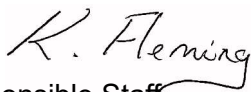


RECOMMENDATION

It is recommended that the Board of Trustees approve the twelve new certificate programs presented for academic year 2024-2025.

BACKGROUND

The **twelve new certificate programs** proposed by the colleges are summarized on the included BOT Curriculum Action Items Summary spreadsheet. Academic Affairs has notified HLC of our intent to offer these certificate programs and received assurance that no further HLC review is required. The programs have now been fully approved through the curriculum process as outlined in University Regulations Title 3, Article 3, Part 5. Prior to notification to the CDHE and implementation, the programs require approval by the Board of Trustees. We are recommending these changes be approved for academic year 2024-2025.



Responsible Staff

02/12/24

Date



President

02/15/24

Date

Board Action

Date



**Board of Trustees - Action Item
New Certificate Programs**

Summary of Change: Five new graduate certificate programs and seven new undergraduate certificate programs are proposed for the academic year 2024-2025 catalog.

Background: The twelve new certificate programs proposed by the colleges are summarized on the included *BOT Curriculum Action Items Summary* spreadsheet. Academic Affairs has notified HLC of our intent to offer these certificate programs and received assurance that no further HLC review is required. The programs have now been fully approved through the curriculum process as outlined in University Regulations Title 3, Article 3, Part 5. Prior to notification to the CDHE and implementation, the programs require approval by the Board of Trustees. We are recommending these changes be approved for academic year 2024-2025.

Rationale: The creation of certificate programs is responsive to a state and national movement to create more flexible formats by which students can obtain a post-secondary credential. Each of the proposed certificate programs is either aligned with our values, supports career readiness for our students and/or is designed to directly or indirectly attract new students. As highlighted on the summary spreadsheet, each of the proposed certificate programs makes use of existing coursework and is embedded in, or stacks directly toward existing undergraduate or graduate degree programs.

Each of the undergraduate certificate programs has been carefully designed to fit within the 120-credit hours of an existing bachelor's degree program:

- Each of the three undergraduate certificates embedded in the bachelors' degree in biological sciences bundles together coursework that is required, either within or in addition to a bachelor's degree, to apply for many jobs with the Bureau of Land Management, US Forest Service, National Park Service, US Fish and Wildlife Service, and Colorado Parks and Wildlife (including State Parks). Specific jobs require applicants to verify they have at least nine credit hours of dedicated coursework in Botany, Ecology and/or Wildlife. While many biology students already choose the courses that will now be packaged in these certificates, the certificates make the qualifications immediately visible to employers and help students choose biology electives aligned with specific career pathways to increase the marketability of their degree. Job postings in these areas range from 25 (fall) to 100+ (spring) and are often available in multiple regions of the state and across the nation.
- The two undergraduate certificates embedded in the bachelor's degree in computer science and statistics similarly enable students to highlight specific programming and data analysis skills embedded within their degree. Those two degrees were first offered this academic year, with little time for marketing, and enrolled seventeen and thirteen students, respectively. However, these certificates may also be embedded within the university-wide electives area of any other undergraduate degree program, providing a significant additional career qualification to almost any student. For example, a sociology or political science major interested in a public policy

career might fit the *Data Analytics* certificate inside their university-wide electives to strengthen the marketability of their degree. According to research by the International Data Group (2023), 93% of organizations have adopted or plan to adopt a digital-first business strategy. Similarly, a computer information systems or pure mathematics major might want to integrate additional evidence of *Computer Programming* skills by incorporating certificate coursework into their elective options. According to the Bureau of Labor Statistics estimates, employment of computer and information research scientists, of which programming is a significant component, is projected to grow 21% from 2021 to 2031. The median annual wage for these jobs in 2021 was \$131,490. About 3,300 openings for computer and information research scientists are projected annually over the coming decade, and the primary qualification is programming skills, regardless of bachelor's degree program.

- The *Spanish for Professionals* certificate is narrowly focused on enabling Spanish language learners to communicate effectively regarding professional topics and tasks. Among job postings reviewed in Fall 2023, Spanish proficiency is one of the most common “preferred” skills or experiences. Although the full certificate requires eighteen credit hours, students who transfer in with some Spanish language learning may be able to test out of the 100- and 200- level prerequisites. Approximately 50% of our undergraduate degree offerings allow for eighteen or more university-wide electives, so this certificate should also be widely available to undergraduates wishing to include Spanish proficiency on their list of earned credentials.
- The *Equity & Inclusion* certificate will enhance career readiness and is aligned with UNC's values of diversity, equity, and inclusion. The certificate will connect and serve students from a range of majors who are interested in developing multiple frameworks and strategies for understanding, evaluating, and cultivating diversity and equity in specific workplaces or public policy. Indeed.com¹ reports a substantial rise in demand for workers educated in diversity, inclusion, and belonging since 2019, and bundling relevant coursework from multiple disciplines into this certificate provides unambiguous evidence that students have intentionally incorporated these skills into their undergraduate education.

The proposed graduate level certificates are each designed to serve working professionals seeking to enhance their careers, and are all aligned with the “[Quality and In-demand Non-degree Credentials](#)” framework² recently developed by CDHE.

- The graduate certificates in *History* and *Art Studio* have independent career value and stack directly to the existing History M.A. and newly reopened Art & Design M.A., respectively. Both are designed to provide students with the qualifications needed to teach college-level courses (either as instructors at colleges and universities or as dual/concurrent enrollment instructors in high schools); each requires eighteen graduate credit hours, which is the minimum number required by higher education accreditors to qualify individuals to teach undergraduate students. The demand for dual/concurrent enrollment instruction is growing rapidly. In Colorado alone, more than 50,000 high school students enroll in dual credit college courses every year. In most school districts, teacher pay stagnates after 5-10 years on the job without evidence of fifteen or

¹ <https://www.indeed.com/career-advice/finding-a-job/diversity-inclusion-and-belonging-jobs-rise>

² Available here: https://drive.google.com/file/d/1otXw2TYw4qz3SDfJhEx5dR_M7P6YcN1v/view

more hours of continuing education coursework. Completion of these certificates will immediately qualify teachers for pay increases.

- The *Sport Coaching* certificate is designed to serve middle school and high school teacher-coaches and is also applicable for all youth sport coaches. In many school districts, including Weld-6, certificate holders would immediately qualify for a 15% pay increase. If the certificate holders choose, they could come back and complete the full master's degree program to qualify for additional salary increases and new positions. The Kinesiology faculty are currently developing a partnership with Greeley-Evens Weld County District 6, which has expressed enthusiasm for this certificate as a continuing education opportunity for their employees. The unit is now reaching out to other area school districts and regional youth sport organizations (i.e., Triple Crown Sports, Power2Play, Colorado Softball Academy, Northern Colorado Rush)
- Finally, the two graduate certificate programs in *Human Resource Management* and *Project Management* were requested by Academic Partnerships (the organization that assists us with marketing and recruiting for the M.B.A. program) and are directly stackable via the similarly named concentration pathways to the full M.B.A. These certificates alone will immediately expand career pathways and potentially increase salaries for business professionals. When they are ready, certificate holders can apply all their coursework directly to the M.B.A. and earn the M.B.A. degree in twenty-one additional credits.

See the included Enrollment and Budget Impacts Detail document for additional information about these proposals.

Action Items Summary

College	Academic Unit	Level	Name	Credit hours	Target Audience	Coursework
Humanities & Social Sciences	History	Graduate	History Graduate Certificate	18	new: potential adjunct/dual enrollment instructors	Existing courses embedded in History M.A.
Humanities & Social Sciences	Sociology	Undergrad	Equity and Inclusion Certificate	12	existing undergraduates in any degree	Existing courses from Sociology and other HSS units
Humanities & Social Sciences	World Languages & Cultures	Undergrad	Spanish for the Professions Certificate*	18	existing undergraduates in any degree	Existing Spanish offerings
Natural & Health Sciences	Biological Sciences	Undergrad	Botany Certificate	12	existing undergraduate Biology students	Existing courses embedded in Biological Sciences B.S.
Natural & Health Sciences	Biological Sciences	Undergrad	Wildlife Certificate	12	existing undergraduate Biology students	Existing courses embedded in Biological Sciences B.S.
Natural & Health Sciences	Biological Sciences	Undergrad	Zoology Certificate	12	existing undergraduate Biology students	Existing courses embedded in Biological Sciences B.S.
Natural & Health Sciences	Kinesiology, Nutrition & Dietetics	Graduate	Sport Coaching Graduate Certificate	15	new: Middle & HS teacher-coaches interested in upskilling	Existing courses embedded in Sport Coaching M.A.
Natural & Health Sciences	Mathematical Sciences	Undergrad	Computer Programming Certificate	12	existing undergraduates in any degree program	Existing courses embedded in Computer Science B.S.
Natural & Health Sciences	Mathematical Sciences	Undergrad	Data Analytics Certificate	12	existing undergraduates in any degree program	Existing courses embedded in Computer Science B.S.
Monfort College of Business	Management	Graduate	Human Resource Management Grad Certificate	15	new: business professionals seeking to upskill	Existing courses embedded in M.B.A.
Monfort College of Business	Management	Graduate	Project Management Graduate Certificate	15	new: business professionals seeking to upskill	Existing courses embedded in M.B.A.
Performing & Visual Arts	Art & Design	Graduate	Art Studio Graduate Certificate	18	new: potential adjunct/dual enrollment instructors	Courses reactivated in Art & Design M.A.

Color Key

Stackable: certificate-holders qualify for new career pathway/increased salary and all courses can be applied directly to M

Embedded: all required coursework can be applied to existing undergraduate degrees either as major requirements or university wide electives to enhance career readiness:

* All but one course can be applied to Spanish B.A. program.



**Board of Trustees - Enrollment and Budget Impacts Detail
Addendum to Action Items Memo**

Summary: Proposing units have carefully reviewed their course capacity and identified the number of students who can be enrolled in certificate coursework before any additional sections or changes to faculty teaching rotations will be needed. Given the short on-ramp for marketing these programs next year, it is unlikely that any program will exceed this capacity in AY 24-25, though units have also developed back-up plans to ensure we do not leave potential enrollments on the table.

Impacts of Undergraduate Certificates: As noted, the primary rationale for all seven undergraduate certificates is to enhance career readiness or highlight how coursework within the newly bundled certificates exemplifies UNC's values. A secondary purpose is to enhance retention and inform the development of UNC's academic portfolio over time. For example:

- *All three biology certificates* help to ensure that students who discover a specialized interest within biological sciences (such as wildlife management) remain at UNC rather than transferring to an institution that may offer a standalone degree with that title, and help our faculty discern whether there is unmet demand for such degrees. It is also possible that these certificates will help to recruit students with specific interests in ecology, wildlife, or zoology to UNC.
- The *Computer Programming, Data Analytics, Equity & Inclusion, and Spanish for Professionals* certificates provide additional support to students of liberal arts and other majors who may develop concerns about whether their degrees will translate into meaningful careers. It is foreseeable that enrollment patterns in the affected units will shift in favor of degree electives that are also embedded in these certificates and away from other course offerings options. As that occurs, units are prepared to adjust course schedules to offer more sections of courses that serve the certificates. Should the effect be strong enough that some units require additional adjunct or full-time faculty members, this can be addressed in the annual budget and staffing request process.

Impacts of Graduate Certificates: For the graduate programs we have prepared more detailed enrollment and costs analyses:

- Because the new *Art Studio* certificate stacks to the Art & Design M.A., a spreadsheet showing the School of Art & Design (*SOAD*) *Proposed Curriculum and Cost Analysis* is included. The unit can serve 18-22 new graduate students alongside students in its existing programs before any additional faculty members are needed.¹ Twenty-five students have expressed active interest in

¹ This is possible because (1) multiple courses have been eliminated from School Art & Design offerings over the past several years, and (2) undergraduate and graduate level sections of art studio courses can be offered in a single classroom from the same instructor, though students at each level have different course requirements (this is a common practice in arts programs).

starting either the certificate or the M.A. as early as Fall 2024.² To ensure a high-quality program, the school plans to limit new graduate enrollments to 18-22 students unless evidence of unmet demand across all programs justifies additional faculty members. To ensure all course offerings from existing faculty members are fully enrolled, the ideal number of students is eighteen. However, having up to twenty-two students is manageable when necessary to accommodate students who become out of sequence with their cohort, though it requires occasional overloads or workload reassignments from service or professional activity to teaching for Art & Design faculty. At a full capacity of 18-22 students, two adjunct faculty members will be needed to teach summer courses, but they have already been identified and have a long-standing relationship with the School of Art & Design. The revenue analysis shows that as soon as the programs reach the 18-22 student maximum with current faculty, they will also be generating sufficient revenue to support one new full-time faculty member (or several part-time) and begin offering additional course sections as needed.

- The Departments of History and Kinesiology, Nutrition, & Dietetics can accommodate up to fifteen and eighteen students, respectively, before the classes in their certificate programs, which also serve their master's degrees, would reach full capacity. The potential new revenue generated if the courses in the certificate programs fill to capacity is detailed on the included *Additional Revenue from Stackable Grad Certificates* spreadsheet. Should demand rapidly exceed the existing capacity in either unit, the units are confident that it would be possible to find qualified adjunct faculty members to teach the needed undergraduate coursework, freeing up full-time faculty members to offer additional graduate level sections as needed.
- The new graduate certificates in the Monfort College of Business (MCB), in combination with the new concentration programs highlighted in the *Curriculum Actions Item Memo*, are projected to require eight additional sections of MBA coursework in each semester, as well as additional summer instruction. However, they are also projected to attract 50-70 additional students beginning next year. As shown on the included *MBA Proposed Curriculum Revenue and Cost Analysis* document, tuition revenue from those students will more than offset the additional instructional cost, and MCB has a plan to hire additional adjunct or contract-renewable instructors as needed. If projected enrollments are not achieved the sections will not be opened and additional costs will not be realized.

² This occurred at a UNC recruitment table at the *Colorado Art Education Association* in November 2023, where Art & Design faculty noted that they had proposed these programs.

SOAD Proposed Curriculum and Cost Analysis

	Year 1	Year 2	Year 3 and beyond
New Revenue (Reactivated MA and Embedded Certificate)			
Total students enrolled (both programs)	9	19	22
Program SCH (16.5 credits/student/year)	149	314	363
Tuition generated by School of Art & Design (Program SCH *612)	\$90,882	\$191,862	\$222,156
New expenses			
Summer adjunct instruction	\$11,871	\$11,871	\$11,871
Extended Campus overhead	\$21,950	\$46,340	\$53,657
Total costs	\$33,821	\$58,211	\$65,528
P/L for UNC	\$57,061	\$133,651	\$156,628

Assumptions:

- 1) 50% of students are in MA taking 15 ch/year and 50% are in certificate taking 18 ch/year); average is 16.5 in line 3.
- 3) Increases in faculty salaries (promotions, raises, etc.) are offset by increases in tuition rates; annual increases not built into formulas.
- 4) Student fees (not included in program revenues) will offset other general campus costs.
- 5) Students complete MA in 2 years and Certificate in 1 year.
- 6) No discounting on tuition.

Notes:

- Fall and Spring instruction fits within workloads of existing full-time faculty.
- Unit plans to limit new graduate enrollments to 22 students unless evidence of unmet demand across all programs justifies additional full-time hires.

Additional Revenue from Stackable Grad Certificates

	25% capacity	50% capacity	75% capacity	100% capacity
Potential New Revenue before additional course sections are needed				
History Certificate (up to 15 students before additional sections needed)	4	8	12	15
Estimated credit hours/year (9)	36	72	108	135
Potential revenue generated by History dept (Program SCH *612)	\$22,032	\$44,064	\$66,096	\$82,620
Sport Coaching Certificate (up to 18 students before additional sections needed)	8	15	22	18
Estimated credit hours/year (7.5)	60	113	165	135
Potential Revenue generated by Biology dept (Program SCH *639)	\$38,340	\$71,888	\$105,435	\$86,265
Total tuition generated for UNC (see assumption 2)	\$60,372	\$115,952	\$171,531	\$168,885

Assumptions:

- 1) Students take two years to complete certificate coursework.
- 2) Increases in faculty salaries (promotions, raises, etc.) are offset by increases in tuition rates; annual increases not built into formulas.

MCB Revenue and Cost Analysis

Academic Partnerships (AP) has estimated the following enrollment projections for the proposed curriculum:

Projected Enrollment, Revenue, Cost					
Program	Year 1	Year 2	Year 3	No. Of Courses Per Student	Credit Hours Per Student
Concentration in Project Mgt.	23-33	28-38	38-48	12 Courses	36
Concentration in Finance	27-34	34-42	44-60	12 Courses	36
Total Added Enrollment (Conservative Estimate)	50	60	70		
Tuition Revenue (UNC Share)	\$609,966.00	\$753,918.00	\$905,958.00		
Certificate in Project Mgt.	10-15	14-20	20-30	5 courses	15
Certificate in Human Resources Mgt.	10-15	14-20	20-30	5 courses	15
Total Added Enrollment (Conservative Estimate)	20	30	40		
Tuition Revenue (UNC Share)	\$101,661.00	\$157,066.00	\$215,704.00		
Total Estimated Revenue UNC Share	\$711,627.00	\$910,984.00	\$1,121,662.00		
Instruction Cost	\$100,000 16 sections of adjunct at \$6K per adjunct Plus \$50K Summer Instructional cost	\$350,000.00 Two New TT Faculty Plus \$30K Adjunct Plus \$50K Summer Instructional cost	\$550,000.00 Two continuing plus one new TT Faculty Plus \$10K Adjunct Plus \$50K Summer Instructional cost		
Staff	\$50K .5 FTE	\$50K .5 FTE	\$100K 1 FTE		
Total Estimated Cost	\$200,000.00	\$480,000.00	\$710,000.00		
NET Revenue	\$511,627.00	\$500,984.00	\$411,662.00		

Assumptions

- Revenue and cost projections are encumbered on one year basis for the entire degree program.
- MBA Tuition will increase every year by 3% using the current tuition per credit of \$658.00.
- New MBA students with proposed concentrations will add 36 credit hours per student.
- New certificates will add 15 credit hours per student.
- UNC share of tuition revenue is calculated at 50% of revenue per the current contract with AP.
- The most immediate impact will result in adding duplicate sections in select 8 core courses in Fall and Spring of year 1 (8 X 2 times a year X \$6000.00) and \$50K summer instructional cost.
- A total of three new tenure-track faculty in project management, finance, and human resources in years 2 and 3 (\$150K salary and benefit each) if the projected enrollment is materialized.
- .5 FTE Staff (years 1 and 2) and 1 FTE staff for year 3 is estimated.
- Staff and faculty costs include salary and benefits.
- The impact on concentration courses will be minimal as MCB has the available capacity immediately.