

**Request for Authorization to Establish
Bachelor of Science (B.S.) in Cybersecurity
CIP 11.1003
Fayetteville State University**

I. Program Highlights

- Fayetteville State University proposes the establishment of a Bachelor of Science in Cybersecurity.
- The proposed degree program would prepare students with the advanced knowledge and skills for a career in the cybersecurity field.
- The proposed degree program aligns with the FSU mission to offer robust and innovative degree programs that meet the educational, career, and personal aspirations of its students and equip them with academic and practical knowledge to serve local, state, national, and global communities as engaged solution creators.
- The proposed degree program would provide graduates with critical workforce credentials in a STEM field — consistent with the goals of the UNC System Strategic Plan — and address a large workforce gap in cybersecurity professionals.
- Graduates of the proposed degree program would work as cybersecurity professionals in industry or military services as information security analysts, business operations specialists, computer systems analysts, or other jobs related to secure computer and network operations.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** FSU established the Center for Defense and Homeland Security on campus, which has served students and the military community since 2010. The institution offers a Certificate in Cybersecurity, preparing Computer Science majors with professional skills. FSU also offers a Cybersecurity Minor program for students in other majors. The proposed degree program would allow FSU to expand the capacity of the center to address cybersecurity issues, an important area for defense and homeland security. It would serve the needs of military services, businesses, and organizations seeking to improve defenses against cybersecurity threats.
2. **Student Demand.** FSU plans to create an educational pipeline with Fayetteville Technical Community College (FTCC), which has between 150-175 students in Systems Security and Analysis, a concentration of a larger Information Technology program. FTCC also offers an Intelligence Studies program. FSU surveys of its ROTC students indicate that 18.9 percent show an interest in a cybersecurity degree program.
3. **Employment Opportunities for Graduates.** A recent regional analysis from Burning Glass Technologies (a labor market analysis firm) indicated 2,642 job postings in North Carolina within the past 12 months in the cybersecurity industry. At least 2,281 jobs were available for information security analysts at an average salary of \$93,350. Since 2020, there has been a 13 percent increase in job availability, with a projected national increase of 35.8 percent between 2018 and 2028. According to Cyber Seek, a tech job-tracking database supported by the National Institute of Standards and Technology in the U.S. Department of Commerce, there were over 597,000 positions available in cybersecurity nationwide in 2021.

- 4. Impact on Access and Affordability.** FSU is not requesting any program-specific fees or tuition differential for this program. Tuition and fees for the 2022-23 full-time (12 credit hour) rates are as follows:

Full-Time 2022-23 Undergraduate Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	\$1,000	\$5,000
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	\$2,463	\$2,463
Special Fees	--	--

According to the College Scorecard, graduates of FSU's B.S. in Computer Science program had a median salary of \$39,369, which translates into a monthly salary of \$3,281. The median monthly repayment of their debt is \$239, or 7.3 percent of their monthly earnings. According to salary.com, the entry level cybersecurity job in Raleigh, North Carolina has a median salary of \$68,906, which translates into a monthly salary of \$5,742. Therefore, graduates of the proposed degree program could expect to spend about 4.2 percent of their monthly earnings for debt repayment.

Furthermore, FSU will join the NC Promise Tuition Plan in Fall 2022. This will decrease tuition to \$500 per semester for in-state students and \$2,500 per semester for out-of-state students. FSU will also offer military-affiliated scholarships each academic year beginning in Fall 2022. The purpose of the military scholarship is to provide free tuition to active-duty service members who have no access to Department of Defense Tuition Assistance; members of the National Guard or Reserves; veterans with an honorable discharge, military spouses, children or other legal dependents of service members or veterans. FSU will offer the Larry Keen Scholarship for qualified students at FTCC who graduate with an associate's degree and a 3.0 grade point average. The scholarship will provide two years of free tuition at FSU.

- 5. Expected Quality.** The proposed degree program would require 120 credit hours, available through online and on-campus delivery. Students would be required to complete 39 credit hours of general education courses, 43 credit hours of major cybersecurity courses, six credit hours of mathematics and statistics courses, 20 credit hours of major electives courses, and 12 credit hours of free electives courses.

The National Security Agency (NSA) reviews cybersecurity programs. The Designation Requirements and Application Process of the Center of Academic Excellence in Cyber Defense (CAE-CD) were reviewed during program planning. The curriculum of the proposed degree program is designed to satisfy the designation requirements. FSU plans to apply for the CAE-CD designation if the proposed degree program is approved

- 6. Faculty Quality and Number.** The faculty members in the Computer Science program at FSU are qualified to teach the proposed degree program in cybersecurity, holding terminal degrees in relevant subject areas.

7. **Relevant Lower-level and Cognate Programs.** FSU has lower-level programs that can support the proposed degree program, including Minors in Computer Science, Geospatial Data Analytics, Disruptive Technologies, Information Systems and Business Analytics for Non-Business Majors. Further support can be provided by a series of networking courses (Networking Basics, Routing Protocols, and LAN Switching and Wireless), which prepare students for Cisco Certified Network Associate (CCNA) certification. Other subject-matter fields at FSU would be valuable in support of the proposed degree program, including Computer Science, Mathematics, and Statistics.
8. **Availability of Campus Resources (library, space, etc.)** Existing physical spaces and infrastructure at FSU would need renovation to support the proposed degree program. The Charles Chesnut Library is working to transform its physical space, concentrating its efforts on expansion of digital collections (electronic books, journals, and databases).

FSU plans to relocate its Networking Lab from the Lloyd College of Business and Economics Building to the Science and Technology Building, room 231, and convert it to a Networking and Internet-of-Things Lab. The Science and Technology lab, room 231, is a classroom that would need to be renovated for its new purpose. The cost of renovation (\$100,000) is included in the requested start-up funds outlined in the budget. The proposed degree program is expected to generate new enrollment growth for FSU.

9. **Existing Programs (Number, Location, Mode of Delivery).** Two UNC System institutions offer the B.S. in Cybersecurity program, the University of North Carolina at Pembroke and the University of North Carolina Wilmington (on-campus). Additionally, several UNC System institutions have degree programs with cybersecurity concentrations/tracks. They include: App State, ECU, N.C. A&T, NCCU, UNCC, UNCW. Three private universities offer similar programs: Campbell University, Guilford College, and Montreat College.
10. **Potential for Unnecessary Duplication.** The proposed degree program differs from others in the following manner. FSU is located near Fort Bragg Army Base and serves military-affiliated students, who comprise 30 percent of undergraduates at the institution. The combination of proximity to the base, online asynchronous delivery options, and a significant military student population, means that FSU is uniquely positioned to serve the military community. FSU also has a Center for Defense and Homeland Security on campus, which has served students and the military community since 2010.
11. **Feasibility of Collaborative Program.** FSU has identified collaboration opportunities with postsecondary institutions and industry. FSU and North Carolina A&T State University have agreed on future collaborations on curriculum development and delivery. Graduates from the proposed degree program may continue their graduate study in the same field at North Carolina A&T State University. The Reserve Officer Training Corps (ROTC) program at FSU expressed interest in allowing their military students to develop expertise in cybersecurity. The curriculum of the proposed degree program contains 12 credit hours for free elective courses, which can be fulfilled by the military courses required of ROTC students. This curricular feature will help ROTC students graduate in four years.

Booz Allen Hamilton, an information technology consulting firm, expressed interest in recruiting students from the proposed degree program. The company submitted a letter of support which was included as an attachment for the proposed degree program.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The academic proposal was reviewed and approved by FSU departmental and college curriculum committees and administrators, including: Program Coordinator for FSU Computer Science Program; Department of Mathematics and Computer Science Curriculum Committee and Department Chair; Dean, College of Health, Science, and Technology; Faculty Senate; SACSCOC Liaison; Provost and Senior Vice Chancellor for Academic Affairs; Interim Vice Chancellor for Business and Finance; and the Chancellor.
2. **UNC System Office Review Process and Feedback.** Throughout the review process, Fayetteville 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

It is recommended that the Board of Governors approve Fayetteville State University's request to establish the Bachelor of Science (BS) in Cybersecurity, CIP 11.1003, effective fall 2022.

**Request for Authorization to Establish
Bachelor of Science (B.S.) in Sport and Fitness Management
CIP 31.0504
Fayetteville State University**

I. Program Highlights

- Fayetteville State University proposes the establishment of a Bachelor of Science in Sport and Fitness Management.
- The proposed degree program would prepare graduates for careers in the sport and fitness management field (managing sport/fitness facilities, athletic directors, operations, marketing, event planning, and related management activities).
- The proposed degree program would support FSU's mission to offer degree programs that meet the educational, career, and personal aspirations of its students and equip them with academic and practical knowledge to serve local, state, national, and global communities as engaged solution creators.
- The proposed degree program would prepare graduates for careers in professional sports, serving domestic and international, intercollegiate, interscholastic, and recreational sports organizations. The major would incorporate 21st century skills to address the needs of the business of sport and fitness management. The proposed curriculum would provide graduates additional opportunities to receive certifications (ACE personal trainer, aquatic facility operator, first aid and CPR, lifeguard and water safety instructor) that would further their knowledge and marketability.
- Graduates of the proposed degree program would enter careers in the business of managing professional sports, including administration of sport/fitness facilities, serving as athletic directors, athletic trainers, gaming supervisors, operations managers, and event planners.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The proposed degree program originated with a concentration in an education program, a critical workforce area. Student enrollment in the concentration rose so quickly, from two to 25, then 35, that the Department of Health, Physical, and Secondary Education considered the need to expand the degree offerings.
2. **Student Demand.** FSU's Department of Health, Physical, and Secondary Education currently offers a B.S. degree in Health and Physical Education with a Concentration in Sport Management. Since 2016, enrollment in the concentration increased from two students to 25, then 35, with continuing growth. FSU receives most of its transfer students from Fayetteville Technical Community College (FTCC). Between 2015 and 2019, enrollment in FTCC's Health and Fitness associate and certificate programs rose from 93 to 115 (23.6 percent). These students are among the population FSU hopes to attract with the new Larry Keen Scholarship in Fall 2022. The Scholarship would offer two years of free tuition at FSU for FTCC graduates with associate degree and 3.0 GPA. The proposed degree program and scholarship would be marketed to students in FTCC's growing Health and Fitness Program.

According to the North Carolina Community Colleges' dashboard of curriculum enrollments, regional community colleges that send transfer students to FSU are experiencing a rise or stability in enrollment in health and fitness programs. Between 2017 and 2021, the program enrollment

at Central Carolina Community College (CCCC) grew 390 percent from 10 to 49. During the same period, enrollment in the program at Wake Technical Community College fluctuated from 135 during the pandemic to return to a level of 139. Along with FTCC, these institutions represent the top five counties sending students to FSU. Students from these programs are a target audience for the proposed degree program.

This was consistent with enrollment growth at other UNC System institutions. Between 2016 and 2020, enrollment in sport management programs increased from 91 to 132 at Elizabeth City State University. Enrollment increased from 1,002 to 1,115 at North Carolina State University. Enrollment increased from 334 to 399 at Western Carolina University. Enrollment increased from 130 to 138 at Winston-Salem State University. During the same period, the number of graduates in kinesiology, a related field, increased 39 percent, from 102 to 142, at North Carolina Agricultural and Technical State University.

- 3. Employment Opportunities for Graduates.** Regional analysis from Burning Glass, a labor market analysis firm, indicated growth in fields related to sport and fitness management. The Bureau of Labors Statistics' projected change in employment from 2018 to 2028 ranged from 9 percent for general and operations managers, to 11.5 percent for coaches, to 20 percent for athletic trainers.

Burning Glass identified 8,431 job postings in North Carolina for sport and fitness management positions in the past 12 months. The average salary reported for general and operations managers was \$73,541 during this period. The average salary for coaches was \$52,341, and the average salary for athletic trainers was \$41,049.

- 4. Impact on Access and Affordability.** FSU is not requesting any program-specific fees or tuition differential for this program. Tuition and fees for the 2022-23 full-time (12 credit hour) rates are as follows:

Full-Time 2022-23 Undergraduate Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	\$1,000	\$5,000
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	\$2,463	\$2,463
Special Fees	--	--

According to the College Scorecard, graduates of FSU's Education Program (which includes the degree in health and physical science) had a median salary of \$36,501, which translates into a monthly salary of \$3,042. The median monthly repayment of their debt is \$273, or 8.3 percent of their monthly earnings. According to Burning Glass, the median salary for an athletic trainer in North Carolina is \$41,049, which translates into a monthly salary of \$3,785. Therefore, graduates of the proposed degree program could expect to spend about 7.2 percent of their monthly earnings for debt repayment.

Furthermore, FSU will join the NC Promise Tuition Plan in Fall 2022. This will decrease the tuition to \$500 per semester for in-state students and \$2,500 per semester for out-of-state students. FSU will offer military-affiliated scholarships each academic year beginning in Fall 2022. The purpose of the military scholarship is to provide free tuition to active-duty service members with no access to Department of Defense Tuition Assistance; members of the National Guard or Reserves; veterans with an honorable discharge, military spouses, children or other legal dependents of service members or veterans. FSU will offer the Larry Keen Scholarship for qualified students at FTCC who graduate with an associate degree and a 3.0 grade point average. The scholarship will provide two years of free tuition at FSU.

5. **Expected Quality.** Graduates of the proposed degree program would be required to complete 120 credit hours of coursework and field experience. This would include 39 semester hours of general education courses, 36 semester hours of sport management core courses, 39 semester hours of fitness and health core courses, and six semester hours of business-related courses. The courses used to meet the sport management core requirement would include 12 semester hours of internship, providing field experience.

The FSU Department of Health, Physical, and Secondary Education would seek accreditation for the proposed degree program from the Commission on Sport Management Accreditation (COSMA). Core courses in the proposed curriculum would be aligned with the sport management competencies and standards of COSMA. The purpose of this specialized accreditation body is to promote and recognize excellence in sport management education worldwide in colleges and universities at the baccalaureate, master's, and doctoral levels. The COSMA model is outcome-based and mission-driven. FSU's proposed degree program outcomes would be vetted through its designated COSMA commissioner. The department would apply for candidacy status, including up to five years to complete the self-study and site visit. The self-study would begin in year two and accreditation would be sought in year four.

6. **Faculty Quality and Number.** The faculty members have appropriate qualifications and experience to teach the course content for the proposed degree program. All current faculty hold a master's degree in sport management or a related field.
7. **Relevant Lower-level and Cognate Programs.** The proposed degree program would use existing courses within the Health and Physical Education, Sport Management Concentration, and Business Programs. The proposed curriculum would use an interdisciplinary approach, offering classes through the Department of Health, Physical, and Secondary Education, as well as the College of Business.
8. **Availability of Campus Resources (library, space, etc.)** The existing campus physical space and infrastructure would be sufficient to support the proposed degree program. The Charles Chesnutt Library's collection, including electronic resources, along with campus information technology and services, are adequate to meet the needs of the proposed curriculum. However, there may be a need for more resources if increases in enrollment require additional faculty. Funding for any new equipment and facilities would be generated from university enrollment-driven sources as well as faculty grant proposals.

9. **Existing Programs (Number, Location, Mode of Delivery).** Four institutions in the UNC System offer the B.S. in Sport Management degree program, including Elizabeth City State University, North Carolina State University, Western Carolina University, and Winston-Salem State University. North Carolina Agricultural and Technical State University offers the B.S. in Kinesiology, a related field sharing the same Classification of Instructional Programs (CIP) code.
10. **Potential for Unnecessary Duplication.** To prevent unnecessary duplication of similar programs in the UNC System, the proposed degree program would focus on serving the local and military friendly community. Given the University's unique position in Fayetteville, the department is poised to support Cumberland County and Lower Eastern North Carolina residents as well as military students at Fort Bragg Army Base. FSU's proposed curriculum will consist of several business and financial classes, but it will focus on hands-on field experiences within sports and fitness professions. The emphasis on skill-based learning and niche development, in addition to the focus on serving students within the local region, avoids unnecessary duplication.
11. **Feasibility of Collaborative Program.** FSU signed an Early Assurance Program (EAP) to establish the Graduate Pathways Early Assurance Program with East Carolina University. The proposed degree program in sport and fitness management was selected to provide students with guidance and mentorship into graduate level programs. The FSU Department of Health, Physical, and Secondary Education would work with ECU to select top quality candidates to apply and enter their Sport Management Master's Program. ECU provided a letter of support for the proposed degree program.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The academic proposal was reviewed and approved by FSU departmental and college curriculum committees and administrators, including: Department of Health, Physical, and Secondary Education Curriculum Committee and Interim Department Chair; College of Education Academic Affairs Committee and Dean; Faculty Senate; SACSCOC Liaison; Provost and Senior Vice Chancellor for Academic Affairs; Interim Vice Chancellor for Business and Finance; and Chancellor.
2. **UNC System Office Review Process and Feedback.** Throughout the review process, Fayetteville 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

It is recommended that the Board of Governors approve Fayetteville State University's request to establish the Bachelor of Science (BS) in Sport and Fitness Management, CIP 31.0504 in fall 2022.

Request for Authorization to Establish
Bachelor of Science (BS) in Neurodiagnostics and Sleep Science
CIP 51.0999
University of North Carolina at Chapel Hill

I. Program Highlights

- The University of North Carolina at Chapel Hill proposes the establishment of a BS Degree in Neurodiagnostics and Sleep Science (NDSS) in its Department of Health Sciences in the School of Medicine. This proposal comprises not the development of a new program per se; but, rather, a transfer of this degree program from UNC Charlotte to the UNC-Chapel Hillcampus's Department of Health Sciences in the School of Medicine. If approved, this program will operate under all of the rules and procedures necessary for any degree-granting program at UNC-Chapel Hill.
- Neurodiagnostics and Sleep Science (NDSS) BS degree was established as a field that involves studying the electrical activity of the brain, spinal cord, peripheral nerves, and cardiovascular and respiratory systems. The NDSS program (NDSS) BS degree at UNC Charlotte is a two-year hybrid program covering the major areas above and prepares graduates competent in diagnostic and therapeutic interventions in these areas. This NDSS program degree also prepares students to branch into careers of education, business, and other types of ventures (e.g., graduate degrees).
- The NDSS program directly aligns with the UNC School of Medicine's mission to "improve the health and wellbeing of North Carolinians and others whom we serve." Excellence in education, patient care, and research will be achieved through the leadership of nationally recognized sleep medicine and clinical neurophysiology faculty within the Departments of Health Sciences and Neurology, and through UNC Health Care's Nationally Accredited Sleep Disorders Center and Clinical Neurophysiology Laboratory.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** UNC-Chapel Hill is a global educational leader in the field of sleep science through UNC Health Care's nationally accredited sleep laboratory and internationally recognized sleep medicine faculty; providing the ideal academic home for NDSS. UNC-Chapel Hill's Department of Health Sciences developed, and thus owns the NDSS curriculum content, and provides the program's faculty and academic support. North Carolina ranks #1 in the nation for the number of CAAHEP accredited sleep technology associate level programs, and UNC-Chapel Hill is again taking the lead in creating an advanced curriculum in neurodiagnostics and sleep science to help fill the need for leaders, managers, and educators. NDSS aligns with the UNC System Strategic Plan, Carolina Next, and the North Carolina Community College System Comprehensive Articulation Agreement. Peer institutions, such as the University of Michigan, have started similar programs
2. **Student Demand.** The Bureau of Labor Statistics estimates the "Employment Projected Growth" for neurodiagnostic technology, including polysomnography (sleep studies), to be "much faster than average (11 percent or higher)" (bls.gov). A 2021 market analysis performed by EMSI demonstrates that 21 percent of nationwide jobs require a bachelor's degree, and 19 percent require a graduate degree. In NC, 17 percent of jobs require a bachelor's degree, and 18 percent require a graduate degree

The 2021 Sleep Technology Workforce Study, administered by SmithBucklin Association Management Company, demonstrated strong student demand for a BS degree through these key findings:

- a. Stakeholder support is strong for advanced level sleep technology practitioners
- b. Bachelor's degrees are the educational level in-demand

- c. 54 percent of clinical coordinators hold at least a bachelor's degree
 - d. ~40 percent of respiratory therapists, sleep health educators, technologists and technicians hold at least a bachelor's degree
- 3. Employment Opportunities for Graduates.** Annual job postings: ~43,000 positions nationwide and ~1,400 positions in the state, many in rural regions. NDSS's 100+ graduates are 100 percent employed and/or enrolled in graduate school, and report careers in the medical device industry, becoming leaders and entrepreneurs in business, higher education, managers in medical settings, federal government policy, etc. The average salary upon graduation is above the average salary for those graduating in engineering.
- 4. Impact on Access and Affordability.** Graduates will have a comfortable 10-year student loan repayment plan at five-seven percent of gross salary, based on an average yearly salary of \$80,000-\$90,000, based on the US Department of Education's income driven repayment plan 10 percent AGI standard. The NDSS Program expands student access by offering a marketable degree with median salaries of graduates exceeding the median of engineering students nationally.

Undergraduate degree program costs will be BOG Approved AY2022-23 Rates for UNC-Chapel Hill. The NC resident rate is \$292.46/per credit hour; the non-resident rate is \$1482.50/per credit hour. Historically, NDSS enrollment at UNC Charlotte was ~50 percent Resident/50 percent Non-Resident. In that 50 percent at UNC Charlotte, students came from Community Colleges and were not UNC-Charlotte students. At UNC-Chapel Hill we will advertise to UNC-Chapel Hill Students and anticipate building to a higher percentage of residents beginning Fall 2023.

UNC-Chapel Hill is not requesting any program-specific fees or tuition differentials for this program. Tuition and fees for the 2022-23 academic year full-time (12+ credit hour) rates are as follows:

2022-23 Full-Time Undergraduate Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	\$7,019.00	\$35,580.00
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	\$1,732.46	\$1,732.46
Special Fees	--	--

- 5. Expected Quality.** NDSS's dynamic curriculum reflects the ever-changing nature of clinical practice and patient care and attracts students from diverse backgrounds and educational experiences. Graduates earn a marketable degree and lay the foundation for a multitude of new opportunities. Coursework includes a combination of didactic, laboratory, clinical, and research experiences. In the first year of the program, students take lecture and laboratory courses emphasizing the principles and procedures involved in NDSS. The second year involves advanced coursework, various clinical rotations, a formal internship, and a capstone research project.

UNC-Chapel Hill undergraduate students are required to complete a minimum of 60 credit hours to meet general education and prerequisite requirements, and a minimum of 60 credit hours in the major (15 credit hours entry-level and 45 credit hours advanced-level NDSS courses). Transfer students are required to complete a minimum of 45 credit hours in the major at UNC-Chapel Hill and may be

awarded up to 75 credit hours as transfer and placement credits. The Neurodiagnostics and Sleep Science Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org).

6. **Faculty Quality and Number.** The program has two highly qualified full-time faculty members with doctoral degrees and credentials in the Department of Health Sciences, a highly qualified and nationally recognized medical director, and adjunct faculty within UNC-Chapel Hill's Department of Neurology.
7. **Relevant Lower-level and Cognate Programs.** Our current pipeline includes NC Community College Polysomnography and Electroneurodiagnostic Technology programs at Catawba Valley, Lenoir, Pitt, Central Piedmont, and Wake Technical Community College, as well as practicing technologists with an earned AS or AA degree, or respiratory therapy degree. We also anticipate a new pipeline from residential UNC-CH undergraduates. Once established, we are excited to develop collaborations with other UNC-CH undergraduate programs (e.g., Department of Psychology and Neuroscience).
8. **Availability of Campus Resources (library, space, etc.)** Existing campus physical spaces and infrastructure and digital resources are already utilized by NDSS students and faculty, and are sufficient to support the program as they have for the past 10 years or so. Additionally, once approved, the Department of Health Sciences plans to make this program its 8th Division which, in turn, will then have access to our student services, Office of Research, and related administrative units in the department. Students also will have access to all interprofessional education engagements and related student activities.
9. **Existing Programs (Number, Location, Mode of Delivery).** No other NDSS programs exist in the UNC System.
10. **Potential for Unnecessary Duplication.** No other NDSS programs exist in the UNC System.
11. **Feasibility of Collaborative Program.** The NDSS Program plans to continue collaborating with other UNC Institutions and UNC-Chapel Hill units to provide our students with a broader array of clinical/research experiences to provide students in other UNC Institutions with new opportunities in the sleep medicine and neurodiagnostics fields. For example, the Department of Psychology and Neuroscience is supportive of collaborative efforts to become an entrance pathway to this degree program. The University of Bern, Switzerland, has proposed a collaboration between its Master of Advanced Studies in Sleep, Consciousness, and Related Disorders Degree and the UNC-Chapel Hill NDSS program. We also plan to expand the internship experiences of our students beyond UNC-Chapel Hill and into the broader UNC System and related communities.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The curriculum was vetted and approved by the Health Sciences Academic Affairs Committee prior to this proposal since the major courses were taught through UNC-Chapel Hill. This proposal to relocate the program's degree-granting institution was reviewed by the Program Director, Medical Director, Health Sciences Department Chair, Dean of the School of Medicine, Vice Deans for Academic Affairs and Strategic Initiatives of the School of Medicine, Provost, Chancellor, and Board of Trustees. Approval and support were provided at all levels.

- 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

It is recommended that the Board of Governors approve the University of North Carolina at Chapel Hill's request to establish the Bachelor of Science (BS) in Neurodiagnostics and Sleep Science (CIP 51.0999) effective fall 2022.

**Request for Authorization to Establish
Master of Science (MS) in Cybersecurity
CIP 11.1003
North Carolina Agricultural and Technical State University**

I. Program Highlights

- North Carolina Agricultural and Technical State University proposes the establishment of an online Master of Science (MSCYBR) in Cybersecurity.
- The MSCYBR degree program at North Carolina A&T is designed to provide professionals from multiple disciplines and industries with an understanding of the core principles of cybersecurity, and expertise in core aspects of cybersecurity.
- The proposed program requires successful completion of at least 30 credit hours of course work. The MSCYBR program will offer students the flexibility to customize their cybersecurity expertise for the evolving and high demand field by leveraging knowledge from required core courses in a rich set of technical electives.
- The MSCYBR program is a collaboration between the College of Engineering (COE) and the College of Science and Technology (CoST) leveraging the COE's Department of Computer Science and the CoST's Department of Computer Systems Technology.
- The MSCYBR program is designed for working professionals, as these students can complete all courses online. While classes are primarily available as asynchronous distance education courses, students can choose to take them on campus in the day or evening. Full-time students can complete the program within two years.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** This program directly supports North Carolina A&T's mission. The institution is an 1890 land-grant doctoral research institution with a distinction in STEM and commitment to excellence in all disciplines. The MS in Cybersecurity degree program is a STEM program filling the country's significant need for professionals trained in this area. This program will attract a diverse population of students who include students from underserved populations, allowing them to pursue a career in a discipline with high growth potential at a reasonable cost.

The proposed program in Cybersecurity is a graduate-level degree that will allow students to make discoveries through research that can be applied to real-world problems and address the needs of the citizens of North Carolina and the United States. It will also position the university to become the number one producer of African American graduates in this field.

2. **Student Demand.** Based on evidence of student demand from Hanover Research and EMSI data, significant student demand exists at state, regional, and national levels. The proposed program will educate students and prepare them for careers in this area of national need and create a pipeline of students with advanced skills in critical areas, including computer security, information security, network security, secure software engineering, database management, and data analytics. Students graduating from this program will develop innovative solutions and defenses to the nation's increasing number of cyber threats and attacks. The expected public benefits for

this program include helping to fill the significant workforce gap in cybersecurity both locally, in the region, state, and nation.

3. **Employment Opportunities for Graduates.** Cybersecurity job opportunities exist in a wide range of settings from private businesses to government agencies. According to the U.S. Bureau of Labor Statistics, employment of information security analysts is projected to grow 33 percent from 2020 to 2030, much faster than the average for all occupations. About 16,300 openings for information security analysts are projected each year, on average, over the decade. There are about 597,767 open positions in cybersecurity nationwide and 21,010 job openings in North Carolina as of January 2022, according to Cyber Seek. Similarly, EMSI data on employment opportunities reports 9,536 unique job postings (January 2021-December 2021) for the cybersecurity graduates.
4. **Impact on Access and Affordability.** The proposed MSCYBR degree program aligns with the goals of the UNC System Strategic plan by increasing access. Students who do not meet the proposed degree program's admission requirements may meet the graduate certificate program's admission requirements. All courses completed as a part of the graduate certificate program count towards the MS degree in cybersecurity. A larger pool of students, including non-traditional students working full time, can complete the degree requirements entirely online. Students from underrepresented minority groups also have access to the proposed degree program, as North Carolina A&T was recognized as the largest public HBCU in the country for the ninth consecutive year.

Students in the proposed MSCYBR will pay tuition in the amount prescribed by the North Carolina A&T State's Graduate College. Based on the table below, total tuition for in-state students would average \$21,000 for the program. The provision of assistantships and scholarships would contribute to reducing student debt. Tuition and fees for the 2022-2023 full-time (9+ credit hour) rates are as follows:

Full-Time 2022-2023 Master's Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	\$4,745.00	\$17,545.00
Tuition Differential	\$2,000.00	\$2,000.00
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	\$3,072.32	\$3,072.32
Special Fees	--	--

5. **Expected Quality.** This program offers a course-based MS in cybersecurity, eliminating requirements to complete a major project, thesis, or comprehensive exam. Graduates will gain critical thinking and communication skills, and hands-on experiences in the 30-credit hour program. The reference structure used for the development of the curriculum was the National Initiative for Cybersecurity Education (NICE) cybersecurity workforce framework from the National Institute of Standards and Technology (NIST). The proposed curriculum was also constructed on guidance from the National Centers of Academic Excellence in Cyber Defense

(CAE-CD) Designation Program, jointly sponsored by the National Security Agency and Department of Homeland Security (NSA/DHS). North Carolina A&T is designated as a CAE-CD site.

6. **Faculty Quality and Number.** The proposed program will deliver a combination of new and existing courses. The program will have two new courses. One additional faculty will be needed to develop and cover new courses, advise new students, and develop relationships with employers. The budget reflects the hiring of a new faculty member in the first year.

Existing courses are shared with the Computer Science Department, the Computer Systems Technology Department, and the Business Information Systems and Analytics Department. New and existing faculty who will support in this program will teach a slate of courses commensurate with workload expectations for their college and the university. Regarding service, faculty will be expected to maintain their service to their profession, the university, and the local region as befitting the expectations at North Carolina A&T. Similarly, with research, the faculty will be expected to produce publications, write research grants, and speak at professional conferences. This program will attract new students to North Carolina A&T. An additional market for this program may be international students.

7. **Relevant Lower-level and Cognate Programs. Business Information Technology.** The Department of Computer Science, Computer Systems Technology, and the Business Information Systems and Analytics have three undergraduate feeder programs that will support the proposed M.S. in Cybersecurity: (1) BS in Computer Science, 2) BS in Information Technology and (3) BS in Business Information Technology.

8. **Availability of Campus Resources (library, space, etc.)** The North Carolina A&T Division of Information Technology Services is well equipped to support educational, research, academic, and administrative needs of the institution, with the ability to grow to meet future capacity needs. Students and faculty receive help through a comprehensive incident management system. F.D. Bluford Library at North Carolina A&T provides both the College of Engineering and the College of Science and Technology with appropriate library and learning/information resources for computer science, information technology, and business information systems and analytics.

Specialized equipment needed includes four dedicated servers for students in the program to remote access and conduct hands-on labs for the cybersecurity courses. Two servers will be housed in the new Engineering Research Innovation Complex (ERIC) for use by computer science courses, and two servers will be housed in the Smith Hall for use by computer systems technology courses.

9. **Existing Programs (Number, Location, Mode of Delivery).** University of North Carolina at Charlotte is the only UNC System institution offering a master's degree in this same CIP, which is delivered on campus.
10. **Potential for Unnecessary Duplication.** The proposed program does not risk unnecessary duplication within the UNC System. The MS degree in Cybersecurity at UNC Charlotte is distinct from the MSCYBER due to its concentrations in network security, secure software development, and emerging technologies.

11. Feasibility of Collaborative Program. The MSCYBR program has an interdisciplinary focus creating opportunities for collaboration while providing professionals from multiple disciplines and industries with an understanding of the core principles of cybersecurity. It also provides them with expertise in core aspects of cybersecurity and flexibility to customize their cybersecurity expertise with a rich set of technical electives.

12. Other Considerations. The proposed program will be integral to the success of ongoing activities within North Carolina A&T's Center for Cyber Defense (CCD) and Center of Excellence in Cybersecurity Research, Education and Outreach (CREO). The proposed program will be housed in the Department of Computer Science. The proposed program will have a program coordinator, who will be an affiliated faculty of CDE and CREO. The program will also have an active external industry advisory board of working professionals to guide its formation and ongoing development.

III. Summary of Review Processes

- 1. Campus Review Process and Feedback.** The proposal was reviewed by North Carolina A&T's faculty senate, the graduate council, the graduate school, and administrators including the Chairs of the Computer Science Department, Computer Systems Technology Department, and Business Information Systems and Analytics Department, the Dean of the College of Agriculture and Environmental Sciences, the Provost and Chancellor.
- 2. UNC System Office Review Process and Feedback.** Throughout the review process, North Carolina 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

It is recommended that the Board of Governors approve North Carolina A&T's request to establish the Master of Science (MS) in Cybersecurity (CIP 11.1003) effective fall 2022.

**Request for Authorization to Establish
Master of Science (MS) in Data Analytics
CIP 30.7101
North Carolina Agricultural and Technical State University**

I. Program Highlights

- North Carolina Agricultural and Technical State University proposes the establishment of a Master of Science in Data Analytics (MSDAAN) to meet the rapidly growing demand for data analysts in North Carolina and the United States.
- The MSDAAN will impart advanced knowledge on current and future applications of tools and technologies that examine datasets, conduct data analyses, and draw conclusions about the information they contain.
- The MSDAAN is offered in both online and campus modalities. The online mode is designed for working professionals and students who cannot meet in-person while the campus mode provides an option for traditional students and who prefer face-to-face course delivery.
- Undergraduates enrolled at the five North Carolina A&T colleges would serve as feeder programs to the proposed master's degree program because of its multidisciplinary focuses on advanced analytics, health analytics, business analytics, education analytics, and social and humanities analytics. Currently, 20 percent of the total number of applications submitted to N.C. A&T graduate programs come from North Carolina A&T students.
- Students graduating from the MSDAAN program will acquire a set of essential data analytics skills to make them effective predictive modelers, engaging team players, and persuasive communicators. The program will help students advance their professional goals and improve and enhance their marketability.
- Graduates of the MSDAAN program will improve and enhance their employers' business operations by providing insights to senior management and business leaders in supporting data-driven decision-making.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** North Carolina A&T advances knowledge through scholarly exchange and transforms society with exceptional teaching, learning, discovery, and community engagement. Based on the course structure and market analysis, the MSDAAN program has clear potential to support North Carolina A&T's mission to advance knowledge and transform society with exceptional teaching in an area of high need. The proposed is a STEAM (Science, Technology, Engineering, Arts and Mathematics) program that addresses the country's significant need for professionals trained in this field. The program will attract a diverse population of students, including students from underserved populations, to pursue a career in a discipline with high growth potential at a reasonable cost. The program will contribute to enhancing diversity in the field of data analytics.
2. **Student Demand.** The proposed MSDAAN program, to be offered in both online and campus formats, will draw recent college graduates, students enrolled in the Data Analytics Certificate Program, and working professionals employed by companies with tuition reimbursement programs. These and other non-traditional students will be able to complete the program entirely online. Online classes will be delivered in an asynchronous format. This modality offers working

professionals across the United States the flexibility to enroll and complete their assignments after hours and on weekends. Students will also be drawn from the cohort currently enrolled in the North Carolina A&T's Data Analytics Certificate Program. The certificate program will serve as a direct pipeline, as students only need to complete 18 additional credit hours to meet the MS degree requirements.

3. **Employment Opportunities for Graduates.** The information revolution has generated strong market demand for professionals trained in data analytics. In its most recent report on jobs in the field, the Bureau of Labor Statistics reported that the number of data scientists and mathematical science positions would grow by 33 percent from 2020 to 2030, much faster than the average for all other occupations. Additionally, the world is projected to generate 175 zettabytes of data by 2025, demonstrating the tremendous societal and labor demands for the data analytics profession.

A 2020 report by EMSI also projected 6,418 annual openings nationally for data analytics positions with an annual average salary of approximately \$79,900. The combination of available positions, the above average starting salaries, and the low cost of the proposed MSDAAN degree program make this an attractive new degree program for North Carolina A&T.

4. **Impact on Access and Affordability.** The proposed MSDAAN degree program is well aligned with the UNC System Strategic Plan, increasing access. Students who do not meet the proposed degree program's admission requirements may meet the graduate certificate program's admission requirements. Students can enter the program after completing the graduate certificate program in data analytics at North Carolina A&T. All courses completed as part of the graduate certificate program count towards the proposed MS degree in data analytics. A larger pool of students, including non-traditional students who work full time, will have access because they can complete the degree requirements entirely online. These working professionals can take one course per semester, including two summer sessions, and complete 12 credit hours per year, completing the program in a maximum of 2.5 years. Students from underrepresented minority groups have access to the proposed degree program as North Carolina A&T is recognized as the largest public HBCU in the country for the eighth consecutive year.

For the target student population of non-traditional working professionals enrolled in online courses, the MSDAAN program is very affordable. In-person courses will also be available for students who wish to take them on campus. It is also very affordable for on-campus and out-of-state students. Tuition and fees for the 2022-2023 full-time (9+ credit hour) rates are as follows:

Full-Time 2022-2023 Master's Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	\$4,745.00	\$17,545.00
Tuition Differential	\$2,000.00	\$2,000.00
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	\$3,072.32	\$3,072.32
Special Fees	--	--

5. **Expected Quality.** In the 30-credit hour program, graduates will gain critical thinking and communication skills, advanced data analytics and visualization skills, and project-oriented problem-solving skills in advanced big data analytics and data mining, business analytics, health analytics, education analytics, and social and humanities analytics. Students will complete 15-credit hour core coursework in introductory data analytics, big data analytics and visualization, statistical foundations of machine learning, predictive analytics and machine learning, data privacy, ethics, and security in DAAN. They will subsequently take 12-credit hours of focus area electives in one of five specializations: advanced analytics, health analytics, business analytics, education analytics, and social and humanities analytics. The focus areas on education analytics as well as social and humanities analytics are unique features of the program. All students are required to take a three-credit hour master's practicum as the program capstone course.
6. **Faculty Quality and Number.** Ten faculty members, each with terminal degrees in their field, would support the proposed program each year. To support the delivery of coursework, marketing campaigns and student recruitment, and supervision and advisement of students, the program will request one additional faculty position in years one to five at an annual salary and fringe benefits of \$129,190.
7. **Relevant Lower-level and Cognate Programs. Business Information Technology.** North Carolina A&T offers baccalaureate degree programs in mathematics, computer science, computer systems technology, computer graphics technology, physics, biology, chemistry, environmental health and safety, health services management, kinesiology, psychology, social work and sociology, educator preparation, journalism and mass communication, political science, criminal justice, accounting, finance, business information technology, economics, management, marketing, and supply chain management with an enrollment of approximately 6,000 students in fall 2021. These programs would serve as feeder programs to the proposed master's degree program in data analytics, with focuses on advanced analytics, health analytics, business analytics, education analytics, and social and humanities analytics, since 20 percent of the total number of applications submitted to graduate programs come from North Carolina A&T.
8. **Availability of Campus Resources (library, space, etc.)** The F.D. Bluford Library supports institutional scholarship at the Library of Congress-defined "Instructional Support Level." Library staff oversees a total collection of 617,309 volumes of print, 396 current print serial subscriptions (468 including government documents), 152,130 electronic serial subscriptions, and 1,102,463 units of microforms and government documents. Most resources can be accessed through the library's website 24 hours per day, seven days per week. Library resource increases are requested at a rate of \$989 per projected student.
9. **Existing Programs (Number, Location, Mode of Delivery).** There are currently six data analytics-related master's degree programs on five UNC System campuses: Applied Data Analytics at Appalachian State University (on-campus, CIP code: 11.0802); Analytics at North Carolina State University (on-campus, CIP code: 11.0802); Data Science and Business Analytics (on-campus, CIP code: 52.1399) and Health Informatics and Analytics (on-campus, CIP code: 51.2706) at University of North Carolina at Charlotte; Informatics and Analytics at The University of North Carolina at Greensboro (on-campus, CIP code: 11.0104); and Business Analytics at University of North Carolina Wilmington (online, CIP code: 52.1399).

10. Potential for Unnecessary Duplication. The proposed MSDAAN program does not involve unnecessary duplication due to the distinct emphasis, degree type, market location, and delivery methods of the six similar programs at five UNC System institutions listed above. Other UNC System programs are focused on specific disciplines. The Applied Data Analytics program at Appalachian State serves a distinct student market outside of Greensboro.

11. Feasibility of Collaborative Program. The proposed MSDAAN is designed as a standalone program in the Department of Mathematics and Statistics. Significant collaboration in teaching, research training and student engagement is expected through partnerships with other departments on campus and business partners. Faculty researchers will also be able to pursue collaborations with other North Carolina institutions offering programs in data analytics.

12. Other Considerations. None.

III. Summary of Review Processes

- 1. Campus Review Process and Feedback.** The proposal was reviewed by the North Carolina A&T faculty senate, the graduate council, the graduate college, and administrators including the chairs of the departments of Mathematics & Statistics, and Computer Systems Technology, the deans of the colleges of Science and Technology; Arts, Humanities and Social Sciences; Business and Economics; Education; Health and Human Sciences; the vice provost for OSPIE and SACSOC liaison, the Provost and Chancellor.
- 2. UNC System Office Review Process and Feedback.** Throughout the review process, North Carolina 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

It is recommended that the Board of Governors approve North Carolina A&T's request to establish the Master of Science (MS) in Data Analytics (CIP 30.7101) effective fall 2022.

**Request for Authorization to Establish
Master of Professional Science (MPS) in Regulatory Science
CIP 51.0720
University of North Carolina at Chapel Hill**

I. Program Highlights

- The University of North Carolina at Chapel Hill (UNC-Chapel Hill) proposes the establishment of a Master of Professional Science (MPS) in Regulatory Science.
- The MPS in Regulatory Science will provide students with advanced training in modern pharmaceutical product development, global regulatory affairs, and cutting-edge regulatory science as well as business fundamentals.
- The UNC-Chapel Hill Eshelman School of Pharmacy's MPS in Regulatory Science will graduate leaders who can apply regulatory principals and improve regulatory processes to advance products to patients, thereby meeting the missions of the University and the UNC System.
- Market analysis conducted by Hanover Research shows that the 10-year projected growth rate for regulatory-related occupations, between 2016 and 2026, in North Carolina (14.1 percent) exceeded the projected statewide growth rate for all occupations (10.1 percent) and a similar trend was observed nationally. Despite the demand for regulatory-trained professionals, there are currently no regulatory-focused master's degree programs offered in the state. This program will fill an unmet need for the residents of North Carolina that will also help to meet the growing workforce demand for regulatory professionals within the state and elsewhere.
- The training offered through the MPS in Regulatory Science will prepare graduates for regulatory roles in pharmaceutical product development. Graduates will be prepared for positions in pharmaceutical companies, contract research organizations, government agencies, and academic institutions. Additionally, the business skills taught as a part of the curriculum will position students for strong upward mobility with management trajectory.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The knowledge and skills gained in the MPS program will allow graduates to become leaders and innovators in pharmaceutical science, thereby supporting the mission of the Eshelman School of Pharmacy. Additionally, the MPS program's commitment to a 100 percent online curriculum aligns with the School and University's strategic plans to facilitate life-long and distance learning with digital education opportunities.
2. **Student Demand.** Pre-pandemic market research suggested strong student demand for regulatory science master's degrees at all geographic levels. The growth rate in North Carolina was not growing as fast as regional and national rates but this could be due, in part, to the fact that North Carolina does not currently have a regulatory-focused master's program. Where programs exist, the number of degree conferrals from regulatory-focused master's programs grew in eight out of 10 benchmarked institutions. Additionally, the demand for advanced training relating to pharmaceutical product development and approval and the science that drives these processes is likely to be heightened due to the coronavirus disease 2019 (COVID-19) global pandemic.

3. **Employment Opportunities for Graduates.** According to a Hanover Research market analysis, the top employers for regulatory professionals in the state of North Carolina include contract research organizations and healthcare systems. Most postings identified for these individuals were at the manager level. Research by Hanover reported the top employers for regulatory professionals nationally include pharmaceutical companies and biotech companies.
4. **Impact on Access and Affordability.** UNC-Chapel Hill is requesting a program-specific tuition differential for the MPS in Regulatory Science. This tuition differential follows the model of existing professional science master's programs at UNC-Chapel Hill. Tuition and fees for the 2022-23 full-time (9+ credit hour) rates are as follows:

Full-Time 2022-23 Master's Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	10,552.00	28,844.00
Tuition Differential	6,246.00	6,246.00
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	2,384.26	2,384.26
Special Fees	--	--

The MPS program is being designed with maximum flexibility to accommodate working professionals; therefore, students should not have to sacrifice their livelihood while enrolled. While graduates will accumulate debt, a full-time student can complete the MPS program in three semesters and a quick return on investment is anticipated.

The median annual wages for relevant master's-level regulatory science professionals such as "regulatory affairs manager" are over \$100,000. Furthermore, the MPS program will prepare students to attain the Regulatory Affairs Certification (RAC) credential from the Regulatory Affairs Professional Society (RAPS). RAPS reports that RAC-holders in North America earn on average 18% more than non-RAC colleagues.

5. **Expected Quality.** As the number one ranked school of pharmacy in the nation, the UNC-Chapel Hill Eshelman School of Pharmacy is well positioned to offer the first regulatory-focused master's program in the state and the only professional regulatory-focused master's degree in the nation. The MPS in Regulatory Science will seek affiliation with the National Professional Science Master's Association (NPSMA).

The proposed program will consist of a 32-credit hour curriculum offered 100 percent online with a mix of asynchronous and synchronous learning to accommodate working professionals. Completion of the MPS program will provide students an advanced understanding of the cutting-edge science and regulatory activities utilized to successfully deliver safe, efficacious, and high-quality therapeutics to patients (~75 percent of courses), as well as highly valued business skills that will prepare students to be regulatory innovators and leaders (~25 percent of courses). The curriculum will culminate in an experiential learning internship allowing students to apply the knowledge and skills gained through coursework in a professional setting.

6. **Faculty Quality and Number.** The UNC-Chapel Hill Eshelman School of Pharmacy is the home unit for most faculty members involved in the development and/or instruction of regulatory-focused coursework within the proposed program. At least five full-time Eshelman faculty members will support development and/or instruction of entire courses. Several program courses will also be developed in collaboration with adjunct faculty members (at least three) who are currently employed in pharmaceutical product development, guaranteeing that MPS students are gaining highly relevant knowledge for regulatory professionals in that industry. Many additional full-time and adjunct faculty members, primarily from the School of Pharmacy, will contribute content to the proposed “Emerging Topics in Regulatory Science” course, ensuring that all the groundbreaking regulatory science research topics being discussed in that class will be taught by experts in the field. Professional skills courses are developed and led by graduate school instructors.
7. **Relevant Lower-level and Cognate Programs.** While working professionals will be the target market for the MPS program, pharmaceutical sciences undergraduate programs will also provide the appropriate training to prepare students for the program. Regionally, nine institutions (excluding UNC-Chapel Hill) reported bachelor’s degrees in pharmacy-related fields. Growth in pharmacy-related bachelor’s degree conferrals at the state, regional, and national levels support the potential for these graduates to increase the prospective pool of students served by the MPS program.
8. **Availability of Campus Resources (library, space, etc.)** New online courses are under development for the MPS program. These courses will be offered 100 percent online and are being developed with the support of the UNC Office of Digital and Lifelong Learning.

Because MPS courses will be offered exclusively online, no space will be required for this program. However, the program will impact UNC-Chapel Hill services involved in marketing and communications, admissions, registration, degree conferrals, and educational technology. The MPS program budget includes funds to ensure support for these services.

The libraries at UNC-Chapel Hill maintain excellent holdings of books and other reference materials as well as online access to scientific journals and electronic sources of primary publications that will be sufficient to support the needs of the MPS program. Development of the MPS will not require any expansion of library holdings or additional support beyond the existing support available to all UNC-Chapel Hill graduate students.

9. **Existing Programs (Number, Location, Mode of Delivery).** In depth review has led to the conclusion that only one existing UNC System program has any significant similarity to the proposed MPS in Regulatory Science. The University of North Carolina Wilmington (UNCW) offers an online Master of Science in Clinical Research and Product Development degree program.
10. **Potential for Unnecessary Duplication.** Compared to the UNCW MS program, the proposed MPS in Regulatory Science has a stronger focus on regulatory affairs and regulatory science. In addition, approximately 25 percent of the MPS curriculum will be training on professional skills. Further, the UNCW program typically enrolls experienced professionals working in clinical research to prepare them for mid- to upper- level roles in the field. While the MPS program will enroll working professionals, many will not have any prior regulatory experience and will benefit

from hands-on training during an internship experience. The MPS program will also target recent graduates with pharmacy-related undergraduate degrees.

- 11. Feasibility of Collaborative Program.** The MPS in Regulatory Science is exploring multiple opportunities to collaborate with other academic institutions within North Carolina. For instance, opportunities being discussed for collaboration with the described MS program at UNCW include joint professional forums and/or career fairs, sharing research opportunities, and sharing coursework. The MPS program is also exploring the possibility to share coursework with Duke University, North Carolina Central University (NCCU), and North Carolina State University (NCSU). Finally, the MPS program is exploring ways to allow students from certain undergraduate degree programs offered through NCCU to obtain an MPS in Regulatory Science in a shorter timeframe through possible dual degree arrangements.

The Program will also forge external collaborations with Research Triangle Institute and the North Carolina Regulatory Affairs Forum to leverage a vast network of experienced regulatory professionals to develop cutting-edge, highly relevant coursework. Importantly, the MPS program will partner with the North Carolina Biotechnology Center to ensure the curriculum is designed to meet the needs of the business community. The MPS program will leverage the longstanding relationship Eshelman has with the FDA to ensure the MPS degree is well aligned with current regulatory policies and new regulatory science initiatives.

III. Summary of Review Processes

- 1. Campus Review Process and Feedback.** This Request to Establish has been reviewed by the Program Director, the Department Chair, the Dean of the Eshelman School of Pharmacy, the Graduate School Dean, the Graduate Council, the Provost, the CFO, and the Chancellor. Approval and support were provided at all levels.
- 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

It is recommended that the Board of Governors approve UNC-Chapel Hill's request to establish the Master of Professional Science (MPS) in Regulatory Science (CIP 51.0720) effective fall 2022.

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

**North Carolina State University – Master of Science and Master in Youth Family and Community
Sciences (MS and M)
(CIP 19.0701)**

Overview: The Master of Science (MS) and Master (M) in Youth, Family, and Community Sciences (19.0701) at North Carolina State University will be discontinued and consolidated into the Master of Science (MS) and Master (M) in Agriculture and Extension Education (01.0801) effective fall 2022. The request to permanently discontinue the degree program was approved by the head of the department, appropriate institutional committees, deans, and provost.

The programs are being discontinued to combine the curriculum pathways of the MS in Youth, Family, and Community Sciences and the MS in Agriculture and Extension Education into a single degree program, the MS in Agricultural Education and Human Sciences. To do so, the MS in Youth, Family, and Community Sciences will be discontinued, and its curriculum content will be consolidated into the remaining MS in Agriculture and Extension Education (which will have its title changed to reflect the new combined degree). The same would be done for the M degrees.

The rationale for this change is to streamline faculty teaching loads by sharing responsibilities for overlapping courses, to encourage faculty collaboration on new courses, and to better market the programs and department to students who are interested in exploring careers and knowledge across agricultural education, leadership, and human sciences. Additionally, this request to consolidate degree programs mirrors the recent consolidation of two academic departments into a single Department of Agricultural and Human Sciences.

Current students in each program will be able to finish the degree into which they were matriculated. Because this is largely an administrative change with few course/curriculum changes, students will likely see no differences to their degree programs as current students finish and new students matriculate. There are no additional charges for students. The proposed changes will go into effect fall 2022.

Recommendation: It is recommended that the University of North Carolina Board of Governors approve North Carolina State University's request to discontinue the Master of Science and Master in Youth, Family, and Community Sciences (19.0701) and consolidate the program into the Master of Science and Master in Agriculture and Extension Education (01.0801) effective summer 2022.