of the next year or two will be to reach out to community colleges in eastern North Carolina and establish bilateral agreements that will bring students who graduate from their programs in emergency management into the BS in Security Studies.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposal was reviewed by the Security Studies Committee, Department of Political Science, dean and associate deans of the Thomas Harriot College of Arts and Sciences, THCAS Undergraduate Curriculum Committee, Institutional Planning and Research, Educational Policies and Planning Committee, the Faculty Senate, Office of the Provost, and the chancellor.

2. **UNC System Office Review Process and Feedback.** Throughout the review process, ECU provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommend that the Board approve East Carolina University's request to establish the Bachelor of Science in Security Studies (CIP 45.0902) effective fall 2025.

Request for Authorization to Establish
Master of Science (MS) in Cybersecurity
CIP 11.1003
NC State University

I. Program Highlights

- NC State University proposes the establishment of an MS in Cybersecurity.
- The educational objectives of the proposed program are to: 1) design, develop, and analyze secure and privacy-aware systems; 2) secure the critical infrastructure; and 3) enhance the security and privacy of end-user technologies which is consistent with the mission and goals of the NC State University Secure Computing Institute.
- The proposed MS in Cybersecurity supports each component of NC State's mission through its interdisciplinary design, its focus on science and technology, its inclusion of public and private industries, and its focus on real-world problems.
- The importance of the proposed program lies in its focus on hardware and device security along with security software. Additionally, it will be offered both on-campus and online to allow for maximum access and flexibility in program delivery.
- Graduates of the MS in Cybersecurity will be equipped with the latest technical knowledge and skills in cybersecurity and privacy principles as well as an understanding of the engineering aspects of software and hardware security. The proposed program will provide a pipeline of cybersecurity-trained professionals able to support technological solutions across a range of industries, government, and academia.
- In year five, the proposed MS in Cybersecurity is projected to enroll 49 students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The proposed MS in Cybersecurity will support each component of NC State's mission through its interdisciplinary design, its focus on science and technology, its inclusion of public and private industries, and its focus on real-world problems. More broadly, the proposed MS in Cybersecurity is aligned with the UNC System's mission to address the needs of individuals and society described in the UNC System's 2022-2027 Strategic Plan by contributing to the state's critical workforce.

2. **Student Demand.** Within the UNC System, the graduate program that is most similar to the MS in Cybersecurity proposed by NC State is the Master of Cybersecurity offered by the University of North Carolina at Charlotte. Over the last four years, UNC Charlotte experienced a nearly 70 percent increase in applications for this program. Though this increase in applications has resulted in an increase in enrollment, the data suggests there is still significant unmet demand for a graduate program in cybersecurity in North Carolina. The MS in Cybersecurity proposed by NC State is poised to meet this need, offering an online delivery option for students unable to relocate to Raleigh or who need a flexible delivery method. Additionally, the proposed program will expand the current educational offering by having a different focus on hardware and device security.

   In addition to a sustained flow of inquiries from potential students seeking a cybersecurity graduate program, NC State also experienced a significant increase in enrollment in its undergraduate cybersecurity offerings. For example, enrollment in the BS in Computer Science

has roughly doubled from 625 students in fall 2014 to 1,180 students in fall 2023. Similarly, course enrollments in CSC 471 (Modern Topics in Cybersecurity) and CSC 472 (Cybersecurity Projects) had a combined enrollment of 36, 47, and 78 over the last three years.

3. **Employment Opportunities for Graduates.** According to the U.S. Bureau of Labor Statistics, careers in cybersecurity and, more generally, information security, rank among the top five fastest-growing career fields in the country. Data also suggests that North Carolina is one of the top ten states in the United States in terms of the number of cybersecurity workers required to support the needs of employers.

   Although data collected and analyzed by Cyberseek estimates the current cybersecurity workforce in North Carolina is over 35,000, there are more than 18,000 additional unfilled job openings. Graduates of the proposed MS in Cybersecurity will be trained professionals who can pursue careers in industry, government, and academia. They will be competitive in the cybersecurity job market, particularly in North Carolina, and can anticipate an annual salary of more than $136,000, according to 2022 data from the U.S. Bureau of Labor Statistics.

4. **Impact on Access and Affordability.** To facilitate student access to the program, the proposed MS in Cybersecurity will be offered both on-campus and online.

   Using the master's degree in computer science as an example (a field closely related to cybersecurity), the median debt level of students completing NC State's graduate program in computer science is $30,750 according to the U.S. Department of Education College Scorecard. The annual loan payment associated with this program is $4,200. Based on data from 2022, the median salary for students completing a graduate education in Computer Science at NC State is $129,000, which is the highest starting salary of any NC State degree program. This corresponds to a debt-to-earnings ratio of 3.3 percent, which is well below the value of 8 percent recommended by the U.S. Department of Education.

5. NC State is requesting tuition differential for the proposed MS in Cybersecurity.

   Full-Time 2024-2025 Graduate Tuition and Fees per Year (In Dollars)

Category	**Resident**	**Non-Resident**
Tuition	9,837.00	30,610.00
Tuition Differential	5,600.00	5,600.00
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	2,264.00	2,264.00
Special Fees	1,500.00	1,500.00

6. **Expected Quality.**

   As part of the proposed MS in Cybersecurity, students will complete 15 credit hours of cybersecurity core courses, 12 credit hours of cybersecurity core or cybersecurity foundational electives, three credit hours of cybersecurity practicum, and one credit hour of graduate orientation to ensure that students are ready for success. Students can select either the thesis

track, the internship track, or both. As with all master's programs at NC State, a student will be given a maximum of six years to complete the program.

Among the admissions requirements are an undergraduate GPA of 3.0 or better and an undergraduate degree in computer science, computer engineering, electrical engineering, or a similar program. International students will have additional minimum requirements. Once admitted to the program, students will be required to maintain an average GPA of 3.0.

7. **Faculty Quality and Number.** Eleven faculty will support the proposed MS in Cybersecurity, including four faculty from the Department of Electrical and Computer Engineering and seven from the Department of Computer Science. Two senior faculty from the Department of Computer Science will co-direct the program.

   Depending on the program's popularity and growth, additional faculty may be needed within 10 years. These additional faculty would also be tenure/tenure-track faculty pursuing cybersecurity research consistent with the goals of the Departments of Computer Science and Electrical and Computer Engineering.

8. **Relevant Lower-level and Cognate Programs.** The proposed MS in Cybersecurity requires sufficient computer programming and mathematical preparation for the graduate computer science and electrical and computer engineering courses included in the curriculum. Courses from the Computer Science Department and the Computer and Electrical Engineering Department support the development of the proposed curriculum.

9. **Availability of Campus Resources (Library, Space, etc.).** The proposed program will make use of existing resources at NC State with minimal impact on infrastructure. The present library holdings are adequate and accessible. No additional space will be required in the first five years. Students will have access to all necessary software through NC State's site licenses.

10. **Existing Programs (Number, Location, Mode of Delivery).** Within the UNC System, both University of North Carolina at Charlotte and North Carolina Agricultural and Technical State University currently offer an MS in Cybersecurity with the same CIP code as the proposed NC State program.

    The program offered by UNC Charlotte is approved for on-campus delivery and focuses on security software. The program offered by North Carolina A&T is approved for online delivery and focuses on security software, analysis, and policy. The latter program is designed to provide working professionals from multiple disciplines and industries with an understanding of and expertise in the core aspects of cybersecurity.

11. **Potential for Unnecessary Duplication.** Unlike the existing programs, the proposed MS in Cybersecurity will focus on hardware and device security and include elements of security software. In addition, the program proposed by NC State will include a capstone project course or require a thesis and will be delivered both on-campus and online. These characteristics distinguish the program proposed by NC State from those offered by UNC Charlotte and North Carolina A&T. A graduate program offered by East Carolina University, the MS in Information and Cybersecurity Technology, was not used for comparison given the difference in CIP code and curricula.

12. **Feasibility of Collaborative Program**. Cybersecurity faculty at NC State, North Carolina A&T, UNC Charlotte, and ECU collaborate extensively through the North Carolina Partnership for Cybersecurity Excellence (NC-PaCE) led out of NC State. NC-PaCE is a coalition of educational, government, and industry organizations committed to accelerating the rate of growth of the state's and the nation's cybersecurity excellence in education, research, and services to counter cyber threats. Among its goals is one to address a growing cybersecurity workforce gap through targeted curriculum development, skills development, work-based learning, and certification support. NC State will continue and expand our ongoing collaboration through NC-PaCE.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposal was reviewed by the NC State faculty (department and college committees), Administrative Board of the Graduate School (ABGS), Graduate Operations Council (GOC), Council of Deans, chief financial officer, provost, chancellor's cabinet, chancellor, and the NC State Board of Trustees. Approval and support were provided at all levels.

2. **UNC System Office Review Process and Feedback.** Throughout the review process, NC State provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommend that the Board approve NC State University's request to establish the Master of Science (MS) in Cybersecurity (CIP 11.1003) effective fall 2025.

Request for Authorization to Establish
Bachelor of Science (BS) in Astronomy
CIP 40.0201
University of North Carolina Asheville

I. Program Highlights

- The University of North Carolina Asheville proposes the establishment of a Bachelor of Science (BS) in Astronomy.
- The purpose of the BS in Astronomy is to provide students with a solid grounding in physics, mathematics, computing, and data analytics and to prepare them for careers in astronomy, astrophysics, and related fields such as data science, science policy, and science education.
- The BS in Astronomy supports UNC Asheville's mission and commitments to student success, accessibility, innovation, and an education emphasizing critical thinking and applied research. Astronomy is rapidly increasing in popularity, particularly among traditionally underrepresented groups in STEM, and develops a broad set of skills in data analytics and machine learning.
- Often referred to as a gateway science, astronomy enjoys broad popularity among the public, inspiring curiosity that can serve as a starting point for further interest and discovery in other scientific fields. Prior to Elon University's launch of Astronomy BA and Astrophysics BS programs in 2021, no colleges or universities in North Carolina offered an undergraduate major in astronomy. Such an offering still remains unavailable in the UNC System. The United States is seeing a nationwide increase in student interest in astronomy, with the number of students majoring in astronomy increasing by 383 percent over the last 25 years and 126 percent in the last decade, and the facilities available at UNC Asheville's Lookout Mountain Observatory position the university well to offer the first public BS in Astronomy to North Carolina residents.
- Upon completion of the BS in Astronomy, students will be equipped for a wide range of careers, in addition to those typically associated with astronomy. These include research, data science, science policy, education, and science communication. The American Institute of Physics surveyed astronomy bachelors who graduated in 2018, 2019, and 2020 one year after they graduated, and 93 percent of respondents were either employed or enrolled in graduate school. Over half of the employed astronomy bachelors worked in the private sector.
- The projected enrollment in year five is 25.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The program will address the following UNC System mission goals: Goal 1: Increase Access for Students from Underserved Counties — Buncombe County, all counties adjacent to it, and all counties farther west are designated as "underserved"; Goal 6: Increase Affordability — UNC Asheville's tuition is affordable, and the Astronomy BS is designed with the flexibility to enable transfer students to graduate in four semesters; Goal 7: Improve University Productivity — the Astronomy BS will utilize existing resources, both faculty and infrastructure (Lookout Observatory, astro-computing lab, planned planetarium), requiring very little additional cost; and Goal 8: Increase Health Sciences and STEM Degrees and Certificates — astronomy has a high public profile and is proven to attract underserved groups into the physical sciences and adding the first Astronomy major in the UNC System is thus highly likely to contribute to this goal.

2. **Student Demand.** UNC Asheville's Department of Physics and Astronomy is vibrant and growing. Per capita, UNC Asheville has the largest number of physics majors in the UNC System with 0.93 percent of our undergraduates majoring in physics in 2022. UNC Asheville's astronomy minor has experienced dramatic growth, rising from seven students in 2017 to the present 33 (a 370 percent increase), owing to a combination of factors: the increased profile of Lookout Observatory built on the UNC Asheville campus in 2014, the popular restructuring of the minor curriculum in 2017, and the hiring of three new astronomy faculty (Britt Lundgren, David Wake, and Christene Lynch). The number of students participating in research in physics and astronomy has also grown by 200 percent over the past decade, bolstered by faculty success in receiving research grants. The Department of Physics and Astronomy has brought in an average of $150,000 per year over the past eight years from a variety of public and private sources, including the Space Telescope Science Institute, the National Science Foundation, NASA's North Carolina Space Grant, the Research Corporation for Science Advancement, the Alfred P. Sloan Foundation, and the John Templeton Foundation. By expanding the department's offerings in astronomy, we will continue to attract high-quality students to the campus.

3. **Employment Opportunities for Graduates.** The American Institute of Physics surveyed astronomy bachelors who graduated in 2018, 2019, and 2020 one year after they graduated, and 93 percent of respondents were either employed or enrolled in graduate school. Graduates with astronomy degrees encounter enormous amounts of data because telescopes produce petabytes of data, and modern observational astronomy courses prepare students to code in Python to extract and analyze information from these large datasets. Those majors who pursue data science careers will find that field has moderate but consistent annual job growth within North Carolina and entry salaries between $55,000 and $75,000 per year, according to NCWorks and NC Careers.

4. **Impact on Access and Affordability.** The BS in Astronomy at UNC Asheville will increase student access by providing a new pathway to a STEM degree at a public institution. The program would contribute directly to the UNC System Strategic Plan goals 1 and 8. Additionally, the average annual cost of attending UNC Asheville, minus the average grants and scholarships for federal financial aid recipients, is $13,069, is well below the national four-year midpoint for four-year schools ($18,902), and less than a third of the comparable cost of Elon University ($39,437), the only other undergraduate astronomy program in the state.

   UNC Asheville is not requesting any program-specific fees or tuition differential for this program.

   Full-Time 2024-2025 Undergraduate Tuition and Fees per Year (In Dollars)

Category	Resident	Nonresident
Tuition (spring and fall)	$4,122	$21,470
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	$3,210	$3,210
Special Fees	--	--

5. **Expected Quality.** The proposed BS in Astronomy at UNC Asheville emphasizes both foundational and interdisciplinary skills, such as problem-solving, data analysis, and technical proficiency. Key features of the program include a comprehensive curriculum of 57 credit hours in the major integrating physics, mathematics, computing, and specialized astronomy courses; innovative learning resources such as access to Lookout Observatory and the Skynet Robotic Telescope Network

(and potentially the forthcoming planetarium); and a focus on accessibility and affordability in alignment with UNC Asheville's mission. Faculty are currently active in research and public service and will continue to mentor students in scholarly and community outreach activities.

6. **Faculty Quality and Number.** There are seven faculty who will deliver the proposed program, including the director of the UNC Asheville Lookout Observatory. Six of the seven hold a doctorate. Students in this degree program will benefit from a highly skilled faculty whose expertise spans the major subfields of astronomy, including radio astronomy, with a focus on stellar magnetism and exoplanetary systems; galaxy formation and cosmic structure evolution; and galaxy evolution and intergalactic medium studies. This curriculum addresses phenomena from stars and exoplanets to galaxies and the large-scale universe.

7. **Relevant Lower-level and Cognate Programs.** Astronomy students will be required to take Calculus I, Calculus II, Calculus III, and one additional course from a menu including mathematics, statistics, and computer science. The mathematics and computer science cognate courses are strong and fundamental to many of our long-established degree programs.

8. **Availability of Campus Resources (Library, Space, etc.).** The Department of Physics and Astronomy has a 30-seat computer lab equipped with Windows PCs, which are used for the computational labs (ASTR 112, ASTR 113, ASTR 320, ASTR 420), and an eight-seat undergraduate research computer lab, equipped with a mixture of dual boot Windows/Linux PCs and iMacs. ASTR 112 and 113 make use of a set of twelve 10-inch Dobsonian telescopes, as well as access to robotic telescopes as part of the Skynet project. ASTR 320 uses telescopes and cameras located at our campus observatory. In the last two years, we have doubled the number of telescopes in the observatory available for this class and upgraded the cameras. All equipment is in good working order, so only general maintenance is required.

9. **Existing Programs (Number, Location, Mode of Delivery).** This will be the only BS in Astronomy in the UNC System.

10. **Potential for Unnecessary Duplication.** There is no duplication at this time.

11. **Feasibility of Collaborative Program**. UNC Asheville's astronomy faculty already collaborates with University of North Carolina at Chapel Hill to incorporate laboratory research experience into UNC Asheville's introductory lab courses. These labs utilize the Skynet Robotic Telescope Network (Skynet), a global network of approximately 20 fully automated or robotic telescopes operated by UNC-Chapel Hill. The faculty also partner with nearby Pisgah Astronomical Research Institute alongside UNC-Chapel Hill and Duke University. Possible future collaborations include joint lecture series, colloquia, or observing nights with nearby Appalachian State University, which has a physics program with an astronomy concentration, or with Western Carolina University, which teaches a sequence of introductory and intermediate astronomy courses.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** This proposal received approval from the UNC Asheville Institutional Development and Academic Policies Committees, Faculty Senate, the chief executive officer, the chief academic officer, and the chief financial officer.

2. **UNC System Office Review Process and Feedback.** Throughout the review process, UNC Asheville provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommend that the Board approve the University of North Carolina Asheville's request to establish the Bachelor of Science in Astronomy (CIP 40.0201) effective fall 2025.

Request for Authorization to Establish
Master of Science (MS) in Environmental Resilience
CIP 03.0103
University of North Carolina Asheville

I. Program Highlights

- The University of North Carolina Asheville proposes the establishment of a Master of Science degree in Environmental Resilience (MSER).
- The proposed program aligns with UNC Asheville's mission to "prepare students for lives of leadership and service" and to deliver "undergraduate and graduate programs that address the most pressing issues of our time." The program leverages interdisciplinary faculty expertise and collaborates closely with the National Environmental Modeling and Analysis Center (NEMAC), strengthening its existing connection with UNC Asheville.
- The proposed program is unique within the UNC System as it focuses explicitly on environmental resilience. It offers a one-year, in-person curriculum that emphasizes practical skills in analyzing ecological and socioeconomic data.
- Asheville has established itself as a leading environmental data center in North Carolina. The city hosts institutions like NOAA's National Centers for Environmental Information (NCEI) which advance environmental research and data dissemination.
- Graduates will have knowledge and skills in environmental science, impact assessment, economic analysis, GIS, data science, and resilience strategies. Historical data from NC Tower show a salary premium for master's degree holders in environmental resilience, with significantly higher starting salaries than those with bachelor's degrees, and the gap widens over the course of their careers. These data indicate strong demand and financial benefits for potential MSER graduates.
- The proposed MSER program anticipates a cohort of 15 students enrolled by year five.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. Relation to Campus Distinctiveness and Mission. The proposed graduate program will benefit existing undergraduate programs in environmental science, economics, and atmospheric sciences. By focusing on regional and societal needs, it will boost the university's competitiveness and align with the UNC System's mission to address individual and societal needs through knowledge application. The proposed program supports the 2022–27 UNC System Strategic Plan by enhancing graduate student success by increasing affordability with its one-year duration.

2. Student Demand. The methods used to assess potential student demand include a review of enrollment trends across the UNC System for undergraduate majors relevant to environmental resilience and application and enrollment data for the only similar graduate program in the UNC System. Enrollment in related undergraduate majors across the UNC System increased by 10 percent from 2018 to 2022, while overall undergraduate enrollment declined by one percent. Specifically, environmental science enrollment in the UNC System has grown by 25 percent since 2010. At UNC Asheville, environmental science is a popular major with over 150 declared majors and about 60 graduates each year.

3. Employment Opportunities for Graduates. The North Carolina Department of Commerce projects 1.29% yearly growth in employment among "Environmental Scientists and Specialists" in North Carolina for the next decade. This occupation is the one staff believes to be most clearly aligned with the program. For comparison, Commerce projects the overall state workforce to grow by 0.96% yearly over that period. Nationwide, according to Lightcast data, approximately 26% of job postings for Environmental Scientists and Specialists require or prefer a master's degree. The median advertised salary over the past three years in the occupation for jobs requiring a high school diploma was $57,200. For bachelor's degrees it was $77,700, and for master's it was $85,400.

4. Impact on Access and Affordability. The proposed MSER program is designed to attract students from across the region, while remaining highly accessible to UNC Asheville's undergraduate students by minimizing prerequisites and expanding the pool of potential candidates. It offers 4+1 and 3+1 options for several majors, allowing students to continue to a master's degree without relocating.

The proposed program offers a favorable debt-to-earnings ratio for graduates. Assuming a median salary of $85,400 and a 10-year loan repayment period of $10,534 at the federal Direct Unsubsidized Loan rate of eight percent interest, an in-state MSER graduate will only pay less than two percent of their monthly salary in student loans for this program.

5. UNC Asheville is not requesting any program-specific fees or tuition differential for this program.

Full-Time AY 2024 -25 Graduate Tuition and Fees per Year (In Dollars)

Category	**Resident**	**Nonresident**
Tuition	$6,552.00	$25,706.00
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	$3,982.90	$3,982.90
Special Fees	--	--

These figures include tuition and fees for two regular terms plus six hours of summer school, sufficient to complete the program. The program does not depend on differential tuition. All instructional staff are in place other than a new administrative assistant. There are no additional personnel costs. The university's existing physical resources and infrastructure are sufficient to support this program. The cost of the proposed MSER program is $10,534.90 for North Carolina residents and $29,688.90 for out-of-state residents, which is the lowest in the state for similar programs.

6. Expected Quality. The proposed MSER program requires 30 hours and the successful completion of a capstone project with a community partner in CLIM 599. Key features include a three-credit internship with a community partner, followed by a six-credit applied research project completed for and with that partner agency. The capstone prepares graduates to meet local and state environmental planning needs. Proficiency is measured with an 80 percent pass rate, with students needing a grade of C (or equivalent) or better in their classes. The proposed MSER program will be subject to the same program review procedures and frequency as other UNC Asheville programs.

7. Faculty Quality and Number. UNC Asheville follows SACSCOC standards for credentialing faculty, which for graduate courses includes an earned doctorate or terminal degree in the teaching discipline or a related discipline. Faculty without an earned doctorate may also be justified in teaching by

documenting other qualifications, including professional expertise and prior teaching experience. Seven faculty, across the departments of Economics, Atmospheric Sciences, Statistics, Computer Science, Philosophy, and Environmental Studies, along with NEMAC's two lead scientists are lined up to deliver the curriculum. The program will not require hiring additional faculty and will utilize existing faculty. Any course releases for regular faculty to deliver these courses will be covered by either reducing total undergraduate course offerings by consolidating sections or by adjunct replacement.

8. Relevant Lower-level and Cognate Programs. The proposed MSER program is set to draw undergraduate students from a variety of disciplines. Key contributing programs include atmospheric sciences, economics, and environmental management and policy. In spring 2024, total majors in those three disciplines were 215 (35 ATMS, 34 ECON, and 146 ENVR). The environmental science program has the capacity and intention to grow and is expected to remain one of the largest majors at UNC Asheville, serving as the primary feeder for the proposed program.

9. Availability of Campus Resources (Library, Space, etc.). Existing resources available to students in the UNC Asheville library and through the interinstitutional Western North Carolina Library Network are sufficient to support this program. UNC Asheville does not expect the program to require any new square footage or significant renovation or retrofit. While space has not immediately been identified, the university will allocate at least two offices to the program for the program director and administrative support, perhaps as part of a suite of other graduate programs that are developed so they can be administered together.

10. Existing Programs (Number, Location, Mode of Delivery). While there are three programs in the UNC System with CIP 03.0103, two of them are dissimilar. As a result, the only comparable master's program in the System is offered at NC State. It is delivered both in person and online. In academic years 2022-2023 and 2023 to 2024, that program had approximately three times as many applications as enrollments. Duke University also offers a master's program which may be broadly similar to the proposed program at UNC Asheville. Duke's program has had completions rise from 19 in 2020 to 30 in 2023. Finally, among UNC Asheville's peer institutions, Christopher Newport University offers a master's degree with this CIP Code. That program has seen completions increase from one in 2020 to 13 in 2023.

11. Potential for Unnecessary Duplication. Concerns expressed about duplication and competition for NC State's CCS program students have been addressed. Notably, the two institutions are 200 miles apart and support different student demographics, indicating that there is enough demand from prospective students and employers to support both programs.

12. Feasibility of Collaborative Program. UNC Asheville discussed the possibility of a collaboration with NC State's CCS program in curriculum delivery. The proposed MSER program will be delivered entirely in person, while the CCS program has a significant portion of the curriculum delivered online. The proposed program allows students to use an NC State course as one of their electives. It is also possible for UNC Asheville to develop a collaborative course that taps into the institution's relationships with the local environmental community, particularly NEMAC, NCEI, and the National Climatic Data Center.

III. Summary of Review Processes

1. Campus Review Process and Feedback. The UNC Asheville campus review process involves approval by the Institutional Development and Planning Committee (IDC), followed by approval by the Academic

Policies Committee (APC), culminating with approval by the full Faculty Senate. Other individuals who reviewed and approved the proposal include the dean of special and graduate programs, the provost, and the chancellor.

2. UNC System Office Review Process and Feedback. Throughout the review process, UNC Asheville provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommend that the Board approve the University of North Carolina Asheville's request to establish the Master of Science (MS) in Environmental Resilience (CIP 03.0103) effective fall 2025.

Request for Authorization to Establish
Master of Science (MS) in Management
CIP 52.1301
University of North Carolina at Chapel Hill

I. Program Highlights

- The University of North Carolina at Chapel Hill proposes the establishment of a Master of Science in Management (MSM).
- The proposed program is designed to provide foundational business education to recent graduates without prior business training or significant work experience and will be delivered in person. It aims to prepare students for entry-level roles in business by offering a rigorous, one-year, 30-credit curriculum.
- The proposed program aligns with UNC-Chapel Hill's mission to serve as a center for research, scholarship, and creativity and to teach a community of undergraduate, graduate, and professional students to become the next generation of leaders. Kenan-Flagler Business School at UNC-Chapel Hill has a track record of developing business leaders. The program also supports the University of North Carolina System's mission to create, transmit, and apply knowledge to address societal needs by leveraging UNC-Chapel Hill's academic expertise to prepare young professionals for contemporary careers.
- The proposed program will include: (1) specializations in finance or marketing; (2) experiential learning opportunities; (3) a cohort-based residential delivery model designed to foster collaboration and community; and (4) access to state-of-the-art facilities, including the newly constructed Bell Hall. The program's lockstep curriculum and dedicated student support model, proven effective in other Kenan-Flagler Business School graduate programs, promotes efficiency and degree completion.
- Upon graduation, graduates of the proposed program will be prepared for a wide range of business roles including consultant, project manager, health center administrator, client solutions executive, investment banking analyst, marketing professional, and digital media coordinator. Additionally, graduates can leverage Kenan-Flagler Business School's employer network and integrated career support services.
- In year five, the proposed MS in Management projects 75 enrolled students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. Relation to Campus Distinctiveness and Mission.

The proposed MSM program aligns directly with the mission of UNC-Chapel Hill to educate and prepare leaders to address societal and workforce needs. The program fills a critical gap in the university's offerings by targeting recent graduates without prior business education or significant work experience. This aligns with the UNC System's Strategic Plan: Higher Expectations, which emphasizes workforce readiness and retaining talent within North Carolina.

2. Student Demand.

Lightcast data provided by the Office of Digital and Lifelong Learning at UNC-Chapel Hill provide evidence of student demand for a one-year business-focused master's program. The results of the analysis indicate a 187 percent increase in student demand for business degrees since 2017. Additionally, the recent UNC ROI Study of University Programs (2023) report identified business, management, marketing, and related

support services as the most popular field of study within the UNC System, exceeding enrollments in the second most popular field of study by nearly 10,000 students.

Institutions across the country (e.g., Emory, University of Chicago) are launching similar programs to meet market demand, while peer institutions with existing programs (e.g., Duke, Wake Forest, and UVA) have seen strong annual enrollment, including many students who are North Carolina residents. Duke University's program enrolls over 250 students annually, and Wake Forest and UVA also report steady enrollments of over 80 and 100 students, respectively.

Consultations with these institutions indicate significant unmet demand within North Carolina, particularly in the Triangle region. Surveys indicate that UNC-Chapel Hill graduates without business backgrounds often pursue similar programs out of state, demonstrating a clear opportunity to retain these students within the UNC System.

3. Employment Opportunities for Graduates.
The program's design aligns with regional and national labor market needs, as highlighted in workforce data included in the Request for Preliminary Authorization. Industries in North Carolina, including technology, financial services, and health care, have expressed growing demand for professionals with foundational business acumen and strong leadership capabilities.

MSM graduates will be prepared for a wide range of business roles. Consistent with this, graduates from peer MSM programs have secured positions such as financial analyst, portfolio asset manager, risk and compliance consultant, and digital content manager. Kenan-Flagler Business School's robust employer network, coupled with the required STAR (Student Teams Achieving Results) experiential component, ensures graduates have practical experience, enhancing their job prospects and employability.

4. Impact on Access and Affordability.
The MSM program is designed with affordability and accessibility in mind. The proposed tuition is well below the anticipated competitor programs (Duke, Wake Forest, UVA) for NC resident students and in line with competitor programs for nonresident students. Students with demonstrated need or merit will be prioritized for scholarships and financial aid options, further reducing financial barriers to entry. Debt loads for MSM students will be similar to debt loads for Master of Accounting (MAC) students, given the similarities in the student groups and overlapping recruiting strategies. The Office of Scholarships and Student Aid at UNC-Chapel Hill reports debt loads of $51,475, $49,260, and $52,560 for the three most recent academic years. In those years, 48, 37, and 52 percent of each class borrowed, respectively.

Benchmarking shows that common majors for students who enroll in MSM programs are economics, political science, health systems/administration, communications/media/journalism, history, sociology, exercise and sport science, and psychology. Based on first destination data from University Career Services at UNC-Chapel Hill, average salaries for UNC-Chapel Hill students graduating with these majors are $61,000 ($53,000 excluding economics). Benchmarking data indicate average starting salaries for MSM graduates of over $80,000. This enhanced earning potential provides a clear path to repayment and a positive return on investment.

5. UNC-Chapel Hill is requesting tuition differential for the MSM program.

Full-Time 2024-2025 Graduate Tuition and Fees per Year (In Dollars)

Category	**Resident**	**Nonresident**

Tuition	10,764	29,421
Tuition Differential	35,159	23,839
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	1,979	1,979
Special Fees	0	0

6. Expected Quality.
The proposed MSM program will offer a rigorous 10-course, 30-credit, one-year curriculum tailored for early-career professionals without business experience. It will include foundational courses in accounting, finance, marketing, analytics, leadership, communications, operations, strategy, and organizational behavior, along with specialized tracks in finance and marketing. In addition, the hallmark of the program is the required STAR (Student Teams Achieving Results) experiential learning component — a team-based, capstone course that engages students in real-world consulting projects.

Kenan-Flagler Business School is accredited by the Association to Advance Collegiate Schools of Business (AACSB) and therefore regularly evaluated under the continuous improvement review (CIR) process. This review process is extensive, and each program is individually assessed ensuring all are held to the highest standards of quality.

7. Faculty Quality and Number.
The proposed program will leverage existing faculty from Kenan-Flagler Business School. Many faculty have advanced degrees and extensive teaching and research experience and are recognized experts in their fields. Consistent with other Kenan-Flagler Business School programs and the UNC-Chapel Hill Policy on Qualifications of Course Instructors requirements, all MSM faculty will either: (1) have an earned doctorate or terminal degree in the same or closely related discipline as the course taught; or (2) meet alternative qualifications such as professional experience or other demonstrated competencies and achievements that contribute to effective teaching and student learning outcomes of the course.

8. Relevant Lower-level and Cognate Programs.
The proposed MSM program content is designed as a bridge from non-business undergraduate majors. It mimics Kenan-Flagler Business School's successful MAC program, which delivers high-quality graduate accounting education to students with little or no prior education or experience in accounting. MSM core curriculum is aligned with academic areas at Kenan-Flagler Business School (accounting, finance, marketing, communication, operations, organizational behavior, and strategy).

9. Availability of Campus Resources (Library, Space, etc.).
Existing resources at Kenan-Flagler Business School, including classrooms, academic support services, and library resources, are sufficient to support the proposed MSM program. The opening of Bell Hall in fall 2025 will alleviate prior space constraints and provide a state-of-the-art facility. Bell Hall's advanced classroom technology, collaborative spaces, and flexible design will support the cohort-based MSM curriculum. The university library system, including access to specialized business databases, will meet students' academic needs.

10. Existing Programs (Number, Location, Mode of Delivery).

Within the UNC System, the University of North Carolina at Charlotte offers the only comparable MSM program. This program is delivered in a cohort-based, lockstep format and primarily serves the Charlotte region. Other UNC System institutions offer one-year specialized business master's programs, but not a general MSM.

11. Potential for Unnecessary Duplication.
Consultations with peer institutions and UNC Charlotte confirm that the two programs cater to distinct student populations, minimizing the risk of duplication. UNC Charlotte's program draws students mainly from the Charlotte area and primarily, but not exclusively, serves recent graduates from UNC Charlotte. The proposed UNC-Chapel Hill MSM program will primarily serve recent graduates from UNC-Chapel Hill and will primarily draw from the Triangle region. Lastly, demand from students currently leaving the state for similar programs underscores the necessity of offering the MSM at UNC-Chapel Hill.

12. Feasibility of Collaborative Program.
Collaborative opportunities exist with UNC Charlotte, particularly in areas such as shared career fairs and research initiatives. Current partnerships, such as joint faculty research and conferences, provide a foundation for further collaboration. These efforts ensure complementarity rather than competition between the two programs. Additionally, partnerships with other Triangle-region undergraduate institutions could create pathways into the MSM program.

13. Other Considerations.
The proposed MSM program addresses a strategic priority for UNC-Chapel Hill by expanding access to graduate business education for non-business undergraduates. It also supports regional economic growth by preparing graduates for in-demand roles across North Carolina. The program's design as a one-year intensive curriculum ensures a quick return on investment for students, enhancing its appeal and accessibility.

III. Summary of Review Processes

1. Campus Review Process and Feedback.
The MSM proposal was reviewed and approved by: the Kenan-Flagler Business School faculty; Kenan-Flagler Business School dean; UNC-Chapel Hill Graduate School Academic Policy Committee; UNC-Chapel Hill Graduate School Administrative Board; UNC-Chapel Hill Graduate School dean; UNC-Chapel Hill New Program Review Committee; UNC-Chapel Hill provost; UNC-Chapel Hill vice chancellor for finance and operations; UNC-Chapel Hill chancellor; and UNC System Office.

2. UNC System Office Review Process and Feedback.
Throughout the review process, UNC-Chapel Hill provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommend that the Board of Governors approve the University of North Carolina at Chapel Hill request to establish the Master of Science (MS) in Management (CIP 52.1301) effective fall 2025.

Request for Authorization to Discontinue and/or Consolidate
Academic Degree Programs

University of North Carolina at Greensboro

Doctor of Philosophy in Consumer, Apparel, and Retail Studies (Ph.D.) (CIP 19.0901)

Overview: The Doctor of Philosophy in Consumer, Apparel, and Retail Studies (19.0901) at the University of North Carolina at Greensboro will be discontinued and consolidated effective fall 2025. This request to discontinue a degree program has been reviewed by the appropriate institutional committees and approved by the appropriate academic authority(ies).

The Doctor of Philosophy in Consumer, Apparel, and Retail Studies will be discontinued and consolidated into the Doctor of Philosophy in Business Administration (52.0201). The consolidation will enhance the efficiency and reach of Bryan School doctoral programs by enabling shared courses and resources across departments and concentrations. No faculty or staff members will be affected by the discontinuation of the program. Currently enrolled students will receive ongoing support and the opportunity to complete the program.

Recommendation: It is recommended that the Board approve the University of North Carolina at Greensboro's request to discontinue and consolidate the delivery of the Doctor of Philosophy in Consumer, Apparel, and Retail Studies (19.0901) effective fall 2025.

Doctor of Philosophy in Economics (Ph.D.) (CIP 45.0603)

Overview: The Doctor of Philosophy in Economics (45.0603) at UNC Greensboro will be discontinued and consolidated effective fall 2025. This request to discontinue a degree program has been reviewed by the appropriate institutional committees and approved by the appropriate academic authority(ies).

The Doctor of Philosophy in Economics will be discontinued and consolidated into the Doctor of Philosophy in Business Administration (52.0201). The consolidation will enhance the efficiency and reach of Bryan School doctoral programs by enabling shared courses and resources across departments and concentrations. No faculty or staff members will be affected by the discontinuation of the program. Currently enrolled students will receive ongoing support and the opportunity to complete the program.

Recommendation: It is recommended that the Board approve the University of North Carolina at Greensboro's request to discontinue and consolidate the delivery of the Doctor of Philosophy in Economics (45.0603) effective fall 2025.

Doctor of Philosophy in Information Systems (Ph.D.) (CIP 11.0103)

Overview: The Doctor of Philosophy in Information Systems (11.0103) at UNC Greensboro will be discontinued and consolidated effective fall 2025. This request to discontinue a degree program has been reviewed by the appropriate institutional committees and approved by the appropriate academic authority(ies).

The Doctor of Philosophy in Information Systems will be discontinued and consolidated into the Doctor of Philosophy in Business Administration (52.0201). The consolidation will enhance the efficiency and reach

of Bryan School doctoral programs by enabling shared courses and resources across departments and concentrations. No faculty or staff members will be affected by the discontinuation of the program. Students who remain in the program and make appropriate progress will be able to complete the program by 2028.

Recommendation: It is recommended that the Board approve the University of North Carolina at Greensboro's request to discontinue and consolidate the delivery of the Doctor of Philosophy in Information Systems (11.0103) effective fall 2025.