APPENDIX K

THE UNIVERSITY OF NORTH CAROLINA SYSTEM

MEETING OF THE BOARD OF GOVERNORS
Committee on Educational Planning, Policies, and Programs
May 22, 2024

AGENDA ITEM

A-4. UNC System Academic Degree Program Actions ..... Daniel Harrison

Situation: Section 400.1.1[R] of the UNC Policy Manual, *Regulation for Academic Program Planning and Evaluation*, defines the academic program actions that require approval from the University of North Carolina Board of Governors and those actions that are delegated to staff at the University of North Carolina System Office. This report presents those program actions that require Board approval.

Program Establishments

Appalachian State University
Bachelor of Science (BS) in Cybersecurity CIP 11.1003

North Carolina Agricultural and Technical State University
Bachelor of Science (BS) in Communication Sciences and Disorders CIP 51.0201

North Carolina Central University
Bachelor of Science (BS) in Formulation and Packaging Science CIP 51.2009

University of North Carolina at Chapel Hill
Bachelor of Science (BS) in Exercise and Sport Science CIP 31.0505

University North Carolina at Charlotte
Bachelor of Science (BS) in Sports Analytics CIP 30.7099

University of North Carolina Wilmington
Bachelor of Science (BS) in Software Engineering CIP 14.0903

University of North Carolina at Pembroke
Master of Health Care Administration (MHA) CIP 51.0701

University of North Carolina Wilmington
Master of Physician Assistant Studies (MPAS) CIP 51.0912

Western Carolina University
Master of Science in Nursing (MSN) (Prelicensure Nursing) CIP 51.3801

North Carolina Central University
Doctor of Education (Ed.D.) in Counseling, Counselor Education, and Supervision CIP 13.1101

North Carolina Agricultural and Technical State University
Doctor of Philosophy (Ph.D.) in Applied Psychology CIP 42.2813

University of North Carolina at Charlotte
Doctor of Philosophy (Ph.D.) in Data Science CIP 11.0701

University of North Carolina at Pembroke
Doctor of Optometry (O.D.) CIP 51.1701

Program Discontinuations and Consolidations

North Carolina Agricultural and Technical State University
Master of Science (MS) in Applied Physics CIP 40.0801

North Carolina State University
Master (M) of Genetics CIP 26.0801
Master of Science (MS) in Genetics CIP 26.0801
Doctor (Ph.D.) of Genetics CIP 26.0801

Western Carolina University
Bachelor of Science (BS) in Art Education CIP 13.1302

Western Carolina University
Bachelor of Science (BS) in Health Systems Administration CIP 51.0701

Western Carolina University
Bachelor of Science in Spanish, Secondary Education (BSEd) CIP 13.1330

Background: Per Section 400.1 of the UNC Policy Manual, the constituent institutions and the UNC System Office review degree program offerings and bring periodic requests for program establishment, discontinuation, and consolidation recommendations to the Board of Governors. Items such as change of delivery mode, change of program title or Classification of Instructional Program (CIP) codes, change of off-site locations, and change of specialty codes are delegated to UNC System Office staff.

Assessment: Approval of the requested program action is recommended.

Action: This item requires a vote by the committee, with a vote by the full Board of Governors through the consent agenda.

Request for Authorization to Establish
Bachelor of Science (BS) in Cybersecurity
CIP 11.1003
Appalachian State University

I. Program Highlights

- Appalachian State University proposes the establishment of a Bachelor of Science (BS) in Cybersecurity.
- The BS in Cybersecurity program will prepare graduates to help large and small organizations protect their digital assets while providing them with a strong business background, communication skills, and cybersecurity knowledge. The program will be housed in the Walker College of Business.
- This program supports all strategic priorities of App State: deliver innovative, relevant academic programs; foster teaching excellence; expand experiential learning; support co-curricular learning experiences that augment classroom learning; and leverage technology to support teaching and learning. Knowledge will be imparted through classes that count toward the cybersecurity degree.
- The program's key objectives are to prepare students with knowledge in various cybersecurity-related topics and help them gain a solid business background and strong communication skills. From a cybersecurity perspective, students will learn about forensics, incident response and detection, cybersecurity strategy, policy and governance, audit and cybersecurity analytics, programming, networking, database management, ethical hacking, countermeasures, and other ethics and privacy issues. From a business perspective, students will complete multiple courses in accounting, business law, computer information systems, economics, finance, management, marketing, supply chain, and global issues as part of their degree requirements. They will also take business communications and/or business writing courses, organizational behavior, and strategic management while practicing oral and written communication skills.
- This program is unique: it will be the only BS in Cybersecurity in the UNC System housed within a college of business. Students will engage and follow the business school curriculum in addition to computer science courses, ensuring a better understanding of how businesses function. Additionally, there are no undergraduate degree programs in cybersecurity available through UNC System institutions in western North Carolina. Students at the Boone and Hickory campuses would take most of the classes in person.
- This program will prepare students for various public, private, and nonprofit information security jobs. Graduates with a cybersecurity degree will be prepared to work as information security analysts or in similar roles. The Lightcast Q1 February 2024 Data Set for CIP 11.1003 (Computer and Information Systems Security/Auditing/Information Assurance) reported a projected 21 percent increase in information security analyst jobs in North Carolina between 2023 and 2028, with median earnings of $56.61/hour.
- The projected enrollment in Year Five is 162 students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The BS in Cybersecurity aligns with App State's strategic plan. App State has seen great interest from students in cybersecurity curricula at both the Boone and Hickory campuses. This program would fall under the STEM designation CIP 11.1003 and aligns with multiple UNC System foundational goals, including student access,

affordability, efficiency, economic impact, and community engagement. The program will be offered to students at both the Boone and Hickory campuses.

2. **Student Demand.** The Department of Computer Information Systems (CIS) at App State launched a cybersecurity concentration for CIS majors in fall 2021. In the period from August 2021 to February 2024, the cybersecurity concentration grew from 0 to 270 students. A cybersecurity minor open to all majors began in the fall of 2022 and has grown to 51 students. In February and March 2023, 457 students enrolled in a freshman-level course. Business analytics using spreadsheet technology surveyed the students regarding their interest in cybersecurity; 328 (72 percent) reported that they were interested in cybersecurity programming. Students at the Hickory campus have also shown strong interest in cybersecurity courses. App State receives regular inquiries from current and prospective students and employers regarding whether the college plans to offer a cybersecurity major.

3. **Employment Opportunities for Graduates.** Because this degree is housed in the Walker College of Business, students have access to that college's career services center for more focused guidance in post-graduation opportunities. There is a shortage of qualified workers in the cybersecurity field. The Bureau of Labor Statistics lists information security analysts as one of the eight fastest-growing occupations, with a projected 35 percent growth rate between 2021 and 2031. The Bureau of Labor Statistics reported the "Piedmont North Carolina nonmetropolitan area," with employment of approximately 120,000 workers, as having the third-highest paying nonmetropolitan area in the United States for information security analysts, with an hourly mean wage of $52.34, equivalent to an annual mean wage of $108,870. The Lightcast Q1 February 2024 Job Posting Analytics report for the previous six-month period indicated 22,184 total job postings in North Carolina related to cybersecurity, with 86 percent requiring a bachelor's degree. In 2021, App State's CIS Department and its advisory board launched an annual Cyber Summit event hosted at the Boone campus. The 2023 Cyber Summit event brought approximately 375 attendees to Boone. Employers are particularly interested in this unique opportunity to recruit students for cybersecurity internships and full-time positions. Approximately 85 interviews took place at the Cyber Summit event alone in September 2023 and immediately following to recruit students with cybersecurity knowledge.

4. **Impact on Access and Affordability.** The program will be offered at both campuses of App State in Boone and Hickory, with some courses offered online. This will increase student access to this program for first-year, transfer, and nontraditional students. Offering the program in Hickory should result in a higher enrollment of students from underserved counties. College Scorecard reports an average annual cost of $13,897 for students attending App State, which is approximately $5,000 less than the $18,902 mid-point for four-year schools. The Bureau of Labor Statistics lists information security analysts as one of the eight fastest-growing occupations, with a projected 35 percent growth rate between 2021 and 2031. The Lightcast Q1 February 2024 Data Set for CIP 11.1003 (Computer and Information Systems Security/Auditing/Information Assurance) reported a projected 20.09 percent increase in information security analyst jobs in North Carolina between 2023 and 2028, with median earnings of $56.61/hour. The average starting salary reported by 2021-22 graduates from the Department of Computer Information Systems (CIS) with a cybersecurity concentration was $70,500. Given the high starting and continuing salaries for those in the cybersecurity field, along with lower-than-average annual cost for students attending App State, students should be able to pay off student debt more quickly than those students attending higher-priced universities and earning degrees in lower-paid areas.

5. App State 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 hours per semester) rates are as follows:

Full-Time 2024-25 Undergraduate Tuition and Fees per Year (in dollars)

Category	**Resident**	**Nonresident**
Tuition	$4,242	$21,875
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	$3,163	$3,163
Mandatory Fees for App State Online courses (Educational & Technology, Safety & Security, ASG)	$654	$654
Special Fees	--	--

6. **Expected Quality.** The program will consist of 120 required hours, including 44 general education credit hours and 34 hours in the major. The cybersecurity program of study also includes courses required for admission to the Walker College of Business, along with lower-level and upper-level core business courses. The Walker College of Business is accredited by the Association to Advance Collegiate Schools of Business (AACSB). All CIS department faculty are academically qualified under the AACSB standards. The department plans to pursue the National Security Agency Center for Academic Excellence in Cyber Defense (NSA CAE-CD) designation. The CAE-CD designation is awarded to regionally accredited academic institutions offering cybersecurity degrees and/or certificates at the associate, bachelor's, and graduate levels.

7. **Faculty Quality and Number.** The CIS department currently includes 24 faculty (15 tenured or tenure-track faculty; nine special faculty, including a cybersecurity program coordinator) and has requested to hire two new tenure-track faculty in the start-up year and two new tenure-track faculty in year three. All faculty in the CIS department are academically qualified under AACSB standards.

8. **Relevant Lower-Level and Cognate Programs.** The cybersecurity program of study includes general education and courses required for admission to and to complete studies within the Walker College of Business, including lower-level and upper-level core courses. The program will integrate with the Walker College of Business and the CIS department, which will house it.

9. **Availability of Campus Resources (Library, Space, etc.).** The university libraries provide adequate coverage for a cybersecurity degree. Besides the renovation from a standard computer lab and board room to a cybersecurity lab and war room in Peacock Hall, there is little facility infrastructure that will be affected on the Boone campus. An external donor has verbally committed to providing funding and resources to create the cybersecurity lab, with a backup plan of using funding raised through private donations for the Walker College of Business, resources from information technology (IT), and/or classroom-designated funds. The requirements for the

cybersecurity labs will be very similar for both the Boone and Hickory campuses. The Hickory cybersecurity lab will primarily use the SCIF (State Capital and Infrastructure Fund), with additional funding as necessary from the Walker College of Business, IT, or classroom-designated funds.

10. **Existing Programs (Number, Location, Mode of Delivery).** Three other UNC System institutions — Fayetteville State University, University of North Carolina at Pembroke, and University of North Carolina Wilmington — offer an undergraduate BS in cybersecurity. These programs are primarily offered in person. Several universities in the UNC System, in addition to App State, offer undergraduate degree programs with cybersecurity concentration tracks. These include East Carolina University, North Carolina Agricultural and Technical State University, North Carolina Central University, University of North Carolina at Charlotte, and UNC Wilmington.

11. **Potential for Unnecessary Duplication.** The BS in Cybersecurity would be unique from others already offered in the UNC System, as the program would be housed within a college of business. As part of the degree requirements, students would complete multiple business courses in accounting, business law, computer information systems, economics, finance, management, marketing, supply chain, and global issues. Students would also take courses in business communications and/or business writing, organizational behavior, and strategic management, differentiating this program from others in the UNC System, as the depth would provide students with a strong business background and communication skills in addition to cybersecurity knowledge. No undergraduate degree programs in cybersecurity are available through the UNC System institutions in western North Carolina. The closest institution in the UNC System to App State currently offering a BS in Cybersecurity is UNC Pembroke, which is over three hours and 30 minutes from Boone and approximately three hours from Hickory.

12. **Feasibility of Collaborative Program**. App State collaborated last year with UNC Wilmington to submit a grant application for the UNC System Research Opportunities Initiative Limited Submission Competition. Even though this grant was not selected, App State intends to continue investigating ways to collaborate with UNC Wilmington as well as with other UNC System institutions.

13. **Other Considerations.** None.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposal was reviewed and approved by App State faculty, the Walker College of Business dean, the Undergraduate Academic Policies and Procedures Committee, the vice provost for undergraduate education, the vice provost of academic program development and strategic initiatives, the provost and executive vice chancellor, and the chancellor.

2. **UNC System Office Review Process and Feedback.** Throughout the review process, App 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 recommends that the Board of Governors approve Appalachian State University's request to establish the Bachelor of Science (BS) in Cybersecurity (CIP 11.1003) effective fall 2024.

Request for Authorization to Establish
Bachelor of Science (BS) in Exercise and Sport Science (EXSS)
CIP 31.0505
University of North Carolina at Chapel Hill

I. Program Highlights

- The University of North Carolina at Chapel Hill proposes establishment of a Bachelor of Science (BS) in Exercise and Sport Science (EXSS). The BS-EXSS degree will prepare undergraduates for careers and graduate studies in the health sciences. The unique aspect of the BS-EXSS degree will be the focus on the role of exercise/physical activity and behavior modification to improve health, wellness, and quality of life. Students will be trained to understand data-driven strategies to address major societal problems, including chronic diseases (e.g., cardiovascular disease, arthritis, diabetes, cancer, neurocognitive decline) linked to sedentary behavior and poor dietary habits.
- The proposed BS-EXSS degree will directly support the departmental mission of "discovering, creating, and promoting knowledge of human movement to improve the quality of life of individuals and society" and the UNC System mission "to discover, create, transmit, and apply knowledge to address the needs of individuals and society."
- The majority of EXSS majors are preparing for future health science professions that require education in the science of physical activity/exercise prescription, nutrition, and behavior modification. The BS-EXSS degree would directly meet this unfilled need and provide students with the requisite knowledge to develop proper exercise and physical activity programs for preventing and managing chronic disease and injury.
- Overall, jobs to which the BS-EXSS degree would provide training and education (i.e., health science careers) continue to grow at a faster than average rate. In addition, the average pay for these positions suggests that there is strong earning potential across a range of professions for students with a BS-EXSS degree. As such, the BS-EXSS degree will prepare students for entry into a high-level graduate program and a thriving job market.
- The conservative estimate is that the BS-EXSS degree will attract over 450 majors by year five.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The BS-EXSS degree is aligned with the Strategic Plan of the UNC System (Higher Expectations) by prioritizing student success, affordability and efficiency, economic impact and community engagement, and institutional excellence and diversity. Furthermore, the BS-EXSS degree is aligned with key aspects of UNC-Chapel Hill's strategic plan (Carolina Next: Innovations for Public Good). Development of the BS-EXSS will also better align EXSS with departments in the Natural Sciences Division at UNC-Chapel Hill, as EXSS is the only natural sciences department that does not offer a BS degree.

2. **Student Demand.** In fall 2021, there were 1,272 intended/declared majors in one of the existing EXSS Bachelor of Arts (BA) degrees. Survey data suggest that 50 percent to 70 percent of the students enrolled in BA degrees in EXSS would choose the BS-EXSS degree option.

3. **Employment Opportunities for Graduates.** The BS-EXSS degree will allow EXSS to best prepare students for graduate education and careers in the health sciences to serve the needs of North Carolina and its citizens. Common job titles for EXSS bachelor's degree recipients are certified

personal trainer, certified therapeutic recreation specialist, clinical exercise physiologist, corporate wellness specialist, kinesiologist, strength and conditioning coach, life coach, dietitian, cardiac rehabilitation specialist, athletics administrator, aquatics director, physical activity/wellness program director, sports management, sports marketing, and sports information director.

4. **Impact on Access and Affordability.** The BS-EXSS degree will provide workforce alignment by preparing students for science careers and graduate programs that require critical thinking skills and a foundation in the sciences. The students who enroll in this program will be able to complete the degree in the eight semesters recommended by UNC-Chapel Hill and should not accrue any additional debt. A search of the N.C. Department of Commerce's NC Works Online data system using the search terms physical therapist, occupational therapist, athletic trainer, fitness trainer, physician assistant, nutritionist, physical therapy assistant, occupational therapy assistant, wellness director, sports medicine, and health promotion identified 5,354 jobs. A search of the Glassdoor data system (www.glassdoor.com) was conducted (8/30/22) to determine the median salary for the jobs listed above in North Carolina. Salary data were available for the following jobs: physical therapist ($84,719), occupational therapist ($92,786), athletic trainer ($61,454), physician assistant ($113,450), nutritionist ($87,010), physical therapy assistant ($59,938), and occupational therapy assistant ($87,489). The average median salary across these jobs was $83,835 ± $18,499.

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

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

Category	Resident	Nonresident
Tuition	7,019	39,228
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	1,746	1,746
Special Fees	--	--

6. **Expected Quality.** The BS-EXSS degree will efficiently and effectively prepare students for graduate programs in the health sciences, such as physical therapy, occupational therapy, athletic training, physician's assistant, and medicine. The program's objectives include: (1) students will be able to interpret and apply current and major topics in exercise and sport science; (2) students will demonstrate proficiency in the design, application, and interpretation of research methods and scientific data commonly used in exercise and sport science; (3) students will be prepared to pursue graduate education and/or employment in areas related to exercise and sport science, especially those related to the allied health/medical sciences; (4) students will become familiar with the content and approach of the natural sciences and how these concepts are integrated into exercise and sport science. These objectives will be accomplished through taking a total of 59-66 credit hours of coursework including 31-34 credits of EXSS courses and 28-32 credits of allied sciences coursework. The student learning outcomes for each course in EXSS will be regularly evaluated, and UNC-Chapel Hill will continue to survey current students and graduates to determine program success.

7. **Faculty Quality and Number.** The EXSS faculty consists of 35 world-renowned researchers, excellent instructors, and experienced practitioners, 26 of whom will contribute to the delivery and success of the BS-EXSS degree. These individuals possess expertise in anatomy, physiology, biomechanics, neuromuscular control, psychology, epidemiology, and exercise prescription, among other areas relevant to the proposed BS-EXSS degree. The EXSS faculty have been recipients of several department and university-wide teaching awards as well as numerous national research awards and are exceptionally well-positioned to deliver the BS-EXSS curriculum. These individuals possess substantial capacity to integrate practical experience and research findings into the classroom setting, which will ensure the curriculum is current and relevant, and will undoubtedly enhance the student experience.

8. **Relevant Lower-level and Cognate Programs.** The BS-EXSS degree will afford in-depth education opportunities. The BS-EXSS degree includes only five core courses, and thus affords students flexibility to take advanced coursework. The flexibility afforded by the smaller core structure will allow students in the BS-EXSS degree to enroll in higher-level elective courses such as EXSS 373: Sport Injury Epidemiology and EXSS 580: Neuromechanics of Human Movement that provide "the next step," higher-level content in these areas of study. Additionally, the requirement for 16 hours of allied sciences credits (e.g., biology, chemistry, physics, and math) will help prepare students for graduate/professional studies and future careers in the health sciences.

9. **Availability of Campus Resources (Library, Space, etc.).** The current EXSS facilities will be available for this program. Classes will utilize the existing laboratories and classrooms. The current facilities are sufficient to support the BS-EXSS degree. As the programs and faculty have continued to grow, UNC-Chapel Hill recognizes the need for additional and updated space. The current plan is to renovate the lower level of Fetzer Hall. The department would like to eventually establish some additional labs for both research and student instruction. While those renovations are not needed to launch the BS-EXSS degree, these plans will enhance the student experience moving forward.

10. **Existing Programs (Number, Location, Mode of Delivery).** Most of UNC-Chapel Hill's peer institutions and those within the UNC System offer a BS degree in Exercise Science or Kinesiology (31.0505). Those programs in the UNC System include University of North Carolina at Greensboro, University of North Carolina at Charlotte, Elizabeth City State University, University of North Carolina Wilmington, Winston-Salem State University, and Appalachian State University.

11. **Potential for Unnecessary Duplication.** The BS-EXSS degree at UNC-Chapel Hill will be unique from other existing programs across the UNC System and peer institutions. UNC-Chapel Hill is the only UNC System institution, and one of the few universities amongst peer institutions, to have academic units in exercise and sport science, medicine, nursing, health sciences, public health, nutrition, and biomedical engineering. UNC-Chapel will seek to use the interprofessional education opportunities available at the institution to provide a unique and differentiating undergraduate educational experience that leverages these leading academic units. For example, the department has worked with the Office of Interprofessional Education and has been part of programming related to traumatic brain injury, and several of the faculty collaborate with the School of Medicine and the School of Public Health. Students can benefit from these continued partnerships. As such, the BS-EXSS is uniquely positioned to focus on core sciences that provide the foundation for graduate education in the health and medical sciences.

12. **Feasibility of Collaborative Program**. Future collaborations with other UNC system programs may be possible given the unique ability for interprofessional education across the wide spectrum of health and medical fields at UNC-Chapel Hill. Future collaborations will be facilitated by the BS-EXSS degree so that they are aligned in the credit hour requirements of other UNC system campuses and peer institutions.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The BS in Exercise and Sport Science Request for Preliminary Authorization (RPA) and the Request to Establish (RTE) were reviewed and approved by the College of Arts and Sciences's Academic Program Development Committee, dean, and the administrative board before submission to UNC-Chapel Hill's new degree review committee. The proposal was then reviewed and approved by the degree review committee, chancellor, provost, and chief financial officer, and the proposal was then submitted via the PREP system to the UNC System for review and approval by the UNC System Office. The RTE was approved by UNC System office staff and submitted for review and approval by the University of North Carolina Board of Governors.

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 recommends that the Board of Governors approve the University of North Carolina at Chapel Hill's request to establish the Bachelor of Science (BS) in Exercise and Sport Science (CIP 31.0505) effective fall 2024.

Request for Authorization to Establish
Bachelor of Science (BS) in Communication Sciences and Disorders
CIP 51.0201
North Carolina Agricultural and Technical State University

I. Program Highlights

- North Carolina Agricultural and Technical State University proposes the establishment of a Bachelor of Science (BS) in Communication Sciences and Disorders (CSD).
- Students earning the BS in CSD will receive extensive training in clinical field placements, rigorous academic preparation, and scientific research opportunities. The intent and learning outcomes of the proposed degree program provide a foundation for understanding normal communication processes and communication disorders. Advanced levels of education for this degree program are directed toward learning communication assessment and treatment techniques for a wide variety of disorders including aphasia, childhood speech disorders, voice loss following laryngectomy, cerebral palsy, cleft palate, language-learning disabilities, and hearing loss.
- The BS in CSD aligns with North Carolina A&T (N.C. A&T)'s mission of advancing the human condition by providing undergraduate students an opportunity to acquire clinical skills for relevant and emerging jobs in the field. To this end, students in the CSD program will complete internships that let them engage in assessment and intervention processes of communications sciences and disorders across the lifespan in school and medical settings. Additionally, students will have the opportunity to participate in an optional international study abroad immersion opportunity in global speech-language pathology, clinical practice, and health communications to address health disparities among underrepresented populations.
- Within the major, students will pursue a concentration in Speech-Language Pathology & Audiology (SLPA), or Health Communication Studies (HCS). Students in the SLPA concentration will be trained in normal language development, speech sound development, and audiology; students will be prepared to enter the field or pursue graduate studies if desired. Students in the HCS concentration will be trained in effective communication methods and strategies to inform individuals about health care facts and best practices, with the goal of improving patient health outcomes and enriching personal and community behaviors and public health practices.
- Graduates of the program will be prepared to pursue careers such as communication specialists, behavioral therapists, rehabilitation aides, special education paraprofessionals, nursing home activity coordinators, patient/victim advocates, patient services coordinators, or health educators. Graduates could pursue registration as a North Carolina speech-language pathologist assistant and join the public-school workforce, medical centers, or private practice settings and/or pursue advanced degrees at the master's level to become American Speech Language Hearing Association (ASHA) certified speech-language pathologists and obtain a certificate of clinical competence. Anticipation is that 95 percent of graduates will pursue these career tracks.
- The projected enrollment for year five is 250 undergraduate students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** According to ASHA (2024), approximately eight percent of speech-language pathologists identify as Black or African American. As a public HBCU, N.C. A&T has a strong potential to attract students from underrepresented groups including those of Hispanic or Latino origin to the profession. The proposed degree also aligns with N.C. A&T's

goal to contribute to the diversity of the health care workforce. In addition, students in either concentration will be exposed to a curriculum that considers perspectives and methodologies that reduce health disparities, aligning with the institution's mission of advancing the human condition.

2. **Student Demand.** According to the 2022 CSD Education Trend Data Report total enrollment in undergraduate CSD programs increased from 34,620 in 2010-11 to 44,527 in 2012-13, then mostly decreased between 2012-13 and 2017-18. Total enrollment decreased to 41,925 in the most recent academic year (2021-22), averaging 40,767.8 over the 12-year period. The percentage of racial/ethnic minority students enrolled in undergraduate CSD programs remained relatively stable between the 2011-12 and 2013-14 academic years, increasing to 32.6 percent in the most recent academic year (2021-22). The percentage of racial/ethnic minority students enrolled in undergraduate CSD programs averaged 26 percent over the 11-year period.

3. **Employment Opportunities for Graduates.** According to the Bureau of Labor Statistics, all health care occupations are projected to grow 6 percent from 2022 to 2032, much faster than the average for all occupations, adding about 1.8 million new jobs (Bureau of Labor Statistics, 2023). Many graduates of CSD undergraduate programs seek to pursue graduate education in either audiology or speech-language pathology (ASHA, 2023). These and other allied health and disabilities services careers are all identified as growing faster than other occupations, with demand projected to grow (ASHA, 2023). Aspiring health communication professionals also expect growth in their specific occupational sector. Overall employment of advertising, promotions, and marketing managers is projected to grow 8 percent from 2018 to 2028, faster than the average for all occupations (Milken Institute School of Public Health, 2023). According to Lightcast, the projected employment opportunities for graduates of this program in North Carolina are as follows:

Description	2020 Jobs	2030 Jobs	2020 - 2030 Change	2020 - 2030 % Change	Avg. Hourly Earnings	Median Hourly Earnings	Median Annual Earnings
Speech-Language Pathologists	4,541	5,851	1,311	29%	$37.08	$36.31	$75,525
Audiologists	405	444	38	9%	$39.06	$37.42	$77,834
Healthcare Support Workers, All Other	3,637	4,108	471	13%	$19.94	$18.56	$38,605

Source: Lightcast

4. **Impact on Access and Affordability.** As an 1890 land grant institution, N.C. A&T is a leader in addressing the crucial need of educating a diverse student body. The proposed program at N.C. A&T is projected to cost $6,625 (in-state) to $20,285 (out-of-state) per year in tuition and fees. The average debt for in-state, first-time students who earned a bachelor's degree between July 1, 2022, and June 30, 2023, was $19,147. According to *ZipRecruiter* data, the median annual speech pathologist assistant salary is $62,207 in North Carolina and $72,643 nationwide in 2024.[1] The median annual health communications specialist's salary is $85,814 in North Carolina and $88,887 nationwide.[2] The CSD program at N.C. A&T thus offers a cost-effective path for students to advance their careers and positions them to compete for well-paying jobs. The debt to earnings ranges from .22 to .30.

5. **N.C. A&T IS NOT requesting any program-specific fees or tuition differential for this program.**

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

Category	Resident	Nonresident
Tuition	3,540	17,400
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	3,151	3,151
Special Fees	--	--

6. **Expected Quality.** Students pursuing the BS in CSD will receive extensive training in clinical field placements, academic preparation, and scientific research opportunities. The curriculum aligns with best practices and knowledge and skills acquisition as established by the Council of Academic Programs in CSD. The establishment of the degree program will positively impact students by providing: (1) exposure to contemporary issues in health care and education; and (2) opportunities to engage in high impact learning practices such as Simucase software experiences, Master Clinician simulation cases, and international study abroad opportunities in global speech-language pathology. Students enrolled in the CSD program receive an opportunity to participate in student-faculty research across many platforms. The CSD program works closely with the Office of Undergraduate Research to identify faculty mentors to engage in interdisciplinary undergraduate research experiences with students throughout their matriculation at the university. Students also participate in research experiences during the following capstone courses as follows: SPCH 521: Early Intervention in Infants and Toddlers and SPCH 575: Internship. Students relate to faculty through their enrollment in courses. Each student must complete a research project that serves as the course's signature assignment. Because the courses are required for graduation, 100 percent of students will have undergraduate research experience upon graduation. Additionally, students have opportunities to share their research experiences during the annual Spring Undergraduate Research Symposium at N.C. A&T, the Undergraduate Research Symposium at Pennsylvania State University, and National Black Association for Speech-Language and Hearing annual conferences.

7. **Faculty Quality and Number.** There are currently four full-time faculty to support the delivery of coursework, supervision, recruitment, retention, and advisement of students. The faculty possess the appropriate academic degrees and have completed the coursework necessary to be credentialed to teach in this program. Moreover, all faculty have participated in Quality Matters effective online certification training since the speech-language pathology curriculum has some courses approved to be taught both face to face and in an online teaching delivery.

8. **Relevant Lower-level and Cognate Programs.** The proposed BS in CSD builds on an interdisciplinary general education course framework in the areas of social science, psychology, speech, and biological sciences to more advanced and complex college-required coursework where emphasis includes preparing students to become researchers, educators, advocates, and business and communication leaders. The existing courses included in this degree program are housed in the following university colleges: Hairston College of Health and Human Sciences, the College of Arts, Humanities and Social Sciences, and the College of Education. Students will have 20 credits of free electives and a required three-credit-hour internship.

9. **Availability of Campus Resources (Library, Space, etc.).** N.C. A&T Bluford Library supports the university community by providing access to technologies, research tools, resources, and a learning environment that enriches the scholarship and creative activity of students, faculty, and staff. The library provides course reserves for students in the CSD program as identified for each course. The CSD program has a dedicated speech lab (GCB 110A) that allows observations in clinical practice and houses two audiometric soundproof booths for audiological educational and research purposes.

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

CSD BS degree offerings within the UNC System			
Location	**Title**	**CIP Code**	**Mode**
Appalachian State University	Communication Sciences & Disorders	51.0201	On Campus
Western Carolina University	Communication Sciences & Disorders	51.0201	On Campus
University of North Carolina at Greensboro	Speech Pathology and Audiology	51.0204	On Campus
East Carolina University	Speech and Hearing Sciences	51.0204	On Campus

11. **Potential for Unnecessary Duplication.** There are four similar undergraduate programs in North Carolina. This program will be distinct, however, in that it will allow students to not only have academic and clinical knowledge in the discipline but also have the option to concentrate in an interdisciplinary field, i.e., health communications. The BS in CSD program at N.C. A&T offers the largest representation of students of underrepresented populations majoring in speech-language pathology and health communication among other undergraduate programs in the United States. N.C. A&T's BS in CSD will provide students at the undergraduate level an opportunity to participate in a study abroad program (Speech in Belize). Lastly, the addition of the new concentration in health communication that is housed in the BS in CSD department will be unique.

12. **Feasibility of Collaborative Program**. The establishment of a BS in CSD will open opportunities to closely collaborate with existing graduate programs in North Carolina to serve as a pipeline for students to accessing a graduate degree. There are five master's and two doctorate programs available at other UNC System institutions.

13. **Other Considerations.** There are currently 136 students in the Bachelor of Arts in Health Communications program. There are minor changes with the speech-language pathology and audiology concentration. The minor changes reflect best practices in curriculum design as outlined in 2023 by the ASHA. A new concentration is being proposed titled Health Communications; existing courses in the BA curriculum will be utilized in both concentrations. These courses are SPCH 453: Persuasion; SPCH 316: Interpersonal Communication; SPCH 250: Speech Fundamentals; SPCH 410: Ethical Issues in Communication; SPCH 314: Intercultural Communication; and SPCH 475: Computer Applications in Communication. Once the BS in CSD degree program is approved, N.C. A&T will look to discontinue the BA in Health Communication.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposal was reviewed by the department, college, the N.C. A&T faculty senate, the dean of the Hairston College of Health and Human Sciences, the Office of Strategic Planning and Institutional Effectiveness, provost, and chancellor.

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

IV. Recommendation

Staff recommends that the University of North Carolina Board of Governors approve N.C. A&T's request to establish the Bachelor of Science (BS) in Communication Sciences and Disorders (CIP 51.0201) effective fall 2024.

References

[1]https://www.ziprecruiter.com/Salaries/Speech-Pathologist-Assistant-Salary--in-North-Carolina
[2]https://www.ziprecruiter.com/Salaries/Health-Communications-Specialist-Salary-in-Raleigh,NC

Request for Authorization to Establish
Bachelor of Science (BS) in Formulation and Packaging Science
CIP 51.2009
North Carolina Central University

I. Program Highlights

- North Carolina Central University (NCCU) proposes the establishment of a Bachelor of Science (BS) in Formulation and Packaging Science.
- The proposed new program is rooted in rigorous science education and training in an interdisciplinary environment uniquely designed toward implementing community-centered science, technology, engineering, and mathematics (STEM) solutions that have global implications for addressing health disparities. Students will be able to design chemical composition of marketed products following a strong emphasis on the research, design, and formulation of products and their packaging. This degree program will empower students to exercise entrepreneurship and knowledge of pharmaco-economics, industrial management, and legal and regulatory affairs to improve access to sustainable health care.
- The proposed program is aligned with the NCCU mission to discover, create, transmit, and apply knowledge to address the needs of individuals and society by preparing students to become global leaders and practitioners who transform communities.
- The creation of a Formulation and Packaging program at NCCU will: (1) increase the number of underrepresented minority students in this STEM-related field; and (2) serve the community by providing a better understanding of the impact of formulation and packaging on the health of individuals. As one of 107 historically black colleges and universities (HBCUs) nationwide, NCCU will be the only HBCU in the country offering a Formulation and Packaging Science degree program, thereby becoming uniquely positioned to play a key role in graduating students with increased workplace diversity. This proposed new undergraduate degree program has the following interdisciplinary strengths: chemistry, pharmaceutical sciences, biological and biomedical sciences, materials sciences, chemical engineering, colloid science, toxicology, regulatory awareness, and consumer science.
- This program will graduate a highly skilled workforce for an environment in which graduates will: (1) relate formulation and packaging chemistry and its applications to real world scenarios; (2) be responsible for developing the final drug product and manufacturing process for various dosage forms for clinical and preclinical trials; (3) play an integral role in the product development process by implementing testing procedures, inspecting manufacturing approaches, and creating detailed reports to fix errors and promote improvements; and (4) lead the design and development of formulations and processes, scaling up for manufacturing of batches, preparation of product development reports, and support for all necessary quality documentation and documentation for regulatory submissions. According to the Bureau of Labor Statistics, this field is expected to grow by six percent in the next 10 years.
- The projected enrollment in year five is 40 students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** This program is a necessary addition for NCCU because it has the potential to significantly impact STEM enrollments. The newly realigned College of Health and Sciences presents an opportunity to develop interdisciplinary programs to best

integrate the health and science disciplines to increase the performance for core metrics drivers. In order to significantly increase and capture a larger share of the awarded degrees, new innovative degree programs with promising enrollment projections and employment outlook are highly desired. The proposed program has the community-centered approach that can deliver these results. Furthermore, this new degree program will directly contribute to the UNC System's strategic plan focus on economic impact and community engagement.

2. **Student Demand.** Student demand projections are based on a similar program at Michigan State University, which provides nearly half of the entire workforce for the packaging science industry. NCCU currently has a 3+2 program with Michigan State and an enrollment class size of approximately 40 students at the four-year milestone. NCCU estimates a modest inaugural class of 15 students and approximately a 25 percent increase each year. This enrollment projection is reasonable based upon the experience in the department of chemistry and biochemistry at NCCU, which currently has 50 undergraduate students in the BS chemistry degree distributed across various concentrations.
3. **Employment Opportunities for Graduates.** Data from O*NET Resource Center by the U.S. Department of Labor, Employment and Training Administration (USDOL/ETA) suggests that graduates earning a degree in formulation and packaging sciences have the potential to move on to successful careers in a number of sectors: pharmaceutical formulation scientist, packaging engineer, chemists, biochemists, materials scientist. The mean salary for a formulation scientist with a bachelor's degree is reported by O*NET at $126,000 per year.
4. **Impact on Access and Affordability.** USDOL/ETA suggests that graduates earning a degree in formulation and packaging sciences have the potential to move on to successful careers in a number of sectors. The degree program improves access to education and training in a field that has a proven return on investment, based upon data presented below on educational expenditure and expected earnings. The degree program prepares students for occupations that pay above North Carolina's median household income, which is $60,000. Bureau of Labor Statistics shows a median annual wage for materials scientists was $104,380 in May 2022, and O*NET reports a mean salary of $126,000 for formulation scientists. A student borrowing $37,856 (120 credits) would pay $442/month over 10 years on a standard plan, per the studentaid.gov borrowing calculator.

5. NCCU does not request any program-specific fees or tuition differential for this program. Tuition and fees for the 2024-25 full-time (12 credit hours per semester) rates are as follows:

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

Category	**Resident**	**Nonresident**
Tuition	3,728	16,764
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	2,815	2,815
Special Fees	--	--

6. **Expected Quality.** The Formulation and Packaging Sciences undergraduate degree program has 120 total credit hours with 60 comprising three components: 12 credit hours for packaging sciences; 15 credit hours each for formulation; 15 credit hours for materials chemistry; and 18 credit hours for regulatory and business topics. The existing BS degree in chemistry program has

45 major credit hours. The credit hours distribution is consistent with the pharmaceutical sciences major, also within the NCCU College of Health and Sciences. Supporting best practices in STEM, the program will provide a curriculum with heavy focus on topics in demand following employers and industry trends. NCCU intends for this program to be connected to major employers in North Carolina, including companies in the Research Triangle Park. Courses in formulation sciences, materials, packaging, and regulatory sciences are curated to ensure a well-rounded professional, capable of leading a team of professionals and operations in an industry setting. NCCU already has strong BS degree programs in chemistry, biochemistry, pharmaceutical sciences, and clinical research, and graduate programs in the same fields.

7. **Faculty Quality and Number.** The Department of Chemistry and Biochemistry has a strong group comprising seven tenured associate and full professors, one tenure-track assistant professor, and one fixed-term full-time faculty member. Two additional tenure-track assistant professors will join the department in fall of 2024. This core faculty includes senior as well as midcareer and junior members totaling nearly 150 years of combined knowledge and expertise in the discipline. The faculty members are leading major research and teaching initiatives and have the knowledge and expertise expected of a premier program to deliver in-depth instructional experience. Faculty have strong relationships with organizations that currently facilitate opportunities for students seeking internships. The program will also be aided by faculty from the pharmaceutical sciences department, which also houses the state-of-the-art Biomanufacturing Research Institute and Technology Enterprise (BRITE) and faculty and staff of more than 45 researchers.
8. **Relevant Lower-level and Cognate Programs.** The formulation and packaging degree program will build on the existing robust general education curriculum in chemistry and biochemistry, pharmaceutical sciences, clinical research, and expertise in the field. The program will be distinct by requiring holistic coursework in formulation chemistry, packaging materials sciences, regulatory, and business management. Courses include biopharmaceutical manufacturing, biopolymers and biomimicry technologies, plant-based pharmaceuticals, processing techniques in packaging, principles of marketing and packaging, and applied science internship and research.
9. **Availability of Campus Resources (Library, Space, etc.).** The current campus infrastructure is sufficient to support this degree program.
10. **Existing Programs (Number, Location, Mode of Delivery).** There are no other public or private four-year institutions of higher education in the state of North Carolina or in the UNC System currently operating degree programs similar to the proposed new undergraduate degree program, in any mode of delivery. This finding is based on a CIP guided search using CIP code 51.2009 (CIP year 2020) titled Industrial and Physical Pharmacy and Cosmetic Sciences and using the broader CIP code of 51.20. The only other content that has similar overlapping disciplinary themes is found in the Department of Forest Biomaterials at NC State University.
11. **Potential for Unnecessary Duplication.** There are no programs among UNC System institutions, or in the state of North Carolina, that offer formulation and packaging sciences in one degree program.
12. **Feasibility of Collaborative Program**. NCCU Department of Chemistry and Biochemistry (NCCU DCB) welcomes the opportunity to partner with the NC State University programs such as Paper Science and Engineering and Sustainable Materials and Technology. NCCU has a similar collaboration with Michigan State University School of Packaging. A collaborative relationship between NCCU and NC State would be beneficial for students and faculty of both institutions. The dean of the College of Health and Sciences at NCCU and the chair of Forest Biomaterials at NC State have started a conversation on future collaborations for the development and offering of the proposed program.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The following internal staff have reviewed and approved the request for this new degree program: chancellor, AVC for administration and finance, provost, faculty senate chair, SACSCOC reviewer, chief data officers, AVC for undergraduate programs, dean of the College of Health and Sciences, college council, and chair, department of chemistry and biochemistry.

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

IV. Recommendation

Staff recommends that the University of North Carolina Board of Governors approve North Carolina Central University's request to establish the Bachelor of Science (BS) in Formulation and Packaging Science (CIP 51.2009) effective fall 2024.

Request for Authorization to Establish
Bachelor of Science (BS) in Sports Analytics
CIP 30.7099
University of North Carolina at Charlotte

I. Program Highlights

- The University of North Carolina at Charlotte (UNC Charlotte) proposes the establishment of a Bachelor of Science (BS) in Sports Analytics. This in-person major is designed to serve students who wish to pursue a career as sports analytics professional.
- The proposed program prepares students for careers in data science emphasizing sports, human performance, and injury prevention. Through an academically rigorous curriculum, students will become competent in: (1) data science, (2) machine learning, (3) research methods, and (4) anatomy and physiology of human performance. Based on current trends in enrollment in UNC Charlotte's sports analytics certificate program, the uniqueness of the program, and the inquiries already received, the estimate is that 75 students will enroll in the program in the first year, growing to 266 students by year five.
- The BS in Sports Analytics supports UNC Charlotte's mission to "Shape What's Next" by launching an innovative, in-demand STEM degree while bolstering community engagement. Initial collaborations with North Carolina professional sports organizations, including the Carolina Panthers, Charlotte FC (Major League Soccer), Carolina Hurricanes, and Charlotte Hornets, are driving further community engagement and support of UNC Charlotte through this high-profile field. This program is designed to extend meaningful collaborations among local and national businesses and sports franchises, while attracting students not normally found in STEM fields to a career in sports analytics.
- This program is important because it will be the first BS degree program in sports analytics in the state of North Carolina and one of only a handful across the country. The program uniquely merges the fields of data science and human performance to produce graduates who will be able to communicate and collaborate with individuals across multiple roles in a sports organization.
- Recent graduates from the UNC Charlotte certificate program in sports analytics have jobs that include business intelligence analyst, ticket analyst, performance science associate, NextGen stats analyst, business strategy/analytics analyst, system analytics, sports marketing analytics, reporting manager, quantitative sports researcher, sports research coordinator, consumer strategy and analysis, statcast data analytics, intelligence analyst, and media analyst.
- Based on job placements of students from the certificate in sports analytics within professional baseball, soccer, and hockey organizations, anticipation is that graduates of the BS in Sports Analytics will obtain jobs in professional sports. Graduates will have a deep knowledge of both data science and human performance, making them competitive candidates for many positions within a hiring company's data science team. Sports analytics is a rapidly growing field; thus, there is reason to believe students will be successfully employed in the field long term.
- The sports analytics certificate is a collaborative program between the interdisciplinary School of Data Science (SDS) and the Department of Applied Physiology, Health, and Clinical Sciences (APHCS) in the College of Health and Human Services. Student advising resides in the School of Data Science.
- Projected enrollment by year five is 266.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The success of the certificate program supports UNC Charlotte's mission by engaging the state and greater Charlotte community by placing students with professional sports organizations across North Carolina for their practical experience classes.

2. **Student Demand.** The proposed program responds to employment, market, and student demand for the program. The current certificate in sports analytics attracts in-state and out-of-state students to UNC Charlotte. As of spring 2024, 68 students have registered in the certificate program. Since launching the certificate in fall of 2022, 13 students have graduated from the program with another 15 slated to graduate in May 2024. Interest is expected to continue to grow by expanding the program to a BS degree. As there are very few BS programs in sports analytics in the nation (and even fewer with the human performance focus) UNC Charlotte expects to recruit nationally and attract both in-state and out-of-state students to this program.

3. **Employment Opportunities for Graduates.** This program will prepare students to work in data analytics with a specific emphasis on sports analytics. Lightcast data suggest that about 10,000 jobs are available in North Carolina for analytics related positions. There is demand for students with the proposed degree. Job searches on platforms including Indeed.com and Ziprecruiter.com return an average of 200 analytics jobs per month, many of which are in North Carolina. Searches for "sports analytics jobs" show between 90 and 110 jobs currently open in North Carolina with more than 4,000 sports analytics positions open across the United States on LinkedIn alone. Based on job placement of graduates of the certificate program, UNC Charlotte anticipates students will earn jobs with professional-level sports organizations, sports media companies, and other sports-focused companies highly dependent on data science and analytics. Graduates will be trained as data scientists with a focus on sports; however, they will be fully trained to succeed in other general data science positions. In 2022, the Bureau of Labor Statistics showed statisticians, data scientists, and similar jobs (including athletes and sports competitors) as some of the fastest growing fields through 2030 with average starting salaries above $80,000. Comparably, Inc. shows sports analysts' annual compensation is over $78,000. Overall, UNC Charlotte expects entry-level salaries for sports analytics professionals to be similar to or slightly lower than computer scientists, data scientists, and statisticians in general ($60,000 to $80,000 starting). The expected five-year salary would be between $100,000 and $120,000.

4. **Impact on Access and Affordability.** This program will allow any student accepted to UNC Charlotte to declare this major and any student in good standing at the university to transfer into the major. UNC Charlotte will leverage programs embedded into other programs on campus, specifically the BS in Data Science, to support students who do not have an extensive math or programming background, allowing them to succeed in the major. This will ensure that the program is accessible to any interested student without additional barriers or admission requirements.

   UNC Charlotte expects a similar overall student debt load ($22,000[1]) for this program compared to other graduates of UNC Charlotte. This is lower than both the North Carolina and U.S. average debt load for students. With high potential incomes of around $80,000/year[2], the expectation is that graduates will be able to repay their debts.

5. UNC Charlotte is requesting a program-specific fee for this program. These fees will support student advising and participation in sports analytics conferences and competitions.

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

Category	Resident	Nonresident
Tuition	3,812.00	19,065
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	3,207	3,207
Special Fees (Major Fee)	225.00	225.00

6. **Expected Quality.** The program will focus on the analytics of human performance, including wearables and data on human movement. UNC Charlotte currently has faculty who are experts in human performance and baseball analytics. With the planned faculty hires, strategic hires will include individuals who are experts in the analytics of other sports and in sports technology, including biometric data analysis. Research in this field includes analysis and prevention of sports injuries. This has obvious overlap with injury prevention and recovery from any form of injury. Current faculty have injury research portfolios that include both youth and elder populations.

7. **Faculty Quality and Number.** There are over 20 faculty currently affiliated with the School of Data Science who will be engaged with the BS in Sports Analytics. Those faculty come from the College of Health and Human Services, College of Computing and Informatics, the William States Lee College of Engineering, and the College of Science. The majority of these faculty currently teach the necessary base skills in computer programming, math, statistics, and physiology. UNC Charlotte is proposing expanding the faculty to include more specific sport expertise by hiring one tenure-track faculty member in the first year and an additional two tenure-track and four non-tenure-track faculty by year four. All faculty do and will meet faculty qualifications for SACSCOC. By the time the program reaches year three, faculty will offer about 20 sections of courses per year.

8. **Relevant Lower-level and Cognate Programs.** To complete this degree, students will take a series of entry-level statistics and computer science classes that will provide the foundational analytical skills necessary for upper-level sports analytics courses. Additionally, this program will build on lower-level anatomy and physiology courses and various electives to produce students capable of analyzing and interpreting human performance data.

9. **Availability of Campus Resources (Library, Space, etc.).** Since the majority of this program will be offered face-to-face on the main campus of UNC Charlotte, students will have access to resources that are traditionally made available to all undergraduate students. This support includes an academic advisor to assist with degree plan guidance; monitoring of academic standing; career planning; and consultation on institutional policies, procedures, and requirements. Students will have regular access to faculty for face-to-face and/or virtual office hours and may access additional campus resources (e.g., disability services, multicultural academic services, financial aid, library, career center, the university center for academic excellence, and writing resources center) as needed.

Facilities are available for the sports analytics program staff in the Colvard Building and Belk Gym at UNC Charlotte. All faculty have private offices, conference rooms, and workspaces through the College of Computing and Informatics, College of Science, College of Health and Human Services, and Belk College of Business. Depending on growth, additional faculty offices may be required. The space for new faculty and research labs is being accounted for in a current renovation and expansion of the Burson building at UNC Charlotte. Funding for the Burson expansion has already been allocated to UNC Charlotte through the state budget and UNC System allocations. Tentative groundbreaking for the expansion is in 2024 with expected completion in 2027.

In addition to the Burson research expansion, the current Burson building is in the initial design stage for refurbishment. This space will house the expansion of the School of Data Science, home to the proposed BS program, and classroom facilities and undergraduate programs. Finally, the Colvard Building, where the School of Data Science is currently located, has $4.5 million in planning funds and a $45 million budget for refurbishment within the next 10 years. Any further growth needs of the programs within the School of Data Science will be considered within this refurbishment. Funding for the Burson refurbishment has already been allocated through the state budget ($25.9 million) with refurbishment timing expected to be aligned with the expansion. Planning funding for Colvard is expected in the second year of the current state budget (FY25). Further allocations are expected in future budgets with completion in the seven- to 10-year window.

Library resources are sufficient to support this program. The university's J. Murrey Atkins Library provides access to hundreds of thousands of physical books and e-books and scholarly databases to support research for program students and faculty. Other existing technology and services will be adequate to support the program's commencement and expansion will be commensurate with its growth.

10. **Existing Programs (Number, Location, Mode of Delivery).** A Bachelor of Arts in data science was approved for University of North Carolina at Chapel Hill at the February 2024 University of North Carolina Board of Governors meeting. The degree program offers the opportunity to focus on any discipline within UNC-Chapel Hill's College of Arts and Sciences. Otherwise, no similar programs are offered within the UNC System.

11. **Potential for Unnecessary Duplication.** This program is unique in name, CIP code, and focus in the UNC System. The potential for unnecessary duplication is minimal.

12. **Feasibility of Collaborative Program**. With no other programs offered in the UNC System, there is limited potential to collaborate with other institutions within the state. However, the program is designed to be transfer-student friendly, meaning the core coursework can be completed in five semesters, allowing for the potential to partner with the North Carolina Community College System to provide pathways to entry for students in the future.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposed program was reviewed and approved by the deans of the College of Health and Human Services, College of Computing and Informatics, the William States Lee College of Engineering, the Belk College of Business, the College of

Humanities and Earth & Social Sciences, and the College of Science as well as the undergraduate college curriculum committee, and faculty council.

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

IV. Recommendation

Staff recommends that the Board of Governors approve the University of North Carolina at Charlotte's request to establish the Bachelor of Science (BS) in Sports Analytics (CIP 30.7099) effective spring 2025.

[1] https://inside.charlotte.edu/news-features/2021-11-16/unc-charlotte-students-graduate-student-loan-debt-lower-state-national
[2] https://www.bls.gov/careeroutlook/2015/interview/sports-statistical-analyst.htm

Request for Authorization to Establish
Bachelor of Science (BS) in Software Engineering
CIP 14.0903
University of North Carolina Wilmington

I. Program Highlights

- The University of North Carolina Wilmington (UNCW) proposes the establishment of a Bachelor of Science (BS) in Software Engineering.
- The program prepares students with software engineering skills needed for competitive advantage in the labor market and closes existing skills gaps by producing profession-ready engineers upon graduation.
- The program aligns with UNCW Strategic Priority 3: develop career-ready students upon graduation and UNCW Strategic Priority 7: expand academic programs in high-demand areas responsive to state needs. The program is aligned with the UNC System's Goal 8: increase the UNC System institutions' contribution to North Carolina's critical workforces.
- The program's topics include software systems analysis, architecture and design, contemporary tools, system verification and validation, and a two-semester capstone experience. The program emphasizes product quality, collaboration, professional ethics, and a learning mindset.
- The program aligns with ABET (Accreditation Board for Engineering and Technology) accreditation requirements for software engineering programs, including 45 hours of engineering credits and 30 hours of natural sciences and math. Accreditation will be sought once possible in the third year. ABET accreditation assures prospective students and employers that graduates of the program meet global standards for technical education in software engineering. Some graduate programs and international employers will only accept graduates from accredited engineering programs.
- The program requires entrepreneurship training in addition to a project capstone. Further, the program includes a selective entrepreneurship pathway, which is unique among software engineering programs, that provides a transformational entrepreneurship education experience for students. Each graduating class of the program will produce an entrepreneurship cohort, supported by the College of Science and Engineering, to create an IT business in North Carolina. This cohort will create an entrepreneurial venture or product that addresses a real-world need. In a small team environment, the cohort will take on challenges, create solutions, and prepare products for market.
- Graduates will have the knowledge and skills necessary to fulfill roles such as software engineer, software developer, systems analyst, software architect, project manager, or technical consultant. A ZipRecruiter search for software engineering positions on March 26 shows 119 open positions within 50 miles of Wilmington. The NC TECH Association's December 2023 IT Job Trends Report shows 11,146 job postings, with developer (#1), senior software engineer (#2), and software engineer (#5) in the top five job posting titles. The U.S. Bureau of Labor Statistics (BLS) projects a 25 percent job growth rate for software engineering between 2022 and 2032. The NC Department of Commerce predicts a 21 percent job growth rate in 2021-2030 for computer and mathematical professions, including software engineers. The latest employment statistics estimates from the BLS show a 13 percent increase from May 2021-May 2022 in software developers employed in North Carolina.
- The projected year five enrollment is 95 students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The software engineering program supports UNCW's Strategic Plan: Soar High, Soar Far, Soar Together. Specifically, the program aligns with Strategic Priority 3 to "develop career-ready students upon graduation" and Strategic Priority 7 to "expand academic programs in high-demand areas responsive to state needs." The program is aligned with the UNC System's Goal 8 to "increase the UNC System institutions' contribution to the state's critical workforces." The program will add to UNCW's growing region-relevant engineering programs that include a BS in Coastal Engineering and a BS in Intelligent Systems Engineering.

2. **Student Demand.** Current institutional data indicate significant demand for the program. In a February 2024 survey of UNCW students, 185 students responded that they would be interested in pursuing a BS in Software Engineering if it were feasible for them. UNCW's BS in Computer Science concentration in software engineering grew from an enrollment of seven in its first semester in fall 2022 to its current enrollment of 69 in spring 2024. UNCW anticipates many of these students will switch to the software engineering major.

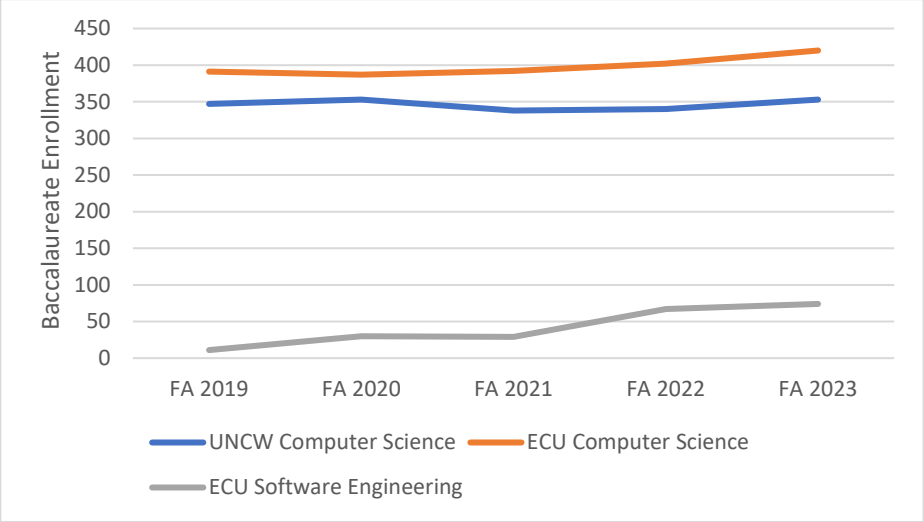

Figure 1. ECU and UNCW Computer Science 5-year Enrollment Trends (https://myinsight.northcarolina.edu/t/Public/views/db_enroll/EnrollmentFastFacts)

With respect to regional eastern North Carolina student demand, Figure 1 shows the five-year enrollment trends for the East Carolina University (ECU) and UNCW baccalaureate computer science and software engineering programs. ECU's computer science enrollment is stable despite the introduction of the software engineering major. This suggests that software engineering programs attract new students in addition to those interested in computer science. In fall 2023, 427 first-year and 96 transfer applicants to UNCW indicated they would pursue computer science, and computing programs at the University of North Carolina at Chapel Hill, NC State University, North Carolina Agricultural and Technical State University, and University of North Carolina at Charlotte all show steady or increasing enrollment in computing programs in 2021-2023. Degree completions are another indicator of student demand. Hanover Research (2024) reports a 16.1 percent growth in completions of Software Engineering majors with CIP 14.0903 in the Southeast (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV) over the last five years and 12 percent growth nationally (Hanover Research, 2024). A Hanover Research survey reports that 86 percent of

prospective students base enrollment decisions on the "ability to get a good job." Both the BLS and the NC Department of Commerce predict over 20 percent job growth rate in software professions. Hanover Research also reports that 76 percent of employers are more likely to hire candidates who have earned a professional certificate. UNCW is an Amazon Web Services (AWS) Academy Member Institution and the software engineering program will offer elective courses to prepare for AWS certifications. Between demand from current UNCW students, increased regional demand, and alignment with labor market demands, UNCW expects 65 students by year three and 95 by year five. (Hanover Research (2024, February 28), *Explore Demand for Programs*; retrieved from https://www.hanoverresearch.com/).

3. **Employment Opportunities for Graduates.** Graduates will be equipped with the knowledge and skills necessary to fulfill roles such as software engineer, software developer, systems analyst, software architect, project manager, or technical consultant. A ZipRecruiter search for software engineering positions on March 26 shows 119 open positions within 50 miles of Wilmington. These results do not include postings from many of the regional companies that provided letters of support for this program, including Corning, Lenovo, nCino, and Pearson. These letters state the need for a focused program in software engineering to meet industry needs. The NC TECH Association's December 2023 IT Job Trends Report shows 11,146 job postings, with developer (#1), senior software engineer (#2), and software engineer (#5) in the top five job posting titles. BLS projects a 25 percent job growth rate for software engineering between 2022 and 2032. The NC Department of Commerce predicts a 21 percent job growth rate in 2021-2030 for computer and mathematical professions, including software engineers, which is the highest growth rate of all occupational groups. The latest occupational employment statistics estimates from the BLS reports 57,690 software developer employees in North Carolina in May 2022, a 13 percent increase from 51,010 in May 2021.

4. **Impact on Access and Affordability.** The average loan debt for graduating undergraduates at UNCW is just over $22,000 and just over $24,000 for all students. For those students who borrowed federal loans the number is $30,000 and for private loans the number is $8,000. For UNCW computer science graduates, the average debt of all students was $5,816 and the average debt of students who borrowed was $18,314. The annual mean wage for software developers in North Carolina is $125,630 according to the BLS. Thus, the proposed degree program will be a reasonable investment given potential earnings.

5. UNCW is not requesting tuition differential for this program.

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

Category	**Resident**	**Nonresident**
Tuition	4,443	21,318
Tuition Differential	0	0
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	2,809	2,809
Special Fees	918	918

6. **Expected Quality.** The curriculum is designed to meet ABET Engineering Accreditation Commission criteria for Software Engineering programs, including 45 credit hours of engineering core classes and 30 hours of mathematics and natural sciences. Students must complete a two-

semester capstone experience developing and deploying a software system for an external customer. Software engineering topics include systems analysis, architecture and design, cloud implementation tools and environments, system verification and validation, project management, process models, and professional ethics. The program requires entrepreneurship training in addition to a project capstone. Further, the program will support a selective entrepreneurship pathway, which is unique among software engineering programs, that provides a transformational entrepreneurship education experience for students. Each graduating class of the program will produce an entrepreneurship cohort, supported by the College of Science and Engineering, to create an IT business in North Carolina. This cohort will create an entrepreneurial venture or product that addresses a real-world need. In a small team environment, the cohort will take on challenges, create solutions, and prepare products for market. UNCW will apply for ABET accreditation as soon as possible, which will be approximately five semesters after the program's inception. ABET accreditation assures prospective students and employers that graduates of the program meet global standards for technical education in software engineering. Some graduate programs and international employers will only accept graduates from accredited engineering programs. UNCW will expand the software engineering curriculum after enrollment growth funding enables the hiring of additional faculty. Concentrations will be added that draw on UNCW's existing expertise in artificial intelligence, cybersecurity, and product development. Wilmington's thriving technology community is a proven source of internships, student development opportunities, event funding, and guidance.

7. **Faculty Quality and Number.** The software engineering program will be housed in the Department of Computer Science. The department currently consists of 16 tenure-track faculty, five full-time lecturers, and four part-time lecturers. The department is in the process of hiring three additional tenure-track faculty and two visiting positions for the 2024-25 academic year. The Department of Computer Science has eight faculty with software industry experience and three faculty with Master and/or Ph.D. degrees with a focus on software engineering. The department proposes to hire an additional tenure-track faculty and a professor-of-the-practice position to support the major's initial offering. The dean of the College of Science and Engineering has pledged continued hiring support for the program to meet student demand. The Wilmington tech companies that employ many UNCW graduates create a ready pool of part-time instructors to deliver courses of interest to the students.

8. **Relevant Lower-level and Cognate Programs.** The software engineering program core overlaps with 23 hours of core courses in the computer science program. Five existing elective courses will be redesignated as software engineering courses. UNCW will be able to launch the software engineering program with minimal new course development and new faculty hires. The 30 required hours of math and natural sciences are drawn from well-established programs within the College of Science and Engineering.

9. **Availability of Campus Resources (Library, Space, etc.).** Existing campus physical spaces and infrastructure are sufficient to support the program. The program request contains a line item for modernizing an existing general-purpose computer science laboratory with new computers and collaborative wall space.

10. **Existing Programs (Number, Location, Mode of Delivery).** ECU provides the only other BS in software engineering program in North Carolina. The program is residential. UNC Charlotte provides a residential BS in Computer Science with a software engineering concentration. North

Carolina A&T, NC State, and UNC-Chapel Hill also provide well-established residential BS in Computer Science programs. Additionally, NC State offers a software engineering track in its residential Master of Computer Science program, and ECU offers a residential Master of Science in Software Engineering.

11. **Potential for Unnecessary Duplication.** Computer Science program graduates also become software developers, but such programs typically include significant computing theory to prepare students to push the scientific boundaries of computing. In contrast, software engineering program graduates are more career-ready to become software engineers by replacing computer science theory courses with courses such as software systems analysis, software construction, and software Practica that typically do not exist in computer science curricula. The previously discussed entrepreneurial pathway is a unique feature of the program and an engagement opportunity with the community. The software engineering program will not offer concentrations at the onset to keep new faculty hires at a minimum during program startup. UNCW will offer concentrations in software security and AI systems engineering that synergize with the cybersecurity and intelligent systems engineering programs at UNCW once enrollment growth funding supports the hiring of new faculty to diversify course offerings. The evidence of student demand suggests that a new software engineering degree at UNCW will bring new students to the field and the workforce.

12. **Feasibility of Collaborative Program**. UNCW's priority is to establish reciprocal articulation agreements between the proposed program and other programs in the UNC System, as appropriate. Those agreements would enable students access to more varied course sequencing and summer course offerings. UNCW will also discuss creating a pathway for software engineering bachelor students to matriculate to graduate level software engineering programs, for example ECU's Master of Science in Software Engineering and NC State's Master of Science in Computer Science with a software engineering concentration. UNCW has also discussed with other institutions the potential to collaborate to create a regional Eastern/Southeastern technology expo/career fair for students, establishing articulation agreements for software engineering courses, and joint efforts to market the software engineering programs to companies throughout North Carolina.

13. **Other Considerations.** Computer science entails the study of computing theory and application, and graduates are prepared to expand the computing discipline in areas such as artificial intelligence and computer security. Software engineering emphasizes the study of principles and practices necessary to create high-quality software systems that meet the requirements of real-world use.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The BS in Software Engineering program was reviewed and approved by the College of Science and Engineering curriculum committee, SACSCOC liaison, academic resource space and resource management, dean, university curriculum committee, faculty senate, and the provost. The program was also reviewed by the chancellor and chief financial officer.

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

IV. Recommendation

Staff recommends that the Board of Governors approve the University of North Carolina Wilmington's request to establish the Bachelor of Science (BS) in Software Engineering (CIP 14.0903) effective fall 2024.

Request for Authorization to Establish
Master of Health Care Administration (MHA)
CIP 51.0701
University of North Carolina at Pembroke

I. Program Highlights

- The University of North Carolina at Pembroke (UNCP) proposes the establishment of a Master of Health Care Administration (MHA).
- The proposed MHA program will meet the mission of the college and university by providing curricular content, learning activities, and scholarship opportunities that are designed to prepare rural health care managers and influential leaders of health care systems in rural southeastern North Carolina and other rural areas.
- The MHA is intended for practicing and aspiring health care managers in health-related organizations that address various health care needs, especially in rural health and underrepresented populations.
- In support of the access goals of the 2022-27 UNC System Strategic Plan, the proposed program will provide additional graduate-level enrollment and degree completion by underserved students, including those from low-income families and rural counties. The program will also support the critical workforce goal, which emphasizes increasing the number of high-quality graduate credentials awarded in health sciences. Graduates will increase the number of health care professionals throughout North Carolina and impact well-being statewide.
- Projected enrollment by year five is 58 full-time students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The proposed MHA will respond to the health disparities identified by the North Carolina General Assembly, the directive that the Board of Governors consider the health care needs of the region and what health science and health care programs would best serve the region and meet its health care needs, and the subsequent report from the Cecil G. Sheps Center for Health Services Research. The Sheps Center report concluded that new health sciences programs at UNC Pembroke could make a potentially significant and lasting contribution toward improving the supply of health professionals in the region, increasing the racial and ethnic diversity of the health workforce, and providing access to well-paying health care jobs.

2. **Student Demand.** Demand for the MHA degree has been growing regionally and nationally. Data from Lightcast Analytics on degree completion trends show that between 2018 and 2021, 1,159 degrees with the CIP 51.0701 (Health/Healthcare Administration/Management) were completed in North Carolina. The seven public institutions accounted for 226 (70 percent) of master's degrees completed, and three private and for-profit institutions accounted for ninety-six (30 percent) of degrees completed. The overall percentage increase in degree completion from 2018-2021 in North Carolina was 55 percent, and the percentage increase in master's degrees completed was 15 percent. Enrollment in other UNC System MHA programs suggests that there is considerable demand statewide for this degree. The number of graduates from other UNC System MHA programs also suggests that there is substantial demand for the MHA and related

degrees statewide. Needs assessment surveys conducted by UNCP also indicate there would be substantial interest in attending the MHA program if offered.

3. **Employment Opportunities for Graduates.** The Bureau of Labor Statistics (BLS) notes that medical and health services managers constitute one of the fastest-growing sectors in the U.S. economy, with a projected growth rate of 28 percent between 2021 and 2031 and a median pay of $101,340 per year with a bachelor's degree. O*Net Online expects to see a 34 percent growth in job openings by 2030. Additionally, data from ncworks.gov shows that there were 739 jobs posted using the keyword "Healthcare Administrator" in North Carolina. NC Tower data indicates that 81 percent of the graduates from UNC System MHA programs are employed in North Carolina, with the highest concentrations of health care administrators located in and around the communities where they received their degrees. A Lightcast analyst occupation overview for medical and health services managers (Job Code 11-9111.00) for the 11 North Carolina counties in UNCP's service region shows that there were 1,245 jobs in this job category. This number is expected to increase to 1,631 (31 percent) by 2032. For medical and health services managers, the 2022 median wage in this region was $102,916, while the national median wage was $101,767.

4. **Impact on Access and Affordability.** To help mitigate the burden of student loan debt, public universities, like the UNC System institutions, offer rigorous high-quality education at affordable tuition rates. Private institutions offering the MHA will be prohibitively expensive for the population UNCP is trying to reach. IPEDS data show that Pfeiffer University charged $33,290 in tuition and fees for this degree in 2022, the University of Mount Olive charged $23,591, and Strayer University charged $13,515. In contrast, costs at most UNC System institutions, including UNCP, averaged between $6,000 and $7,000 or less in 2022. According to the BLS, the average wage for professionals in this field is $113,730 annually.

5. UNCP does not request any program-specific fees or tuition differential for this program.

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

Category	**Resident**	**Nonresident**
Tuition	$4,280	$17,339
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	$2,648	$2,648
Special Fees	--	--

6. **Expected Quality.** The MHA degree will consist of 45 semester credit hours of required coursework. Voluntary accreditation through the Commission on Accreditation of Healthcare Management Education (CHAME) will be a directed goal for this program. CAHME accreditation signifies that the program meets rigorous standards of excellence in health care management education. This accreditation ensures that students receive a high-quality education that equips them with the knowledge and skills necessary to excel in the dynamic field of health care administration. CAHME accreditation enhances the program's credibility and reputation, attracting top-tier faculty and students. Accreditation facilitates partnerships with health care

organizations, providing students valuable networking and internship opportunities.

7. **Faculty Quality and Number.** Faculty must hold graduate faculty status to teach graduate level courses at UNCP. Graduate faculty in the MHA program will be expected to engage in service activities and scholarly research. UNCP anticipates the hiring of five new full-time core faculty members, including the department chair/program coordinator, as well as several adjunct faculty members. The program plans to hire the faculty in tenure-track lines using a phased approach.

8. **Relevant Lower-level and Cognate Programs.** The university offers bachelor's and master's degrees in nursing, exercise science, public administration, business administration, and social work that can support the MHA. Additionally, the university is expanding its degree program offerings in health sciences with a Master of Occupational Therapy degree. Three other programs include a health administration concentration. UNCP believes that undergraduate students from many of these health care-related degrees will provide an important pool of applicants for the prospective MHA.

9. **Availability of Campus Resources (Library, Space, etc.).** The development and implementation of the MHA program will not require a new facility. The Weinstein Health Sciences facility is designed to house this program. Opened in 2012, this 87,000-square-foot allied health building houses the McKenzie-Elliott School of Nursing, Department of Social Work, biology labs, College of Health Sciences, and a food service area. Due to the online modality of instruction, existing infrastructure on campus will not require new construction or conversion of existing space. The Mary Livermore Library has holdings that will need minimal expansion to support the instructional and research needs of the MHA. The library has online services to aid students in research and resource acquisition.

10. **Existing Programs (Number, Location, Mode of Delivery).** Within the UNC System, the following institutions offer a Master of Health Administration (MHA) with the CIP 51.0701: Appalachian State University (hybrid/online), University of North Carolina at Chapel Hill (on campus/online), University of North Carolina at Charlotte (on campus), University of North Carolina Wilmington (online), and Winston-Salem State University (online). Western Carolina University offers a related Master of Health Science (MHS) degree (on campus), and University of North Carolina at Greensboro offers a combined MSN/MBA in Health Management (online), both of which also carry the CIP 51.0701.

11. **Potential for Unnecessary Duplication.** The Master of Health Care Administration at UNCP will serve a unique need identified by the Sheps Center report. This program is intended to serve the health care needs of rural, underserved, and culturally diverse populations in Robeson and surrounding counties. None of the other MHA programs in the UNC System address this need, and no university has the same course structure. The UNCP MHA program will focus on the unique aspects of rural health care service delivery. The UNCP MHA program will ensure that students are equipped with focal knowledge related to rural health care, the options and opportunities that exist to leverage technology, an understanding of the impact of social determinants, and the importance of moving beyond traditional thinking.

12. **Feasibility of Collaborative Program**. UNCP's College of Health Sciences consortium with North Carolina Agricultural and Technical State University, Fayetteville State University, WCU, App State, and Shaw University, designed to examine disparities in COVID-19 response between urban and

rural counties in North Carolina, is working extremely well. The teamwork among participating universities has been so exceptional that the consortium has been officially established to work on other grants and research projects, and a director has been appointed.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** All program proposals are approved through the university curriculum development and revision process, including review by the department faculty, department chair, dean, and provost. It also includes review by the Curriculum Subcommittee and Academic Affairs Committee of the Faculty Senate and the Faculty Senate.

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

IV. Recommendation

Staff recommends that the Board of Governors approve the University of North Carolina at Pembroke's request to establish the Master of Health Care Administration (MHA) (CIP 51.0701) effective spring 2025.

Request for Authorization to Establish
Master of Physician Assistant Studies (MPAS)
CIP 51.0912
University of North Carolina Wilmington

I. Program Highlights

- The University of North Carolina Wilmington (UNCW) proposes the establishment of a Master of Physician Assistant Studies (MPAS).
- The proposed program fulfills a significant state need by increasing access to medical services for the state's growing population while expanding affordable health science education for appropriately qualified students. The proposed physician assistant program will prepare students for the health sciences workforce through the delivery of foundational theoretical knowledge and essential clinical skills.
- UNC Wilmington's mission is to ensure graduates "are prepared to serve the needs of local, state, and global communities." In alignment with this mission and that of the College of Health and Human Services, the proposed program will create student-centered, transformative learning experiences to prepare the next generation of physician assistants to respond to patient and societal needs in North Carolina and beyond, including improving health and quality of life, through the provision of passionate, empathetic, and contemporary interprofessional care.
- Designed in consultation with local health care employers and leaders, the proposed program ensures the skills and subject matter taught are contemporary and relevant to the broad population needs of southeastern North Carolina and beyond. The learning outcomes and competency matrix for the proposed program were derived from an analysis of research exploring national trends, considering societal needs, acknowledging student demands, and with an intentional focus on tangible skill attainment. This competency-based curriculum aligns with the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) current accreditation.
- The Educational Advisory Board (EAB) conducted a study of state and regional employer demand, degree completions in North Carolina programs, and competitive opportunities. The analysis, which incorporates data from a variety of sources including, but not limited to, Economic Modeling Specialists International (EMSI), Bureau of Labor Statistics (BLS), National Center for Education Statistics, and IPEDS, revealed a growing employer demand, particularly in southeastern North Carolina, that significantly outpaced the average growth rate of all other occupations.
- Projected enrollment is 126 full-time on-campus students by year five.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The proposed program will become the fourth physician assistant (PA) training program in the UNC System and, with its rural focus and integrated health equity plan, will directly address workforce deficits in southeastern North Carolina and beyond. MPAS graduates fulfill UNC System's mission "to discover, create, transmit, and apply knowledge to address the needs of individuals and society." These professionals apply specialized knowledge and clinical skills to address the health care needs of a growing North Carolina population; particularly the state's rapidly growing older adult population. These

demographic shifts acutely influence health care in UNCW's service region and its predominantly rural counties.

2. **Student Demand.** UNCW consulted several sources including an external vendor, a professional consultant in the academic discipline, and a regional advisory task force in developing this proposal. Overwhelmingly, the information garnered from these consultations led to the conclusion that there is a need for a fourth PA program in the UNC System. According to the UNC System data dashboard, less than 10 percent of applicants are accepted and enrolled in UNC System PA programs and UNC System institutions achieved full cohort enrollment 100 percent of the time with an average of 82 percent of those cohorts representing students from North Carolina.

3. **Employment Opportunities for Graduates.** Graduates from the proposed master's program will be prepared to take the Physician Assistant National Certifying Exam (PANCE), which is a major component of licensure across all states and U.S. territories. Licensed physician assistants are prepared for employment in various health care contexts, including inpatient, outpatient, geriatric, home health, and other employment contexts. Based on BLS data, employment of physician assistants in southeastern North Carolina is expected to be strong and above the national labor market average. Employment rates for graduates of other UNC System institutions is nearly 100 percent. Based on data from BLS and UNC System data dashboard, it is anticipated that UNCW graduates will have similar placement outcomes, given labor market indicators and population growth in southeastern North Carolina.

4. **Impact on Access and Affordability.** The proposed program significantly increases access to affordable PA education for North Carolina residents. The UNC System currently has only three PA programs, all of which have cohort sizes below the national average and well below the average cohort size for private institutions. The limited number of UNC System programs and the restricted seats available in those programs forces qualified applicants, primarily in-state applicants, to attend private or out-of-state institutions. This escalates student debt and makes PA education less accessible to critical segments of the student populace. UNCW's PA program increases access for two vulnerable and frequently underserved student populations: rural communities and those with low incomes. UNCW admissions data indicates that currently, 27.7 percent (4,935) of all enrolled UNCW students are from a rural county in North Carolina, and 25 percent (3,637) of all enrolled students are Pell Grant recipients.

   UNCW's proposed program cost of $47,428 compares favorably with other PA programs in the UNC System that range from $54,483 (East Carolina University) to $63,268 (University of North Carolina at Chapel Hill), and to PA programs at North Carolina's private institutions which all exceed $100,000.

5. UNCW is requesting program-specific fees and tuition differential for this program. The university seeks to establish a $35 per credit hour program fee and a $180 per credit tuition differential for this program.

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

Category	**Resident**	**Nonresident**
Tuition	5,278	21,364
Tuition Differential	3,240	3,240

Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)*	2,809	2,809
Special Fees	630	630

6. **Expected Quality.** The university will seek initial and continuing accreditation from ARC-PA, which has compliance standards associated with student success during matriculation and performance on certification exams. The expected quality of the proposed program is high.

7. **Faculty Quality and Number.** UNCW will recruit faculty with expertise specific to physician assistant training prior to program launch according to ARC-PA standards. UNCW anticipates the need for 8 to 10 faculty (including the program director, medical director, and director of clinical education) positions. ARC-PA requires each core faculty member, including the program director and clinical education coordinator, to have doctoral preparation, contemporary expertise in assigned teaching areas, and demonstrated effectiveness in teaching and evaluation of student learning.

8. **Relevant Lower-level and Cognate Programs.** UNCW has several undergraduate degree programs that will support the proposed PA program by delivering required prerequisites and opportunities for clinical experiences and observation hours. Admissions criteria to the proposed program do not specify preparatory undergraduate programs; however, programs in kinesiology/exercise science, biology, public health, and psychology traditionally serve as primary academic conduits to MPAS programs. All these programs exist in UNCW's current academic portfolio and are also offered at several other UNC System institutions. UNCW anticipates entering into articulation agreements with several institutions that will provide pathways to admission for this program.

9. **Availability of Campus Resources (Library, Space, etc.).** UNCW has significant infrastructure in place to support the launch and ongoing enrollment. UNCW opened its new 145,000-square-foot allied health sciences building, Veterans Hall, in 2020, which provides instructional space featuring multiple, state-of-the-art teaching and research laboratories, faculty offices, clinics, and classrooms. Capital equipment costs were included in the building's construction, anticipating the development of the proposed program. Despite these physical resources, successful program delivery will necessitate renovation of existing space to add sufficient clinical practice/instructional areas, storage, and faculty offices. UNCW is exploring several options and is committed to building or renovating an appropriate space. Beyond Veterans Hall, the proposed MPAS program will utilize the college's Simulation Learning Center (located in McNeill Hall) to support the clinical elements of its curriculum. Through simulation, students can experience realistic patient environments and a powerful learning experience that promotes cognitive, affective, physical, and social development. Additionally, UNCW's Randall Library is well positioned to support a Master of Physician Assistant Studies program.

10. **Existing Programs (Number, Location, Mode of Delivery).** The UNC System has three institutions that offer a Physician Assistant training program: East Carolina University, North Carolina Agricultural and Technical State University, and University of North Carolina at Chapel Hill. These programs are residential with full cohort enrollment.

11. **Potential for Unnecessary Duplication.** UNCW consulted several sources including an external vendor, a discipline-specific professional consultant, and a regional advisory task force. The

information garnered from these consultations led to the conclusion that there is a need for a fourth PA training program in the UNC System. Existing PA programs in the UNC System are at full capacity and turn away more than 90 percent of qualified applicants each year indicating an opportunity within the UNC System to add additional programs to effectively serve the state need.

12. **Feasibility of Collaborative Program**. UNCW understands that all UNC System institutions must work together to serve North Carolina's students and meet the health care needs of North Carolina's residents. One such opportunity for collaboration is in clinical placements. Identifying suitable clinical placements is a primary concern for clinical programs, and an increasing challenge as private and out-of-state programs seek placements in the service regions of UNC System programs. Beyond coordinating clinical placements, outstanding opportunities to partner with numerous UNC System institutions to develop academic pathways for qualified undergraduates exist. UNCW has already developed several of these pathway agreements in other academic disciplines (e.g., social work, exercise science) at the undergraduate and associate degree levels and is prepared to collaborate with UNC System institutions to build additional pathways for its MPAS program.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** This proposed degree program was reviewed and approved in compliance with institutional faculty and administrative governance requirements. This includes review of budget, physical and human resources, and curriculum.

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

IV. Recommendation

Staff recommends that the Board of Governors approve the University of North Carolina Wilmington's request to establish the Master of Physician Assistant Studies (MPAS) (CIP 51.0912) effective fall 2027.

Request for Authorization to Establish
Master of Science in Nursing (MSN) (Prelicensure Nursing)
CIP 51.3801
Western Carolina University

I. Program Highlights

- Western Carolina University (WCU) proposes the establishment of a Master of Science in Nursing (Prelicensure Nursing).
- The proposed program's aim is to prepare individuals with non-nursing backgrounds for careers in nursing, with a special emphasis on serving rural health needs in Appalachia and Cherokee communities. This focus addresses critical health care shortages in these areas by equipping graduates with the skills and knowledge to provide culturally competent, high-quality care.
- The proposed Master of Science in Nursing (MSN) program at WCU will align with the university's mission by providing academic excellence through innovative teaching focused on rural health care. The program supports affordability and access, particularly for Southern Appalachia and the Eastern Band of Cherokee Indians. Support from local health care organizations underscores the program's alignment with community needs, ensuring graduates are well equipped to meet the evolving health care challenges and lead with competence and compassion in various settings.
- The proposed MSN is designed to provide graduates with the comprehensive skills needed to care for patients across the lifespan and at all levels of care. This program focuses on rural health care challenges and equips nurses with the leadership and policymaking skills required to advocate for and implement effective changes in the health care system. The program's accelerated structure allows professionals from non-nursing backgrounds to quickly transition into high-level nursing roles. Graduates of the program are poised to excel in nursing roles and rapidly ascend to leadership positions, contributing to the alleviation of the ongoing local nursing shortage.
- Projected enrollment is 65 full-time students in year five.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The mission statement of the UNC System specifies that its institutions deliver educational programs that "… discover, create, transmit, and apply knowledge to address the needs of individuals and society." The proposed MSN program supports this mission by supporting the personal and professional goals of individuals with a bachelor's or graduate degree in a non-nursing field who want to transition into nursing without obtaining another undergraduate degree. Additionally, the MSN at WCU has been carefully structured to align with the university's mission by providing academic excellence through innovative teaching focused on rural health care. The program aims to improve lives and foster economic prosperity in Western North Carolina by preparing students for effective nursing roles in local communities, consistent with WCU's commitment to regional development and student engagement.

2. **Student Demand.** The demand for entry-level master's programs in nursing is underscored by the growing number of individuals seeking accelerated pathways into the nursing profession. Two studies published in the *Journal of Nursing Education* highlight the unique educational opportunities these programs offer, particularly to individuals with non-nursing bachelor's degrees, aiming to fast-track their transition into high-quality nursing roles. The increasing

number of entry-level Master of Science in Nursing programs noted by Mark, Twigg, Barber, and Warren (2019) reflects the rising student interest and the varied program options available, catering to a diverse range of academic and professional backgrounds.

Additionally, targeted efforts to enhance student success in these programs, such as the SUSTAIN program reported by Cowan, Weeks, and Wicks (2015), have shown remarkable outcomes in terms of retention and graduation rates, particularly among minority and male students, indicating a strong demand from traditionally underrepresented groups. Informal queries of students in the WCU Integrated Health Science baccalaureate program align with the results of these studies, suggesting a significant interest in accelerated nursing pathways. The perceived value and demand for these programs are reflected not only in academic research but also in the aspirations of the WCU student body, indicating a clear alignment between student interests and the evolving landscape of nursing education.

3. **Employment Opportunities for Graduates.** The profound nursing shortage in Appalachia, particularly in Western North Carolina, presents significant employment opportunities for graduates of the proposed nursing program. This region faces unique health care challenges, including limited access to medical facilities, a high prevalence of chronic conditions, and a population that is often geographically isolated. These factors contribute to a critical demand for qualified health care professionals, particularly nurses, who are equipped to address these unique challenges.

   Graduates of the proposed MSN program will be in a favorable position, as their specialized training in rural health care will make them particularly well suited to meet local communities' needs. Hospitals, clinics, long-term care facilities, and community health organizations in Western North Carolina need nursing professionals and leaders who understand the specific health issues and cultural nuances of the Appalachian region. In addition to traditional health care settings, graduates may find opportunities in public health, home health, outpatient services, and telehealth, all of which are expanding to address the region's health care gaps.

4. **Impact on Access and Affordability.** The affordability of the proposed program is expected to be within reach of prospective students. Based on 2024-25 rates for full-time, in-state WCU graduate tuition and fees, the four-semester program has an estimated total cost of under $20,000. Graduates of this program will be qualified to enter nursing leadership tracks in their institutions. The salary for nursing leadership roles varies by position and location. For example, clinical nurse leaders (CNLs) have an average salary range between $112,732 and $137,738, with the base average being around $124,628, as reported by Salary.com (2024). Nurse executives have an average salary reported as $108,562, with the salary range stretching from $80,000 to $158,000, as noted by PayScale (2024). These figures underscore the substantial variation in compensation based on leadership level and the critical importance of the roles within healthcare institutions.

5. WCU is requesting a tuition differential for this program.

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

Category	**Resident**	**Nonresident**
Tuition	$4,568	$15,287
Tuition Differential	$2,000	$2,000

Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	$3,144	$3,144
Special Fees	N/A	N/A

6. **Expected Quality.** The expected quality of the program is anchored in rigorous academic standards, comprehensive curriculum, specialized concentrations, and esteemed accreditation. The program ensures a thorough understanding and application of nursing concepts, from foundational theories to advanced clinical practices. Concentrations within the program, such as rural health, leadership, policy, and change theory, are tailored to address the specific needs of the communities WCU serves, particularly in Appalachia.

   Faculty will pursue accreditation from the Commission on Collegiate Nursing Education (CCNE), ensuring the curriculum meets or exceeds national standards for nursing education. This accreditation process involves a rigorous evaluation of the program's objectives, curriculum, faculty qualifications, and student outcomes, providing an external validation of program quality.

7. **Faculty Quality and Number.** Faculty will be nurses who possess a clinical or research doctorate. Initially, one tenure-track faculty member will be hired to serve as the program director. Each year as the program enrollment increases, additional adjunct faculty (fixed-term and adjunct) will be added to meet the faculty-student ratio of 1:10 in clinical experiences.

8. **Relevant Lower-level and Cognate Programs.** The proposed entry-level prelicensure nursing program is a generalist nursing degree with no specific cognate program or lower-level required coursework. It is a fast-track program of study that provides an alternative pathway for individuals who have a bachelor's or graduate degree in another field to become a registered nurse (RN) without having to obtain a second bachelor's degree or an associate degree at a community college.

   The proposed program is designed for individuals who have proved successful in an undergraduate and/or graduate program in another field, are interested in health disparities and/or rural health, and desire to transition into nursing from another field expeditiously. Second-degree nursing students are typically older, are highly motivated, and have higher academic expectations than traditional entry-level nursing students (AACN, April 2019). Admission standards for accelerated programs are high and include a thorough vetting/screening process to identify individuals who will succeed in this environment. A holistic admission process is planned to encourage diverse student enrollment in the program. Students will be encouraged not to hold a job while in the program.

9. **Availability of Campus Resources (Library, Space, etc.).** The program will share WCU-SON laboratory and simulation resources with other nursing programs; however, additional lab and simulation equipment purchases will be required because the resources and facilities are heavily utilized Monday through Friday. Library costs for the program have been included in the proposed budget, as have costs for additional office furniture.

10. **Existing Programs (Number, Location, Mode of Delivery).** There are currently no similar programs offered in North Carolina.

11. **Potential for Unnecessary Duplication.** No potential for unnecessary duplication exists due to similar prelicensure nursing programs.

12. **Feasibility of Collaborative Program**. There is potential collaboration with other institutions on the required practice change project completed by MSN students before graduation. Intra-institutional translational research could be beneficial to the communities served by state institutions.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.**
   The proposed MSN program has been reviewed by the Graduate Curriculum, Prelicensure Curriculum, Graduate Student, and Prelicensure Student committees. The proposed program has also been reviewed and approved by the School of Nursing faculty body, the Associate Provost of Academic Affairs, the Provost Council, the Academic Policy and Review Council, Faculty Senate, and the Provost and Chancellor.

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

IV. Recommendation

Staff recommends that the Board of Governors approve Western Carolina University's request to establish the Master of Science in Nursing (Prelicensure Nursing) (MSN) (CIP 51.3801) effective fall 2025.

Request for Authorization to Establish
Doctor of Education (Ed.D.) in Counseling, Counselor Education, and Supervision
CIP 13.1101
North Carolina Central University

I. Program Highlights

- North Carolina Central University (NCCU) proposes the establishment of a Doctor of Education in Counseling, Counselor Education, and Supervision.
- The purpose of the program is to train scholar-practitioners and practical applicators of research. The program will address professional roles in five areas: (1) counseling, (2) counselor supervision, (3) teaching/counselor education, (4) research and scholarship, and (5) leadership and advocacy with a distinct emphasis on counseling, counselor supervision, and leadership.
- The proposed program aligns with NC Central University's Strategic Plan (2019-2024) to increase student access and success (Goal 1) and expand innovation, research, and entrepreneurship opportunities (Goal 2).
- The proposed program contains a well-rounded curriculum based on 2024 Council for the Accreditation of Counseling and Related Educational Programs (CACREP) standards. The program provides a wealth of hands-on opportunities using a face-to-face delivery format. NCCU has an existing master's degree counseling program, accredited through 2030. The counseling program at NCCU is one of the largest in North Carolina and hosts an in-house community counseling clinic, serving the community.
- Students who graduate from the proposed program will serve as counselors, supervisors, counselor educators, and leaders in mental health organizations or institutions (public and private). Graduates will increase the number of licensed clinical mental health supervisors in the state within five years. The U.S. Bureau of Labor Statistics (BLS) anticipates that between 2020 and 2030 the demand for counselors and counselor educators will rise 23 percent.
- Proposed program enrollment by year five is 15 full-time students.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The University of North Carolina System's mission is to contribute to the solution of societal problems and enrich the quality of life for residents of the state. The proposed doctoral program's vision is to equip graduates with the knowledge, attitudes, and skills to address the world's most critical problems, specifically those related to mental health, health, wellness, and social justice, through evidence-based mental health practices and interventions. According to the National Alliance on Mental Illness, in 2021 over 1,460,000 adults in North Carolina have a mental health condition, 356,000 experienced a serious mental illness and 452,000 adults in NC did not receive mental health care. In February 2021, 44.7 percent of adults in NC reported symptoms of anxiety or depression and 128,000 North Carolinians aged 12-17 have depression. At the state level, 2,670,849 people in NC live in a community that does not have enough mental health professionals.

2. **Student Demand.**
   A total of 244 potential students were surveyed regarding interest in a doctoral program between September 2021 and October 2022. Of the respondents, 187 (approximately 77 percent)

expressed interest in enrolling in the program at NCCU, 19 (approximately eight percent) said they were not interested in enrolling, and 38 (approximately 15 percent) said they were unsure.

3. **Employment Opportunities for Graduates.**
A doctorate in counselor education and supervision provides multiple career pathways for graduates. Graduates will be able to find employment as counselors, supervisors, educators, leaders, advocates, and researchers. Mental health issues across the country from 2020 to present have skyrocketed due to the ongoing societal challenges resulting from the COVID-19 pandemic. North Carolina has experienced an increase in mental health and substance abuse issues among youth and adults. Given the increased awareness and de-stigmatization of mental health issues, the job prospects for graduates of this proposed program, both in and out of the academy, is promising.

   In North Carolina, newly licensed (master's level) counselors must practice under supervision of a qualified/licensed supervisor. At the February 2023 annual conference for the North Carolina Counseling Association, the chair of the North Carolina Board of Licensed Clinical Mental Health Counselors (NCBLCMHC) highlighted the shortage of licensed counseling supervisors in North Carolina and the need for more licensed counselor supervisors in all clinical areas (public and private). The proposed program aims to help meet this need.

4. **Impact on Access and Affordability.** The total estimated cost of the program for North Carolina residents is $34,406. There are six semesters of nine enrolled hours (each semester costs $5,200.71). The proposed program includes two (dual-session) summer semesters of six enrolled hours (each summer costs $1,601.14). The recent UNC System Evaluation of University Programs (ROI study) indicates graduates of counseling/counselor education programs earn $1.3 million in lifetime earnings, which is $850,000 more in lifetime earnings than the counterfactual North Carolinian. The BLS indicates that the mean annual wage for licensed clinical mental health counselors in North Carolina is $54,840-$60,320. The highest 10 percent earned more than $82,710 per year. A licensed clinical mental health counselor with a doctorate would earn on the higher end of the mean ($60,320). The debt-to earnings ratio would be 5.7 percent ($3,440.65 annual debt/$60,320 annual earnings).

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

Full-Time FY24-25 Graduate Tuition and Fees per Year (In Dollars)

Category	**Resident**	**Nonresident**
Tuition	4,740	18,048
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	2,740	2,740
Special Fees	--	--

6. **Expected Quality.** The proposed Ed.D. program will be CACREP-accredited, heavily focused on hands-on learning, and include a total of 66 semester hours. The program will feature 18 hours of seminar classes in professional identity and ethics, leadership and social justice, advanced counseling theory, advanced multicultural counseling and global health, clinical supervision theory, and counselor education pedagogy. There will be nine semester hours of research courses. The research courses are designed to address all CACREP standards for doctoral research and scholarship. There are 24 semester hours in field placement. There are nine hours of dissertation credit. Finally, there are six hours of electives, all designed to develop expertise or specialty areas within counseling (e.g., addictions counseling, psychopathology).

7. **Faculty Quality and Number.** There are 11 faculty, one clinic director, and six adjunct faculty affiliated with the counseling program at NCCU. Five of the department's tenured faculty will teach in the doctoral program.

   All faculty hold appropriate professional credentials. All are licensed by the North Carolina Board of Licensed Clinical Mental Health Counselors (NCBLCMHC) and have extensive experience and years of supervising graduate students in clinical practice. Three of the five are licensed as a clinical supervisor. A new faculty member will be hired in year two of the program's implementation, and another in year three of the program's implementation.

8. **Relevant Lower-level and Cognate Programs.** An Ed.D. in counseling builds upon a master's degree in counseling, providing advanced training in counseling, counselor supervision, and counselor education (training of counselors). A master's degree is entry level for the counseling profession. The proposed doctoral program would provide an opportunity for graduates of master's programs in counseling (including the master's program at NCCU) to advance their counselor training and receive training in counselor supervision and counselor education. Training in counselor supervision leads toward licensure in North Carolina as a licensed clinical mental health counselor supervisor.

9. **Availability of Campus Resources (Library, Space, etc.).** Existing campus physical spaces and infrastructure are sufficient to support the program. Counselor education students have many materials at their fingertips through the NCCU libraries which contain over 850,000 volumes. The libraries subscribe to more than 5,000 periodicals. The new Ed.D. program will require office space for doctoral students enrolled in the program and the two new faculty hired in years two and three. There are existing offices within the H.M. Michaux, Jr. School of Education Building. There is sufficient space and infrastructure to accommodate the new Ed.D. program. The program is not anticipated to have a significant impact on existing technology, information technology, or services. The current services provided through NCCU are adequate and sufficient to support the program.

10. **Existing Programs (Number, Location, Mode of Delivery).** There are currently five Ph.D. programs in counseling in the UNC System: East Carolina University, NC State University, University of North Carolina at Greensboro, University of North Carolina at Charlotte, and North Carolina Agricultural and Technical State University. All are Ph.D. programs delivered in-person.

11. **Potential for Unnecessary Duplication.** There are no other Ed.D. programs in counseling in North Carolina. NCCU's intention is to focus on preparing and producing highly skilled clinicians and supervisors and practical applicators of research. Ph.D. programs at ECU, NC State, UNC Greensboro, and UNC Charlotte were consulted. Although these programs also prepare graduates as advanced clinicians and supervisors, it is not their primary focus. However, the consultation provided useful insights that will inform career placement efforts.

12. **Feasibility of Collaborative Program**. NCCU is open to exploring collaborations in several areas. These include a multicultural competency program, client referral and practicum/internship with the NCCU clinic and comparable counseling centers at the other institutions, academic research including seeking grants, interinstitutional course teaching and enrollments, and encouraging students across the programs to interact and collaborate, and interinstitutional faculty mentoring.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The Request for Preliminary Authorization and Request to Establish were reviewed by and approved by the Counseling Program Doctoral Program Planning Committee, the Department of Counseling and Higher Education faculty, and the Sand School of Education faculty. Requests were subsequently approved by the Graduate Council, School of Graduate Studies, Academic Planning Council, provost, and chancellor.

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

IV. Recommendation

Staff recommends that the Board of Governors approve North Carolina Central University's request to establish the Doctor of Education (Ed.D.) in Counseling, Counselor Education, and Supervision (CIP 13.1101) effective fall 2025.

Request for Authorization to Establish
Doctor of Philosophy (Ph.D.) in Applied Psychology
CIP 42.2813
North Carolina Agricultural and Technical State University

I. Program Highlights

- North Carolina A&T State University (N.C. A&T) proposes the establishment of a Doctor of Philosophy (Ph.D.) in Applied Psychology.
- The purpose of the proposed program is to prepare scholars in the field of Applied Psychology, who will apply psychological principles and methods to address critical societal needs in health, business, education, and justice. Graduates will be prepared to evaluate and implement innovative psychological research and utilize data analytics to drive solutions to real-world problems.
- The proposed program's focus on training students to provide solutions to real-world problems aligns with the university's land-grant mission to "…prepare students to advance the human condition … by providing a preeminent and diverse educational experience through teaching, research and scholarly application of knowledge."
- The proposed Ph.D. in Applied Psychology program at N.C. A&T is important because it will diversify the scientific workforce, help meet demand for psychological scientists, and offer a unique academic focus within the state of North Carolina through its concentrations in (1) cognitive-behavioral neuroscience and (2) social-community psychology, along with an optional minor area of focus in applied data analytics.
- Graduates of the proposed doctoral program will be qualified to apply their degree to various careers within and outside of psychology, including market research, engineering, education, social services, business, the justice system, and medicine. At least 90 percent of graduates are projected to work in degree-related jobs within five years of graduation. According to the Bureau of Labor Statistics (BLS), employment opportunities for advanced degree graduates in psychology will grow 12 percent from 2021 to 2031, which is double the average for all occupations. The American Psychological Association (APA) (2021) reports that psychology doctorate holders work in 61 occupational categories due to the diverse skill sets of those who train in psychology.
- The projected enrollment after five years is 30.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** An applied psychology doctorate program at N.C. A&T will attract students interested in conducting innovative research to address real-world issues and improve the lives of others. As a land grant institution dedicated to providing access for all to higher education, N.C. A&T has a strong record of accomplishment in attracting students from underrepresented populations and will thus contribute to diversifying the workforce. The proposed program will be the first Applied Psychology Ph.D. program at an HBCU in North Carolina and supports the UNC System mission to "…apply knowledge to address the needs of individuals and society" and UNC System strategic plan priorities of access, student success, and economic impact and community engagement.

2. **Student Demand.** Data from existing psychology programs in North Carolina confirms that employment rates among graduates are high, but there is not currently enough capacity in

existing programs to meet demand. Less than 10 percent of interested applicants to existing programs are admitted annually due to barriers that include faculty capacity and the availability of graduate assistantships. The proposed program will help meet the high demand for doctoral programs in psychology.

3. **Employment Opportunities for Graduates.** As demand for doctoral degrees in applied psychology increases, market conditions indicate competitive trends at state, regional, and national levels. A Hanover Research market analysis commissioned by N.C. A&T reports that job opportunities for advanced psychology degrees are expected to grow at a rate of 5.8 percent, compared to 5.3 percent for all occupations in the next 10 years. Graduates will be especially well prepared for research scientist and data scientist positions in industry, business, government, private research centers and treatment facilities, and faculty positions in academia.

4. **Impact on Access and Affordability.** According to *Money Magazine* (2020), N.C. A&T is the second-most affordable campus in North Carolina and one of the most affordable HBCUs in the country. This recognition aligns with the UNC System's goal to "*Ensure that a UNC System education remains among the most affordable in the nation.*" A minimum of two years of tuition remission will be provided to doctoral students; total tuition and fees for in-state graduate programs at N.C. A&T over the remaining three years would total approximately $25,000. ZipRecruiter reports the average salary for research psychologists in North Carolina is $81,704, and the average salary for entry-level data scientists in North Carolina is $137,947. These equate to debt-to-income ratios of 0.31 and 0.18, respectively. The proposed Ph.D. in Applied Psychology will thus provide students with an affordable path to acquiring skills that position them to compete for well-paying jobs.

5. **N.C. A&T is not requesting any program-specific fees or tuition differential for this program.**
Full-Time 2024-25 Graduate Level Tuition and Fees per Year (In Dollars)

Category	**Resident**	**Nonresident**
Tuition	$5,095.00	$17,895.00
Tuition Differential	-	-
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	$3,151.00	$3,151.00
Special Fees	--	--

6. **Expected Quality.** The proposed doctoral program will comprise 72 credit hours for students entering with a bachelor's degree and a minimum of 42 credit hours for students entering with a master's degree, pending transfer credit. Components of the program are 12 credit hours of core courses, 18 credit hours of concentration courses in either cognitive-behavioral neuroscience or social-community psychology, 15 credit hours of a data analytics minor or free electives, and 27 credit hours of doctoral seminar and dissertation work. This combination of program focus and concentrations is unique in the state, and the program will support a diverse student population. The Department of Psychology and university will provide high-quality graduate education and training by leveraging existing resources and investing in added resources, including additional department faculty and a planned new building for the College of Health and Human Sciences.

7. **Faculty Quality and Number.** The department has 11 full-time graduate faculty that actively engage in research who will mentor students in the program. The department is currently conducting searches for three tenure-track faculty, and the proposed program will hire three additional faculty in year one and year two to support the delivery of coursework, supervision, recruitment, retention, and advisement of students. Existing and new faculty are expected to be highly productive in obtaining research funding that includes student support; to regularly publish and present papers at local, regional, and national conferences; and to chair and serve on dissertation committees to support the program.

8. **Relevant Lower-level and Cognate Programs.** Psychology is a popular undergraduate major within the UNC System and throughout the United States. The bachelor's degree in psychology is the second most popular degree program at N.C. A&T. The Master of Science in Health Psychology, which focuses on how biological, social, and psychological factors influence overall well-being, is a cognate program that prepares students well for an applied psychology doctoral program focused on addressing "real-world problems" to improve the lives of others. Many graduates of the MS program are expected to apply to the proposed applied psychology Ph.D. program.

9. **Availability of Campus Resources (Library, Space, etc.).** The psychology department has 10 research laboratories used for training undergraduate and master's students. The laboratories will also accommodate doctoral students. There is a fully equipped computer laboratory with access to statistical software, citation software, and the university's virtual laboratory. Current classroom space is adequate to accommodate seminars, lectures, and distance learning. Plans are already in place to construct a new building for the Hairston College of Health and Human Sciences. The building will house the psychology department with expanded research and instructional spaces. N.C. A&T's F.D. Bluford Library offers scholarly resources to support graduate student research including 11 psychology databases, as well as resource-sharing programs.

10. **Existing Programs (Number, Location, Mode of Delivery).** East Carolina University and University of North Carolina at Charlotte offer an on-campus Ph.D. program in health psychology. The following institutions offer an on-campus Ph.D. program in psychology: NC State University, University of North Carolina at Chapel Hill, University of North Carolina at Greensboro, and University of North Carolina Wilmington.

11. **Potential for Unnecessary Duplication.** The UNC System currently offers Ph.D. programs in psychology at six campuses. There are three institutions (ECU, NC State University, and UNC Wilmington) offering doctoral degrees in psychology east of UNC-Chapel Hill and two (UNC Greensboro and UNC Charlotte) located west. N.C. A&T could fill a regional gap and offer a third option to obtain a Ph.D. in psychology west of the UNC-Chapel Hill campus. N.C. A&T's program will be the only one with a clear focus on applied psychology with CIP code 42.2813. While NC State's doctoral program offers similar concentrations (human factors and applied cognition psychology and applied social and community psychology), with graduates acquiring skills relevant to both cognitive and behavioral neuroscience or social and community concentration, students in N.C. A&T's program will also have the option to choose a minor focus in data analytics.

12. **Feasibility of Collaborative Program**. The Department of Psychology will leverage existing research funded by the NIH and NSF, and existing collaborations such as partnerships with NC State to build capacity for citizen science research, with UNC-Chapel Hill in the regional NC

Diabetes Research Center, the North Carolina Translational and Clinical Sciences Institute (NC TraCS), and a recent NIH-funded U24 mentoring grant. Within N.C. A&T, psychology faculty collaborate in externally funded research with faculty from within and beyond the Hairston College of Health and Human Sciences, including engineering, science and technology, education, and agricultural and environmental sciences. Pipeline partnerships will be developed with other UNC System institutions that offer bachelor's degree programs in psychology, especially those in central and western North Carolina, where the program fills a regional gap.

13. **Other Considerations.** N.C. A&T is in the Piedmont Triad. There is a robust recruitment pool with 10 four-year colleges and universities in the area offering bachelor's degrees in psychology: Bennett College, Elon University, Greensboro College, Guilford College, High Point University, N.C. A&T, Salem College, UNC Greensboro, Wake Forest University, and Winston-Salem State University.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposal was reviewed by the N.C. A&T Faculty Senate, the graduate council, the graduate school, and administrators, including the chairs within the Hairston College of Health and Human Sciences, the dean of the Hairston College of Health and Human Sciences, and the Office of Strategic Planning and Institutional Effectiveness, UNC System Graduate Council, external program reviewers, provost, and chancellor.

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

IV. Recommendation

Staff recommends that the Board of Governors approve North Carolina Agricultural & Technical State University's request to establish the Doctor of Philosophy in Applied Psychology (CIP 43.0104) effective fall 2025.

Request for Authorization to Establish
Doctor of Philosophy (Ph.D.) in Data Science
CIP 11.0701
University of North Carolina at Charlotte

I. Program Highlights

- The University of North Carolina at Charlotte (UNC Charlotte) proposes the establishment of a Doctor of Philosophy in Data Science.
- The purpose of the proposed program is to prepare students for the most rigorous careers in data science. This is an in-person, terminal degree program for students planning to pursue an academic or professional career in data science. Students will apply the most advanced data science techniques to solve a broad range of possible problems and will understand the biases and potential dangers that arise in data collection, data transformation and predictions.
- The proposed program will help support UNC Charlotte's mission to "Shape What's Next" through an emphasis on educational and research opportunities that clearly align with the UNC Charlotte strategic plan. The School of Data Science (SDS) has a broad cadre of industrial and community partners that support the development of this degree. The North Carolina General Assembly has recently invested $41.2M for "Engineering North Carolina's Future." This funding specifically calls for investments in data science along with engineering and cybersecurity.
- The proposed program will provide two pathways for students, training both future university educators and industry practitioners. This dual pathway will enable universities to have faculty members with expertise in the development and use of data, while teaching critical thinking skills that bring understanding to a wider audience of students. In addition, industry and government employers are demanding this skill set for development of products and services.
- The proposed program crosses disciplines and balances the core technical skills of machine learning, artificial intelligence, and statistics, with social implications and ethics of data use. SDS has been navigating the complexity of cross disciplinary program delivery for nearly 10 years through successful Master of Science and Bachelor of Science programs. The proposed program is a terminal research degree that is transdisciplinary by design and lays emphasis on the mastery of the data science tools and methodologies from diverse disciplines and on responsible stewardship of data to cover the broad value of data science in various domains across society. Strong emphasis will be placed on providing students the opportunity to demonstrate mastery of knowledge in multiple data science application domains including, but not limited to, financial services, political science, sociology, marketing, management information systems, operations management, criminal justice, public administration, geography, public health, earth and environmental sciences, engineering, urban management, economics.
- Full-time program enrollment at year five is projected to be 32.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The proposed program fulfills a need created by the increasing demand for data scientists at the high end of the marketplace. As evidenced by the many letters of support, Charlotte area industries, especially the finance industry, have long partnered with UNC Charlotte and support this extension of data science programs to include the PhD. As North Carolina's urban research university, UNC Charlotte is in a unique position to deliver on career-building expertise. It leverages its location in the state's largest city to offer internationally competitive programs of research and creative activity and exemplary

undergraduate, graduate, and professional programs. UNC Charlotte established SDS as the home for transdisciplinary data science and analytics programs. SDS and its predecessor, the Data Science Initiative (DSI), are key strategic priorities of the university. Six colleges participate in program implementation within SDS, while the remaining colleges will be contributing as well.

The UNC System mission is "to discover, create, transmit, and apply knowledge to address the needs of individuals and society." A critical component of data science education is to guide students to develop data acumen. This requires exposure to key concepts in real-world data and problems that can reinforce the limitations of existing tools and stimulate the development of new ones, and ethical considerations that permeate many applications. By exposing students to real-world data and problems in society and business organizations, the program emphasizes educational and research opportunities in STEM that clearly align with UNC Charlotte's mission.

2. **Student Demand.** SDS is fielding a consistent flow of inquiries from current students and alumni about when they can expect to be able to enroll in a PhD program in data science. Given these inquiries, surveys of alumni, and discussion with peer programs, student demand is expected within three areas, 1) current Data Science MS holders from UNC Charlotte as well as other U.S.-based MS programs; 2) direct entry from U.S.-based data science and other technically based undergraduate degree holders including the BS in Data Science offered by UNC Charlotte; and 3) international students. A small, but material demand for part-time enrollment is also expected from prospective students and alumni who want to complete a PhD while holding on to their full-time employment. According to a recent survey of alumni of the Master of Science in Data Science and Business Analytics (DSBA) program, 84 percent were moderately or very interested in continuing in a PhD program in Data Science.

3. **Employment Opportunities for Graduates**. Companies seeking PhD data scientists are broad, ranging from IT (e.g., Amazon) to finance (e.g., Capital One) to management consulting (e.g., Booz Allen Hamilton). Occupational projections for 2022, by the Bureau of Labor Statistics (BLS), predict that data scientists will experience a job growth rate of greater than 30 percent between 2020 and 2030). Currently, most data science practitioners have graduate degrees (93 percent). Of data science jobs today, 12 percent hold a PhD degree (40 percent of artificial intelligence positions, a type of data scientist).

   The proposed program focuses on theories and techniques pertaining to data collection, data organization, and analytics for applications to real-world problems in a variety of domains of use, while instilling understanding of ethical dimensions of data stewardship. As an emerging field, strong demand is anticipated for university educators and researchers.

4. **Impact on Access and Affordability.** The anticipated debt level for students enrolled in the proposed program is comparable to that of programs offered at UNC Charlotte ($56,761). To further reduce the debt burden and reduce the time to graduation, the proposed program will have an advanced standing track for students entering with a relevant master's (e.g. DSBA) degree requiring fewer credit hours. Most full-time students will be fully supported through Teaching or Research Assistantships and receive a stipend.

   In 2021, according to the National Science Foundation Survey of Earned Doctorates, the average annualized salary for a data science PhD ranged from $110,000 to $150,000 which aligns with

current industry data from Burtchworks.com reporting $144,000. The proposed program will be affordable and attractive to a large cohort of applicants.

5. **UNC Charlotte is requesting program-specific fees for the program and a tuition differential.**

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

Category	Resident	Non-Resident
Tuition	$4,610	$19,645
Tuition Differential	$7,560	$7,560
Mandatory Fees	$3,206	$3,206
Special Fees	$225	$225

6. **Expected Quality.** The proposed program will focus on the ethical application of advanced skills in statistics, machine learning, and artificial intelligence to a broad range of application domains. UNC Charlotte currently has faculty expertise in data science across six colleges and 26 departments and is strategically hiring additional tenure-track faculty to augment this capability and extend the depth of expertise. Additionally, the program will utilize special topics courses and courses shared with other PhD programs across the university. These partnerships were demonstrated through more than 20 letters of support.

7. **Faculty Quality and Number.** SDS has over 90 faculty from 26 departments participating with significant expertise in statistics, computer science, business, and social sciences. Faculty expertise also includes humanists and ethicists from philosophy who focus on and teach the appropriate use of data within societal norms.

8. **Relevant Lower-level and Cognate Programs.** The proposed program builds on 10 years of history within the Data Science Initiative, now SDS at UNC Charlotte. SDS currently has more than 750 students across two MS programs (>360 students), a BS in Data Science (>300 students) and a certificate in Sports Analytics (>60 students). The PhD program will add the terminal degree for these students.

9. **Availability of Campus Resources (Library, Space, etc.).** Facilities are available for the data science program staff in the Colvard Building. The Colvard Building has $4.5M in planning funds and a $45M budget for refurbishment within the next 10 years. Funding for the Burson expansion has already been allocated through the state budget and UNC System allocations. Tentative groundbreaking for the expansion is in 2024 with expected completion in 2027.

   Library resources are sufficient to support this program. SDS has set aside additional funding for purchase of the digital archives identified by the Data Science Librarian. At the program's start, other existing technology and services will provide adequate support. Expansion will be commensurate with the growth of the program.

10. **Existing Programs (Number, Location, Mode of Delivery).** There is only one similar doctoral program in North Carolina: the renamed PhD in Computational Data Science and Engineering at North Carolina Agricultural and Technical State University (N.C. A&T). However, UNC Charlotte's program is distinctive by its transdisciplinary breadth that is central to what is being proposed.

11. **Potential for Unnecessary Duplication.** The proposed program is unique in the UNC System for its transdisciplinary approach. While the N.C. A&T program is a great program focused on computational engineering and efficiency in the computation of data science, the proposed program focuses much more on the application areas and appropriate methodologies.

12. **Feasibility of Collaborative Program**. SDS currently collaborates with many institutions through quarterly and annual meetings of data science organizations including the UNC (UNC-Chapel Hill) School of Data Science and Society and the NC State Data Science Academy as well as with North Carolina Central University and Appalachian State University. This collaboration includes discussion on curriculum and its evolution, program feeder pipelines, and collaborative research.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposed program was reviewed and approved by the deans of the College of Health and Human Services, College of Computing and Informatics, the William States Lee College of Engineering, the Belk College of Business, the College of Humanities & Earth and Social Sciences, and the College of Science as well as the Graduate Council, and Faculty Council. Leadership support and approval for the proposed program includes the provost and vice chancellor for academic affairs, vice chancellor for Business Affairs, and chancellor.
2. **UNC System Office Review Process and Feedback.** Throughout the review process, UNC-Charlotte provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommends that the Board of Governors approves the University of North Carolina at Charlotte's request to establish the Doctor of Philosophy in Data Science (CIP 11.0701) effective spring 2025.

Request for Authorization to Establish
Doctor of Optometry (O.D.)
CIP 51.170
University of North Carolina at Pembroke

I. Program Highlights

- The University of North Carolina at Pembroke (UNCP) proposes the establishment of a Doctor of Optometry (O.D.).
- The proposed Doctor of Optometry program aims to provide an advanced and comprehensive four-year professional program in optometry, focusing on eye, vision, and relevant systemic health. The proposed program will be a four-year program consisting of 146 semester hours of credit. The program will include a comprehensive curriculum in basic science, optometric science, clinical training, and provision of patient care in the third and fourth years of the program.
- The proposed Doctor of Optometry program is consistent with UNC Pembroke's strategic plan to create innovative academic programming and is aligned with the university's health care program offerings.
- The establishment of a Doctor of Optometry program at UNCP is supported by compelling data that reflect the regional, state, and county needs for comprehensive eye care. Regional disparities that reflect the need for more optometric providers are confirmed by the North Carolina market demand for optometrists and the distribution of optometrists, especially in rural areas, as well as by the increased number of North Carolina residents who have left to study out of state in the past 10 years.
- The proposed program will focus on providing the comprehensive optometric and medical training needed to become a licensed optometrist in any jurisdiction served by the Association of Regulatory Boards of Optometry (all 50 states and U.S. territories). Anticipation is that most of the graduates will either open their own private offices or join existing eye care clinics.
- The projected enrollment in year five is 122.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The proposed Doctor of Optometry program will meet the mission of the college, university, and UNC System by providing curricular content, learning activities, and research opportunities that are designed to "improve health and wellness outcomes and the quality of life for individuals, families, and communities that the graduates will engage and serve" (College of Health Sciences mission), "enhance the intellectual, cultural, economic, and social life of the region" (UNCP mission), and address the needs of individuals and society (UNC System mission).

2. **Student Demand.** There are 23 Doctor of Optometry programs across the United States and Puerto Rico. Of those 23 programs, nine are at public universities and 14 are at private universities and colleges. The student demand analysis showed that the number of North Carolina residents who attended optometry programs out of state in the past 10 years increased by 80 percent. Forty-seven North Carolina residents entered optometry programs just in the last academic year (2021-2022).

Recent trends in enrollment and completion rates for O.D. programs can be used to measure student demand. Of the 2,700 applicants to optometry programs, 1,954 received at least one offer of admission. Across all the optometry schools, 72 percent of people who applied were admitted to at least one school. Total enrollment for the 2021-2022 reporting period was 7,284, 1,906 of which were first-year matriculants. The number of graduates receiving the O.D. degree increased 3.6 percent, from 1,689 to 1,750, from 2020 to 2021. The percentage of graduates of American Indian or Alaska Native, Black or African American, and Asian ethnicity decreased in 2021 from 2020, while the percentage of Hispanic and White graduates increased.

3. **Employment Opportunities for Graduates.** February 2023 data from ncworks.gov shows 176 jobs posted using the keyword "Optometrist" in North Carolina within the health care practitioners and technical occupations category. The regional compensation is one percent higher than national compensation for optometrists, and the 2021 median wage in North Carolina is $125,571. The national median wage is $123,998. Job posting activity is high in North Carolina when compared to the national data. The national average of job postings per month is 59, while in North Carolina it is 72.

4. **Impact on Access and Affordability.** According to the U.S. Bureau of Labor Statistics (BLS), median annual wage for O.D. holders is $124,300. Per the American Optometric Association, the average O.D. student debt in 2018 was $180,000. If the average cost of attendance nationally is $281,839 and students on average are taking out $180,000 of debt, they are financing roughly 64 percent of their debt. Based on the weighted average of in-state and out-of-state total cost of attendance ($231,773), if UNCP students financed 64 percent of the cost, their debt would be $148,335, which is 18 percent below the average debt in 2018.

   According to the BLS, the average optometrist salary in North Carolina is $141,140. The Consumer Financial Protection Bureau (CFPB) recommends that renters maintain a debt-to-income ratio of between 15 percent and 20 percent (or up to 36 percent if a homeowner has a mortgage). Using the Sallie Mae Student Loan Payment Estimator, entering the loan amount as $148,335, and using an interest rate as 6.54 percent (which is the current rate for graduate direct subsidized loans), and a 10n-year repayment schedule (which is standard for direct subsidized loans), the monthly repayment amount is $1,687. To calculate a debt service to income ratio, divide the monthly payment ($1,687) by monthly gross income $141,140/12 = $11,761. The monthly debt payment comes to 14.3 percent of monthly gross, which is less than the bottom range of debt as recommended by the CFPB.

5. UNCP is requesting a program-specific tuition differential for this program. The proposed total annual tuition for resident students is $18,000, which includes tuition and tuition differential. Total tuition for nonresidents enrolling in this professional doctorate program will be $43,405, including tuition differential.

Full-Time Academic Year 24-25 Graduate Tuition and Fees per Year (In Dollars)

Category	**Resident**	**Nonresident**
Tuition	$4,280	$17,339
Tuition Differential	$13,720	$26,066
Mandatory Fees (Athletics, Student Activities, Health Services, Educational &	$2,647	$2,647

Technology, Campus Security, Debt Service, ASG)		
Special Fees	--	--

6. **Expected Quality.** The UNCP optometry program will seek accreditation from the Accreditation Council on Optometric Education (ACOE). As part of the accreditation process, the proposed Doctor of Optometry program will develop a systematic assessment and evaluation plan to monitor success in achieving its mission, goals, and objectives and curricula that align with the university's mission, goals, and objectives. It will demonstrate that research and scholarly activity is supported, sufficient and qualified faculty are in place, adequate facilities and equipment have been acquired, and appropriate fiscal and administrative capacity is available.

7. **Faculty Quality and Number.** Faculty credentialing requirements for teaching in an optometry school are stringent and rigorous due to the high standards of optometric education. The number of full-time and part-time faculty will be adequate to accommodate enrollment. The ratio of full-time faculty to students will be congruent with the national standards. The founding dean of the School of Optometric Medicine will be hired in FY25. Approximately one-third of the full complement of faculty (nine faculty members) will be recruited in FY27. Only one other faculty member will be hired in FY28. In FY29, up to six new faculty members will be hired to support the growing academic program and the start of the clinical program. In FY30, up to eight new faculty members will be added to support both the growing academic program and clinical program. In FY 31, three new faculty members will be added to complete the hiring of all needed faculty.

8. **Relevant Lower-level and Cognate Programs.** The university offers degrees in biology, chemistry, exercise science, and nursing that can support the Doctor of Optometry degree. The McKenzie-Elliott School of Nursing offers a traditional Bachelor of Science in Nursing, an RN-BSN completion program, an MSN, and a Doctor of Nursing Practice degree.

9. **Availability of Campus Resources (Library, Space, etc.).** The Mary Livermore Library's optometry collection consists of a wide range of materials, including physical books, e-books, physical and electronic journals, and online videos. UNCP's O.D. program will be housed in the new Allied Health Building, for which the State of North Carolina has appropriated $91 million to UNCP.

10. **Existing Programs (Number, Location, Mode of Delivery).** There are no Doctor of Optometry programs offered within the UNC System.

11. **Potential for Unnecessary Duplication.** No potential for unnecessary duplication exists as the proposed program will be the first doctoral-level program leading to a professional Doctor of Optometry (O.D.) degree within the UNC System.

12. **Feasibility of Collaborative Program**. Optometrists collaborate with various other professionals and institutions in the health care field, academia, and industry, which offer related degrees, training, or services to provide comprehensive care to patients and advance the science of ocular health.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** All program proposals are approved through the university curriculum development and revision process, including review by department faculty, the department chair, the Curriculum Subcommittee, the Academic Affairs Committee of the Faculty Senate, Faculty Senate, dean, and provost.

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

IV. Recommendation

Staff recommends that the Board of Governors approve the University of North Carolina Pembroke's request to establish the Doctor of Optometry (O.D.) (CIP 11.0710) effective spring 2025.

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

North Carolina Agricultural and Technical State University
Master of Science in Applied Physics (CIP 40.0801)

Overview: The Master of Science in Applied Physics at North Carolina Agricultural and Technical State University will be discontinued effective spring 2024. The request to permanently discontinue delivery of the degree program was approved by the head of the program, appropriate institutional committees, and chief academic officer.

The Master of Science in Applied Physics has been inactive in the North Carolina A&T State University information system since 2003. The UNC Academic Program Inventory lists the program as active. This discontinuation action will reconcile the discrepancy. No students, faculty, or staff members will be affected by the discontinuation of the program.

Recommendation: UNC System Office staff recommend that the University of North Carolina Board of Governors approve the request of North Carolina Agricultural and Technical State University to discontinue the delivery of the Master of Science in Applied Physics (CIP 40.0801) effective spring 2024.

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

NC State University
Master (M) of Genetics (CIP 26.0801)
Master of Science (MS) of Genetics (CIP 26.0801)

Overview: The Master of Genetics *and* the Master of Science at NC State University will be discontinued and consolidated effective spring 2024. The request to discontinue and consolidate delivery of the degree programs was approved by the head of the program, appropriate institutional committees, and chief academic officer.

The Master of Genetics and the Master of Science of Genetics will be discontinued and consolidated into the Master of Functional Genomics (26.0807). This discontinuation and consolidation will prevent unnecessary overlap and unintended competition between Genetics and Functional Genomics. No faculty or staff members will be affected by the discontinuation and consolidation of the program. Currently enrolled students will be able to complete their program of study and newly enrolled students will begin the combined curriculum under the new proposed program title Genetics and Genomics.

Recommendation: It is recommended that the Board of Governors approve NC State University's request to discontinue and consolidate the delivery of the Master of Genetics (26.0801) effective spring 2024.

NC State University
Doctor (Ph.D.) of Genetics (CIP 26.0801)

Overview: The Doctor of Genetics (26.0801) at NC State University will be discontinued and consolidated effective spring 2024. The request to discontinue and consolidate delivery of the degree program was approved by the head of the program, appropriate institutional committees, and chief academic officer.

The Doctor of Genetics will be discontinued and consolidated into the Doctor of Functional Genomics (26.0807). This discontinuation and consolidation will prevent unnecessary overlap and unintended competition between Genetics and Functional Genomics. No faculty or staff members will be affected by the discontinuation and consolidation of the program. Currently enrolled students will be able to complete their program of study and newly enrolled students will begin the combined curriculum under the new proposed program title Genetics and Genomics.

Recommendation: It is recommended that the Board of Governors approve NC State University's request to discontinue and consolidate the delivery of the Doctor of Genetics (26.0801) effective spring 2024.

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

Bachelor of Science (BS) in Health Systems Administration (CIP 51.0701)

Overview: The Bachelor of Science in Health Systems Administration (51.0701) at Western Carolina University will be discontinued effective spring 2024. The request to permanently discontinue delivery of the degree program was approved by the head of the program, appropriate institutional committees, and chief academic officer.

The Bachelor of Science in Health Systems Administration has been inactive in the Western Carolina University Information System since 2007. The UNC Academic Program Inventory lists the program as active. This discontinuation action will reconcile the discrepancy. No students, faculty, or staff members will be affected by the discontinuation of the program.

Recommendation: UNC System Office staff recommend that the University of North Carolina Board of Governors approve the request of Western Carolina University to discontinue the delivery of the Bachelor of Science in Health Systems Administration (51.0701) effective spring 2024.

Bachelor of Science (BS) in Art Education (CIP 13.1302)

Overview: The Bachelor of Science in Art Education (13.1302) at Western Carolina University will be discontinued effective spring 2024. The request to permanently discontinue delivery of the degree program was approved by the chief academic officer.

The Bachelor of Science in Art Education is inactive at Western Carolina University. The UNC Academic Program Inventory lists the program as active. This discontinuation action will reconcile the discrepancy. No students, faculty, or staff members will be affected by the discontinuation of the program.

Recommendation: UNC System Office staff recommend that the University of North Carolina Board of Governors approve the request of Western Carolina University to discontinue the delivery of the Bachelor of Science in Art Education (13.1302) effective spring 2024.

Bachelor of Science in Spanish, Secondary Education (BSEd) (CIP 13.1330)

Overview: The Bachelor of Science in Spanish, Secondary Education (13.1330) at Western Carolina University will be discontinued effective spring 2024. The request to permanently discontinue delivery of the degree program was approved by the head of the program, appropriate institutional committees, and chief academic officer.

The Bachelor of Science in Spanish, Secondary Education has been inactive in the Western Carolina University Information System since 2021. The UNC Academic Program Inventory lists the program as active. This discontinuation action will reconcile the discrepancy. No students, faculty, or staff members will be affected by the discontinuation of the program.

Recommendation: UNC System Office staff recommend that the University of North Carolina Board of Governors approve the request of Western Carolina University to discontinue the delivery of the Bachelor of Spanish, Secondary Education (13.1330) effective spring 2024.