UW Board of Trustees Committee on Academic and Student Affairs Agenda-FINAL 5.02.2025

<u>Closed Session</u>: If necessary, a separate agenda and materials for the Closed Session.

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ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: Master List of Degrees, Turpen, Hilaire

\boxtimes OPEN SESSION

□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

🛛 Yes

🗆 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY:

Per UW Regulation 2-119, at its annual meeting in May, the Board of Trustees shall approve the master list of Academic Programs offered by the University of Wyoming. The list may be amended by the Board at any meeting. As part of its fiduciary and academic governance responsibilities, the University of Wyoming Board of Trustees maintains final approval authority over the master list of academic degrees. This ensures that all proposed additions, modifications, or discontinuations of degree programs align with the university's mission, strategic priorities, and commitment to academic excellence. For AY 25-26, there are 5 programs up for potential removal and 1 degree, 1 concurrent degree and 2 certificates for approval consideration.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS:

The Board reviews and approves the Master List of Degrees and Majors annually each May.

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve the Master List of Degrees and Majors annually in May. The Academic and Student Affairs Committee will report to the Board on recommended action for approval of the master list.

ACTION REQUIRED AT THIS COMMITTEE MEETING: Consideration for approval the Master List of Degrees and Majors.

PROPOSED MOTION:

"I move to approve the 2025 Master List of Degrees and Majors."

UNIVERSITY OF WYOMING MASTER LIST OF DEGREES AND MAJORS

as authorized by the Trustees

May 2025

Prepared by the Office of Academic Affairs

- The degree title is listed in *bold italics* (for example, *Bachelor of Arts, Bachelor of Science in Chemical Engineering*). The list of majors for a specific degree in a specific college is listed below the degree title. Information in *italics* and parentheses () following a major is explanatory data, and not part of the official major name. Majors with brackets {} require the insertion of a secondary program of study.
- Unless an additional delivery method is notated in parentheses (), programs are available through inperson instruction. When a delivery method is listed, the program is available through in-person instruction as well as the listed method. Programs available 100% Online may also be completed through Hybrid delivery.
- Degree concentrations are only listed where concentrations have different delivery modes.
- Joint programs are not included on the master list as separate degrees.
- Proposed new Degrees and Certificates have been highlighted in green. Programs in red are listed as Inactive Admission Status. Their status will be determined/changed at a later date, once departments are merged and curriculum is changed or teach out plans are complete. Degrees and Certificates proposed to be deleted from previous Master Lists are highlighted in yellow. The proposed deletions are programs that were duplicated in other departments or that UW has simply ceased to offer over time and all eliminated programs have gone through the process as outlined in the University regulations for eliminating programs. As such, the Master List of Degrees and Majors has been corrected to reflect current offerings.

COLLEGE OF AGRICULTURE, LIFE SCIENCES, and NATURAL RESOURCES

Bachelor of Science

Agricultural Business Agricultural Communications Animal and Veterinary Science Biology Botany Design, Merchandising and Textiles Human Development and Family Sciences Human Nutrition and Food Microbiology Molecular Biology Physiology Plant Production and Protection Ranch Management and Agricultural Leadership Rangeland Ecology and Watershed Management Wildlife and Fisheries Biology and Management Zoology Master of Arts

Molecular Biology (Pending BOT May 2025)

Master of Science

Agricultural and Applied Economics Animal and Veterinary Science Botany

COLLEGE OF AGRICULTURE, LIFE SCIENCES, and NATURAL RESOURCES (cont.)

Master of Science (cont.)

Entomology

Family and Consumer Sciences

Design, Merchandising and Textiles

Human Development and Family Sciences (100% Online)

Human Nutrition and Food

Food Science and Human Nutrition (*interdisciplinary*)

Molecular Biology[@]

Nutrition and Dietetics

Plant Sciences

Rangeland Ecology and Watershed Management Soil Science

Zoology and Physiology

Doctor of Philosophy

Animal and Veterinary Science Botany (Pending BOT May 2025) Entomology Molecular Biology Plant Sciences Rangeland Ecology and Watershed Management Soil Sciences Zoology and Physiology

@ = Molecular Biology is listed under both the Master of Science and Master of Arts categories, but is only counted as one master's program

COLLEGE OF ARTS and SCIENCES

Bachelor of Arts African American and Diaspora Studies (Pending BOT May 2025) American Studies Anthropology Art Education Art History (Pending BOT May 2025) Communication Criminal Justice (100% Online) English European Languages, Literature, and Film Studies French Gender and Women's Studies (Pending BOT May 2025) German History International Studies Journalism Music Native American and Indigenous Studies Philosophy Political Science **Religious Studies** Sociology (100% Online) Spanish Studio Art

Theatre and Dance Visual Art (Pending May 2025)

COLLEGE OF ARTS and SCIENCES (cont.)

Bachelor of Fine Arts

Art Studio Art[#] Theatre and Dance[#] Visual Communication Design **Bachelor of Music** Jazz Performance **Music Education** Music Performance **Bachelor** of Science Communication[#] Journalism Political Science# Psychology (100% Online Completion) Master of Arts American Studies (*interdisciplinary*) Anthropology Communication English (Hybrid) History International Studies (*interdisciplinary*) **Political Science** Spanish Master of Fine Arts in Creative Writing Master of Music Master of Music Education Master of Public Administration (100% Online) Master of Science Psychology **Doctor of Philosophy** Anthropology English Psychology

= This major counted under a previously listed undergraduate degree in the College of Arts and Sciences.

COLLEGE OF BUSINESS

Bachelor of Science in Business Accounting (100% Online) **Business Economics** Entrepreneurship Finance Management (100% Online) Marketing (100% Online) Professional Selling **Bachelor of Science in Economics** Master of Business Administration **Business Administration** Business Administration – Executive^{(100%} Online) Business Administration – Advanced Accounting^(100%) Online) Business Administration – Energy[^] (100% Online) Master of Science Accounting (100% Online) Economics Finance (100% Online) **Doctor of Philosophy** Economics Management and Marketing

^ = This listing not counted as a separate major

COLLEGE OF EDUCATION

Bachelor of Applied Science

Major: Career and Technical Education (100% Online Completion) Areas of Concentration: Business (100% Online) Family and Consumer Science (100% Online Completion)

Bachelor of Arts

Major: Elementary Education (100% Online Completion)

- Major: Elementary and Special Education (K-12) (100% Online Completion)
- Major: Secondary Education

Areas of Concentration:

English Education with concurrent major in English^{*}

Mathematics Education with concurrent major in Mathematics*

Modern Languages Education with concurrent majors in French, German or Spanish* Science Education with concurrent majors in Biology, Chemistry, Physics, or Earth Science. Earth Science majors choose concurrent majors in Geology or Environmental Systems Science*

Social Studies Education with concurrent majors in History or Political Science*

Bachelor of Science

Major: Agricultural Education with concurrent majors in Animal and Veterinary Science, Agricultural Business or Agricultural Communication

* = This is not a separate major and is considered a concentration within that major (ex. Master of Arts with a concentration in Curriculum & Instruction or a Doctor of Philosophy with a concentration in Curriculum Studies)

COLLEGE OF EDUCATION (cont.)

Master of Arts Major: Education Areas of Concentration: Curriculum & Instruction^{*} (100% Online) Educational Leadership^{*} (100% Online) Higher Education Administration^{*} (100% Online) Literacy Education^{*} (100% Online) Special Education^{*} (100% Online) Master of Arts in Teaching Mathematics[&] (100% Online) Physics[&] (100% Online) Master of Science Major: Counseling Areas of Concentration: Mental Health Counseling^{*} School Counseling* Major: Education[&] Areas of Concentration: Learning Design & Technology^{*} (100% Online) Major: Natural Science (interdisciplinary) (Hybrid) Master of Science in Teaching Major: Mathematics[&] (100% Online) Major: Natural Science (interdisciplinary)[&] (Hybrid) **Doctor of Education** Major: Education Areas of Concentration: Curriculum & Instruction^{*} (100% Online) Educational Administration^{*} Educational Leadership^{*} (100% Online) Higher Education Administration (100% Online) Learning Design & Technology^{*} (100% Online) Mathematics Education^{*} (100% Online) **Doctor of Philosophy** Major: Counselor Education and Supervision Major: Curriculum and Instruction Areas of Concentration: Curriculum Studies^{*} (100% Online) Literacy Education^{*} (Hybrid) Mathematics Education^{*} (Hybrid) Science Education^{*} (Hybrid) Major: Education[&] Area of Concentration: Adult & Post Secondary Education * Learning Design & Technology^{*} Institutional Technology*

^{* =} This is not a separate major and is considered a concentration within that major (ex. Master of Arts with a concentration in Curriculum & Instruction or a Doctor of Philosophy with a concentration in Curriculum Studies)

[&]amp; = This major counted under a previously listed graduate degree in the College of Education.

COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES (CEPS)

Bachelor of Arts

Chemistry Geology and Earth Sciences Mathematics Physics Bachelor of Science Astronomy/Astrophysics Chemistry [%] Chemistry (ACS approved)[^] Environmental Geology/Geohydrology Geography Geology Mathematics[%] Physics[%]

Statistics[%] **Bachelor of Science in Architectural Engineering Bachelor of Science in Chemical Engineering Bachelor of Science in Civil Engineering Bachelor of Science in Computer Engineering Bachelor of Science in Computer Science Bachelor of Science in Construction Management Bachelor of Science in Electrical Engineering Bachelor of Science in Energy Systems Engineering Bachelor of Science in Mechanical Engineering Bachelor of Science in Petroleum Engineering** Master of Arts Mathematics Master of Arts in Teaching Mathematics[&] Master of Engineering Energy & Petroleum Engineering Master of Science in Teaching Mathematics[&] Physics & Master of Science Architectural Engineering Artificial Intelligence Atmospheric Science **Chemical Engineering** Chemistry **Civil Engineering Computer Science Electrical Engineering Environmental Engineering** Geology Geophysics Mathematics[&] Mechanical Engineering

Petroleum Engineering

Physics Quantum Information Science & Engineering Statistics

Doctor of Philosophy

Atmospheric Science Chemical Engineering Chemistry Civil Engineering Computer Science Electrical Engineering Geology Geophysics Mathematics Mechanical Engineering Petroleum Engineering Physics

SCHOOL OF COMPUTING[!]

Bachelor of Science

Applied Software Development (100% Online) Geospatial Information Science and Technology Bachelor of {affiliated degree}/Applied Computing concurrent major (Pending BOT May 2025)

Master of Science

Geospatial Information Science and Technology - Professional Option (100% Online) Geospatial Information Science and Technology – Thesis Option

^ = This listing not counted as a separate major

& = This major counted under a previously listed graduate degree in the College of Engineering and Physical Sciences.

% = This major counted under a previously listed undergraduate degree in the College of Engineering and Physical Sciences.

! = The School of Computing is incubating in the College of Engineering and Physical Sciences.

COLLEGE OF HEALTH SCIENCES

Bachelor of Science

Kinesiology and Health Promotion Medical Laboratory Science (Hybrid) **Physical Education Teaching** Speech, Language and Hearing Sciences Bachelor of Science in Dental Hygiene (Hybrid) Bachelor of Science in Nursing (Three options - On campus BASIC traditional, 100% Online Completion, and 2nd degree Hybrid) Bachelor of Social Work Master of Science Health Services Administration (Hybrid) Kinesiology and Health (100% Online) Nursing (100% Online) Speech-Language Pathology Master of Social Work **Doctor of Nursing Practice Doctor of Pharmacy**

COLLEGE OF LAW

Juris Doctor

HAUB SCHOOL OF ENVIRONMENT and NATURAL RESOURCES

Bachelor of Science

Environment and Natural Resources/ {affiliated major} Environmental Systems Science Outdoor Recreation & Tourism Management *Master of Science* Environment, Natural Resources and Society

HONORS COLLEGE

Bachelor of {affiliated degree}/Honors Interdisciplinary Inquiry concurrent major ^ ^ = This listing not counted as a separate major

SCHOOL OF ENERGY RESOURCES

Bachelor of Science Energy Resource Management and Development Energy and Environmental Systems^{\$} Professional Land Management ^{\$}

\$ = This is not a separate major and is considered a concentration within that major (ex. Bachelor of Science with a concentration in Energy and Environmental Systems or Bachelor of Science with a concentration in Professional Land Management)

CROSS-COLLEGE INTERDISCIPLINARY GRADUATE DEGREES

Juris Doctor/Master of Arts in Environment and Natural Resources [#] Juris Doctor/Master of Public Administration [#] Master of Science

Ag Econ/Water Resources[#] Botany/Water Resources[#] Civil Engineering/Water Resources[#] Economics/Water Resources[#] Entomology/Water Resources[#] Geographic Information Science & Technology/Water Resources Geology/Water Resources[#] Geophysics/Water Resources[#] Rangeland Ecology/Water Resources[#] Soil Science/Water Resources[#] Zoology & Physiology/Water Resources[#] # = This listing not counted as a separate major

ACADEMIC AFFAIRS

Bachelor of General Studies (100% Online Completion) Master of Science Biomedical Sciences Master of {affiliated degree}/Environment and Natural Resources ^ Doctor of Philosophy Biomedical Sciences Ecology and Evolution Hydrologic Science Molecular and Cellular Life Sciences Neuroscience

^ = This listing not counted as a separate major

UW at CASPER

Bachelor of Applied Science

Organizational Leadership (100% Online)

Aggregate List of Certificates and Teacher Endorsements Offered at UW May 2025

Graduate Certificates

Collaborative Practice (Pending BOT May 2025) Community and Public Health (100% Online) Community College Leadership (100% Online) Early Birth to Five Certificate and Teacher Endorsement (100% Online) Early Birth to Eight Teacher Endorsement (100% Online) Early Childhood Special Education (birth to five) (100% Online) Early Childhood Special Education Teacher Endorsement (100% Online) Energy Business (100% Online) English as a Second Language Teacher Endorsement and Certificate (100% Online) Environment and Natural Resources Law & Policy (Pending BOT May 2025) Financial Planning (100% Online) Geospatial Information Science & Technology (GIS&T) (100% Online) Literacy Certificate and Wyoming Reading Teacher Endorsement (K-6) (100% Online) Literacy Certificate and Wyoming Reading Teacher Endorsement (6-12) (100% Online) Literacy Certificate and Wyoming Reading Teacher Endorsement (K-12) (100% Online) **Music Performance** Nuclear Energy Science Online Instruction (100% Online) Play Therapy (100% Online) **Reclamation and Restoration Ecology** Remote Sensing (100% Online) School District Superintendent (100% Online) School Principalship (100% Online) School Social Work (100% Online) Teachers of American Indian Children (100% Online) Teaching Elementary School (Hybrid) Teaching Middle School Math Teaching Middle School Science Teaching Secondary Content (Hybrid) Unmanned Aerial Systems (drones) (100% Online)

Undergraduate Certificates

American Sign Language American Studies Arts Entrepreneurship (100% Online) Audio Technology Cadastral Surveying (100% Online) Carbon Capture Utilization and Storage (CCUS) (100% Online) Computer Science Education Construction Management Cybersecurity Early Childhood Program Director

Geographic Information Science (GIS) Land Administration (100% Online) Nuclear Energy Science Agribusiness Leadership, UW at Casper (100% Online) Health Leadership, UW at Casper (100% Online) Organizational Leadership, UW at Casper (100% Online) Remote Sensing (Hybrid)

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>UW Regulation 2-13: Low Producing Programs</u> Turpen

 \boxtimes OPEN SESSION

 \Box CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

🛛 Yes

□ No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY:

Per the Standard Administrative Policy and Procedure: Academic Program Review, the Provost's Office must annually review degree production for all academic programs. Per UW Regulation 2-13, the Provost and President will make final recommendations for reorganization, consolidation, reduction, or discontinuance to the UW Board of Trustees.

The Provost and Office of Academic Affairs are committed to systematically examining all data on academic enrollment, low-producing programs, and low-enrolled courses, making informed decisions based on policy, process, and strategic planning. The annual review of low-producing programs continues to evolve into a process that looks beyond numbers to assess the value, delivery, and potential growth or discontinuance of academic programs. On April 29, 2024, the Provost requested the annual review of low-producing programs. The Office of Institutional Analysis (OIA) provided data on all degree programs, identifying 29 programs for this review. Following the Deans' recommendations, the Provost is providing the final list of program recommendations under UW Regulation 2-13. Of the programs reviewed, five will be recommended for discontinuation, and six will be recommended for consolidation under UW Regulation 2-13.

Recommended for Discontinuance under UW Regulation 2-13:

College of Agriculture, Life Sciences and Natural Resources

- M.A. in Molecular Biology Discontinue after AY24-25
- PhD in Botany Discontinue after AY24-25

College of Arts and Sciences:

- B.A. in Art History Discontinue after AY24-25
- B.A. in African and Diaspora Studies- Discontinue after AY24-25
- B.A. in Gender and Women's Studies– Discontinue after AY24-25

Recommended for Consolidation under UW Regulation 2-13:

College of Agriculture, Life Sciences and Natural Resources

- M.S. in Entomology Consolidate process in 2025
- M.S. in Soil Sciences Consolidate process in 2025
- PhD in Entomology Consolidate process in 2025
- PhD in Soil Sciences Consolidate process in 2025

College of Education

- MST in Physics Consolidate process in 2025
- MST in Mathematics- Consolidate process in 2025

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS:

The Academic and Student Affairs Committee was updated on this review and process in November of 2024 and January of 2025.

WHY THIS ITEM IS BEFORE THE COMMITTEE:

UW Regulation 2-13 requires that the President shall make a final recommendation to the Board of Trustees upon conclusion of a review of a program.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Approval, modification, or disapproval of UW Regulation 2-13 Low Producing program recommendations from the President and Provost.

PROPOSED MOTION:

"I move to approve the President and Provost's recommendations for the programs reviewed under UW Regulation 2-13 for discontinuation and consolidation as presented."



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Date: April 14, 2025

Re: UW Regulation 2-13: Low Producing Programs

Under the auspices of University Regulation 2-13, the Provost, in consultation with deans from the College of Agriculture, Life Sciences and Natural Resources, College of Arts and Sciences, and the College of Education, proposes programs outlined in the memo to be consolidated or discontinued under UW Regulation 2-13.

Background:

On April 29, 2024, the Provost requested the annual review of low producing programs. The Office of Institutional Analysis (OIA) provided data on all degree programs, and 29 programs were identified for this review of low producing programs. Following the Deans' recommendations, the Provost is providing the final list of programs recommended for review under UW Regulation 2-13. Of the programs reviewed, 5 will be recommended for discontinuation, and 6 will be recommended for consolidation under UW Regulation 2-13.

We recommend the following low-producing programs to be consolidated or discontinued under UW Regulation 2-13:

Recommended for Discontinuance under UW Regulation 2-13:

College of Agriculture, Life Sciences and Natural Resources

- M.A. in Molecular Biology Discontinue after AY24-25
- PhD in Botany Discontinue after AY24-25

College of Arts and Sciences:

- B.A. in Art History Discontinue after AY24-25
- B.A. in African and Diaspora Studies– Discontinue after AY24-25
- B.A. in Gender and Women's Studies
 Discontinue after AY24-25

Recommended for Consolidation under UW Regulation 2-13:

College of Agriculture, Life Sciences and Natural Resources

- M.S. in Entomology Consolidate process in 2025
- M.S. in Soil Sciences Consolidate process in 2025
- PhD in Entomology Consolidate process in 2025
- PhD in Soil Sciences Consolidate process in 2025

College of Education

- MST in Physics Consolidate process in 2025
- MST in Mathematics- Consolidate process in 2025

The attached materials from the Deans outline the justifications for the recommendations.

Regards,

J Scott Tuyen

J. Scott Turpen Interim Provost

CC:

Ed Seidel, President Kelly Crane, Dean, College of Agriculture, Life Sciences, and Natural Resources Adrienne Freng, Interim Dean, College of Arts and Sciences Jenna Shim, Dean, College of Education

UNIVERSITY OF WYOMING

College of Agriculture, Life Sciences, and Natural Resources Office of the Dean Department 3354 • 1000 E. University Avenue Laramie, Wyoming 82071 (307) 766-4133 • www.uwyo.edu/uwag

CALSNR Low Completion Programs Review and Recommendations

Spring 2025

In response to the call from the Provost's office to examine CALSNR's low completion rate programs, each affected department head was asked to discuss their identified programs with their faculty. Department heads then provided a recommendation to the college administrative team that reviewed the recommendations and provided feedback. The reviews and recommendations provided below represent a culmination of these discussions.

Recommended for Discontinuance:

Ph.D. in Botany. Of the 7 students enrolled in the Ph.D. program between AY 2018-2019 and AY 2022- 2023, 1 completed their degree, 5 moved into the Ph.D. in Ecology and Evolution, and one moved down to the M.S. in Botany program.

It appears that the Ph.D. in Botany is often a gateway into the Ph.D. in Ecology and Evolution program. As the Ph.D. in Ecology and Evolution is an interdisciplinary degree with many students advised by Botany faculty, this makes sense. As of fall 2024, there are 18 students in the Ph.D. in Ecology and Evolution program whose primary advisor is faculty in Botany. Further, courses taught for the Ph.D. in Botany are not underenrolled (despite typically having on average 2 enrolled Ph.D. students over the last 5 years), as these courses are heavily used by the Program in Ecology and Evolution, the Program in Hydrologic Science, and graduate students from the departments of Zoology and Physiology, Ecosystem Science and Management, Plant Sciences, Haub School, Civil Engineering, Geology and Geophysics, and Atmospheric Science.

Our recommendation is to eliminate the Botany Ph.D. and instead focus on the Ph.D. in Ecology and Evolution. As there are some students who enter the Ph.D. in Ecology and Evolution through the Botany Ph.D., we would ask for institutional support to increase marketing and recruitment of students into this program to ensure continued support of graduate education and faculty research in the Botany department.

There is one student currently enrolled in the Ph.D. in Botany, however since course offerings would not be affected by this change, this student should be able to complete their degree with minimal, if any, changes to their program of study.

M.A. in Molecular Biology. The M.A. has an average enrollment of 1-2 students a year, with only one graduate in the last year. The department acknowledges that the M.A. has a low enrollment that only serves a small number of students. The proposed M.S. in Preclinical Sciences will fill some of this void although students will have to take different course work and another department will administer the degree. In conclusion, we propose the elimination of the M.A. in Molecular Biology.

Recommended for Consolidation

<u>M.S. and Ph.D. in Entomology and M.S. and Ph.D. in Soil Sciences</u>. There have been no graduates in the entomology program over the past 5 years. The M.S. in Soil Science has an average enrollment of 3 with 1-2 graduates a year, and the Ph.D. has an average enrollment of 9 with 0-3 graduates per year.

As discussed in the summer 2023 low enrollment report, faculty loss in these two areas has dramatically impacted student numbers. Although there is still interest in and desire for these areas, both from the faculty and students, the ESM department agrees that at this time, offering these as stand-alone areas is currently not sustainable. The department would like to consolidate their graduate-level degree offerings into one degree with multiple concentration options (e.g., Entomology, Rangeland Ecology and Watershed Management, Soil Science). As this change requires multiple steps (determining the right name for the overall degree and the appropriate concentrations, completing and submitting the appropriate change forms and going through the formal review process, updating all catalog and website information, etc.), the anticipated timeline to have this new degree with concentrations in place and ready to accept students is Fall 2026. Spring 2025 would be used to determine the degree name, requirements and concentrations; the existing degree change forms would be submitted by Fall 2025 so that campus and Trustee approval would occur in time for the changes to take effect in the Fall 2026 catalog.

Felly & Crane

Kelly K. Crane, Dean

RA E Sa

Brent Ewers, Department Head, Botany

Jinethy R Callies

Timothy Collier, Department Head, Ecosystem Science and Management

Daniel Wall

Daniel Wall, Department Chair, Molecular Biology



College of Arts and Sciences Office of the Dean

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LOW COMPLETION PROGRAMS REPORT April 19, 2025

Please see below our recommendations for the low-producing programs designated for a 2-13 process.

advente freng

Adrienne Freng, Interim Dean of the College of Arts and Sciences

B.A. IN ART HISTORY

<u>RECOMENDATION</u>- Eliminate after AY24-25 <u>COMMENTS</u>-

- Eliminate the BA in Art History and move its curricula into a track with the successful BA in Studio Art.
- The department will engage in a curricular review in AY24-25 to implement this change next year.

B.A. IN AFRICAN AND DIASPORA STUDIES

RECOMENDATION- Eliminate after AY24-25

COMMENTS-

- Eliminate the BA in African and Diaspora Studies due to low enrolled and completion rates.
- The department will engage in a curricular review in AY24-25 to implement this change next year.

B.A. IN GENDER AND WOMEN'S STUDIES

<u>RECOMENDATION</u>- Eliminate after AY24-25 <u>COMMENTS</u>-

- Eliminate the BA in Gender and Women's Studies due to low enrolled and completion rates.
- The department will engage in a curricular review in AY24-25 to implement this change next year.

To: Scott Turpen, Ph.D., Interim Provost James Ahern, Ph.D., Vice Provost and Dean of the Graduate School Mandy Gifford, Chief of Staff to the Provost University of Wyoming Faculty Senate

From:

Jenna Min Shim, Dean, College of Education

Date: April 18, 2025

Re: Consolidation Recommendation for MST Programs in Physics and Mathematics

As requested, this memorandum summarizes the College of Education's recommendation regarding lowproducing programs as part of the 2-13 process.

Recommendation:

We recommend consolidating the Master of Science in Teaching (MST) in Physics and the MST in Mathematics into a single MST program, effective 2025.

Justification:

The recommendation is based on the following considerations:

- 1. **Program Similarity:** The MST in Physics and MST in Mathematics share significant curricular overlap, both in structure and in intended outcomes. Consolidating them under a single MST umbrella will streamline administrative processes and improve coherence across the program.
- 2. **Enrollment Efficiency:** Both programs have consistently low enrollment. A consolidated MST program allows for a more efficient use of faculty resources and creates a unified pathway for prospective students, potentially strengthening recruitment and retention.
- 3. **Compliance with UW Regulation 2-13:** As clarified in recent conversations with Academic Affairs, concentrations are not treated as independent degree programs under University Regulation 2-13. Thus, this consolidation involves no formal program discontinuation and does not require Board of Trustees action, though we welcome Faculty Senate input.

We appreciate your coordination and look forward to supporting a smooth implementation process.

Sincerely,

Jenna M. Shim, Ph.D. John P. "Jack" Ellbogen Dean and Professor College of Education, University of Wyoming Main Office 307-766-3145 jshim@uwyo.edu

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Change of Department Name from School of Gender, Culture and</u> <u>Social Justice to Department of American Cultural Studies</u> Turpen, Hilaire, Frank, Dillon

☑ OPEN SESSION□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

□ Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The School of Gender, Culture, and Social Justice (SCGSJ) proposes to change its name to the Department of American Cultural Studies. The undergraduate degrees in African American and Diaspora Studies and Gender and Women's Studies are currently presented in the UW Regulation 2-13 process for low-producing programs. Courses will be consolidated into the existing American Studies degree. The unit spent S24/F24 working with the advising office to ensure that the few remaining Gender Studies and African American and Diaspora Studies majors will have all the resources needed to graduate in S25. All new students over the last two years who are interested have been enrolled as American Studies Majors. The faculty of SCGSJ have collaborated on this plan for the past year, and it has been approved unanimously. This plan has also received support from the UW Faculty Senate.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

The Office of Academic Affairs' internal policies for major changes to departments require a proposal to the AA/SA Committee of the Board of Trustees with full board consideration and action.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the name change from School of Gender, Culture and Social Justice to the Department of American Cultural Studies in the College of Arts and Sciences.

PROPOSED MOTION:

"I move to approve the name change from the School of Gender, Culture and Social Justice to the Department of American Cultural Studies in the College of Arts and Sciences."



Existing College, Department, Degree Program, Certificate Program **Change Request for** Title Change, Degree Designation, Content Change, or CIP Change

Directions: Complete this form and proposal template to request a change to the title (name) of an existing college, department, degree program or certificate program; to request a change to the Classification of Instructional Programs (CIP) code of an existing degree or certificate program; and/or the content change for an existing degree or certificate program. The degree or certificate program must already be on an institution's program inventory.

- A degree program title consists of the following two parts:
 - 1. Degree designation, such as Bachelor of Science (BS), Master of Arts (MA), or Doctor of Philosophy (PhD); and,
 - 2. name of the discipline, such as History, Mechanical Engineering, or Zoology.
- The Classification of Instructional Programs (CIP) is the taxonomic coding scheme used for instructional programs in higher education. Its purpose is to facilitate the organization, collection, and reporting of fields of study and program completions. The academic unit should consult with the Office of the Registrar and Office of Institutional Analysis prior to submitting the proposal to determine whether a change to the CIP code used to classify the program is recommended. For more information, visit CIP Code Information.

Process:

- 1. Faculty of the unit develop a rational for the change.
- 2. The dean of the academic unit approves the rationale and change and submits the proposal to the Provost designee (UG: VP Undergraduate Education, GRAD: VP Graduate Education). For minor curricular changes, the VP will proceed to Step 7, otherwise Step 3.
- 3. The Provost routes the proposal to the Faculty Senate for consideration by the Graduate Council or Academic Planning Committee.
- 4. The Provost approves the rationale and change.
- 5. The Provost reports the proposal to the Academic and Student Affairs Committee of the Board of Trustees.
- 6. The Board's Academic and Student Affairs Committee recommends the change to the full Board of Trustees for consideration and action.
- 7. The proposers hold an implementation meeting with the Registrar, Admissions, OIA, and Advising Managers, and other appropriate units to implement the change. Implementation meetings gather people from all of the units that will take part in ensuring a new or restructured academic program runs smoothly.

Existing College, Department, Degree Program, Certificate, or CIP Change Page 3

Request for a change to the title (name) of an existing college, department, degree program, or certificate program. For degree or certificate name change, please describe any change in content (if any) to the program.

Guidance: Name and identity are closely related. A "brand" as represented by the name has value and so careful planning for a name or designation change is a worthwhile investment. Academic entities with a long history and many alumni and past employees may find that these groups express strong attachment to the existing name. Thus, the rationale for the name change should be made with full consideration for the impact on the historic connections and with a view to the long-term future. New names should be designed to reflect the nature of the entity for many years to come. Ideally, consultation with and support from the entity's students in course and alumni should be evident in the proposal.

The academic entity should also demonstrate that they have consulted with other colleges and departments on campus that may be impacted by the change. Additionally, they should demonstrate they have discussed the change with their Wyoming community college colleagues.

Names that narrow the scope or reflect short-term sub-areas or trends in research tools or methodology should be avoided. Proposals should be explicit about all the academic programs and structures that are included in a name change request. For example, list all departments, majors, degrees, certificates, centers, subject listings, minors or other academic elements that are included in the request.

Some common justifications for a change in name or CIP code are that the new name more accurately reflects the academic entity than the old name; that the activities of the faculty and the training they offer are more accurately reflected by the new name; and that the name of the discipline has changed and consequently the major should be renamed to reflect this change in the discipline.

Administrative Information Complete all info in this box, and then complete the appropriate information on p. 4

1. Proposing Unit: School of Culture, Gender, and Social Justice

2. <u>Current College, Department, Degree Program, or Certificate Title</u> – *Current official name of the college, department, degree program, or certificate (e.g., College of Business, Department of Botany, Bachelor of Business Administration degree with a major in Accounting, etc.)*:

Department: College of Arts and Sciences; School of Culture, Gender, and Social Justice; B.A. in American Studies; B.A. in Native American and Indigenous Studies.

3. If Degree Program or Certificate change, Current Degree Program CIP Code:

050107

4. <u>Contact Person</u>: *Provide contact information for the person who can answer specific questions about the degree program and change proposal.*

Name: Stephen Dillon

Title: Director of SCGSJ

E-mail: sdillon5@uwyo.edu

Phone: 612-232-6993

Request for Change in College, Department, Degree Program, Certificate Designation

Current Designation: School of Gender, Culture, and Social Justice; B.A. in American Studies; B.A. in Native American and Indigenous Studies.

Proposed Designation: Department of American Cultural Studies; B.A. in American Studies; B.A. in Native American and Indigenous Studies.

Proposed Implementation Date (MM/DD/YYYY): 08/01/2025

Reason for Change:

- Background: An overview explanation of why the change(s) is being requested; how will it improve the college, department, or degree program and benefit students and faculty?
- Proposed changes: List the specific rationale for that change.
- Logistics: When is the changed proposed to be effective. How will current students in the entity be handled? (Note: Generally, program changes are effective for the subsequent fall semester. Current students are assumed to be required to complete the requirements in place when they entered the program unless otherwise agreed upon by the student and program.)

Proposed Changes: The School of Gender, Culture, and Social Justice will change its name to the Department of American Cultural Studies.

The undergraduate degrees in African-American Studies and Gender studies will go through the 2-13 process in AY 25. Courses and faculty will be consolidated into the existing American Studies degree.

The faculty of SCGSJ have worked together for the last year on this plan and it has been approved unanimously.

Background and Objectives:

1). While African-American Studies and Gender Studies have declining enrollments at UW over the last 5 years, the American Studies major has been growing and has the most current majors (see tables below), a clear concise identity, and the most potential for growth according to Gray's Data.

2). Black Studies, Latino/a Studies, and Gender Studies are at the heart of American Studies as a national and international field. In many ways, the previous composition of the school meant degrees were competing with each other. By integrating Gender Studies and African American Studies into American Studies we will increase our recruitment possibilities as well as our current actual numbers.

-For example, in the future, our 8 Gender Studies majors and 2 African-American Studies majors would all be "American Studies majors." Doing so will boost the consolidated major's numbers by about 20%.

3). Third, American Studies at Wyoming has a long history with national and international recognition. Expanding on this legacy is more viable and consolidating makes marketing,

Existing College, Department, Degree Program, Certificate, or CIP Change Page 6

recruitment, and retention more streamlined. According to the Gray's data, "The current American Studies program has a high degree of program requirement flexibility and a re-designed with select classes from African American & Diaspora Studies, Gender & Women Studies, Native American & Indigenous Studies, plus Anthropology, Communication, History, Literary Studies, Philosophy, Political Economy and Sociology will serve to strengthen the development of a new bachelor program in Cultural Studies, Critical Theory & Analysis."

4). Consolidation uses existing faculty expertise and coursework in gender and ethnic studies in a more efficient and interdisciplinary way and also encourages students to draw upon campus-wide offerings in art, English, history, music, political science, and criminal justice. Rather than competing with other courses on campus, this BA encourages an interdisciplinary confluence of existing coursework and resources.

5). Consolidation offers niche regional offerings. As the Gray's data and report shows, continuing with separate degrees in African-American and Gender studies "would be an uphill effort to attract students" as nationally these fields are in decline meaning, "As a stand-alone program enrollments will be challenging." Yet, a consolidated degree would be regionally unique.

6). The American Studies degree supports UW's Strategic Plan, A&S's strategic plan, and the unit's strategic plan since it offers strong and varied ways to enhance student success by developing a broad set of practical and academic skills; prepares students for community, national and international engagement; exposes them to diverse viewpoints; and enables them to connect Wyoming with a wide range of global commerce in various settings.

Logistics: We have spent S24/F24 working with the advising office to make sure the few remaining Gender studies and African-American studies majors will have all resources needed to graduate in S25. Once these students graduate in S25 there will be no more GWST or AAST majors at UW. All new students over the last 2 years who are interested in GWST or AAST have been enrolled as American Studies Majors.

Request Change in CIP Code

Current Code: 05.0107

Proposed Code: 05.0102

Implementation Date (MM/DD/YYYY): 8/1/25

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Request for Authorization: Graduate Certificate in Collaborative</u> <u>Practice</u>, Ahern, Koprowski, Stoellinger

☑ OPEN SESSION

 \Box CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

🛛 Yes

🗆 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The Haub School of Environment and Natural Resources is proposing a new graduate certificate in Collaborative Practice to replace its Collaborative Practice graduate minor. The certificate program will comprise nine credit hours and will have a flexible hybrid delivery format. Furthermore, this certificate program will be 'stackable' to the MS in Environment, Natural Resources & Society. The program addresses the needs of current graduate students and early- to mid-career professionals working across a variety of professional sectors. The Collaborative Practice certificate will add to the University's portfolio of graduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS:

Notice of Intent approved by the Academic Affairs & Student Affairs Committee and the full Board, May 2024.

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. The Academic and Student Affairs committee will report to the Board on recommended action for approval of the new degree program.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Request for Authorization for the Graduate Certificate in Collaborative Practice.

PROPOSED MOTION:

"I move to approve the Request for Authorization for the Graduate Certificate in Collaborative Practice."

Feasibility Study

Graduate Certificate in Collaborative Practice

University of Wyoming Haub School of Environment and Natural Resources

December 2024

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The graduate certificate in Collaborative Practice, offered by the Haub School of Environment and Natural Resources (ENR) at the University of Wyoming, addresses a pressing need for advanced skills in collaborative governance. In an era of "wicked problems" requiring complex, multi-stakeholder solutions, professionals across sectors must be adept at negotiation, facilitation, and stakeholder engagement. This program equips learners with the interdisciplinary tools needed to address challenges spanning various environmental, natural resource management, and public administration applications.

Designed for graduate students and working professionals, the program will replace the Haub School's existing graduate minor. Its flexible hybrid format will transition to fully online delivery by Fall 2026, ensuring accessibility for learners nationwide. This adaptation reflects the University of Wyoming's commitment to meeting the needs of today's workforce, particularly in rural and underserved regions.

The Collaborative Practice certificate exemplifies UW's mission to address societal challenges through education and innovation. By preparing professionals to lead effectively, resolve conflicts, and build consensus, the program positions UW as a higher education pioneer in addressing the growing demand for collaboration skills across sectors. The certificate serves as a pathway for learners to make meaningful contributions to governance, policy, and problem-solving in an interconnected and complex world.

PROGRAM AT-A-GLANCE

- Certificate Title: Collaborative Practice
- Level of Certificate: Graduate
- Delivery Mode: Hybrid, transitioning to fully online by Fall 2026
- Estimated Startup Cost of Degree: Minimal, leveraging existing resources
- Anticipated Launch Date: Fall 2025

KEY PROGRAM FEATURES

Targeted Curriculum

This nine-credit graduate certificate focuses on essential skills for collaborative decision-making and conflict resolution. The curriculum includes two core courses in the principles and methods of collaborative practice and one elective selected to align with the learner's career stage and specific learning needs.

Flexible Delivery Options

With a hybrid format available at launch and a fully online asynchronous option by 2026, this program accommodates working professionals and learners across Wyoming and beyond, ensuring accessibility for those in remote locations.

Interdisciplinary Approach

The program integrates theory and practice, blending insights from fields like natural resource management, environmental science, public administration, and business. Students gain a holistic understanding of collaborative strategies across sectors.

STRATEGIC ALIGNMENT

The Collaborative Practice Certificate supports the University of Wyoming's strategic objectives by:

- Enhancing student success: Developing leadership and negotiation skills that empower graduates to advance their careers and positively impact organizations.
- Serving Wyoming communities: Addressing statewide needs for collaboration and governance, particularly in managing complex natural resource challenges.
- Expanding access and inclusion: Providing an affordable, flexible pathway for professionals seeking career growth, supporting diversity in learner participation and perspective.

Moreover, since its inception in 1993, the Haub School has been a leader in training practitioners to address contentious issues through collaborative approaches. Home to the Spicer Chair in Collaborative Practice and the Ruckelshaus Institute, the school has a commitment to advancing stakeholder-driven solutions for environmental and natural resource challenges. The proposed certificate builds on this foundation, offering a program that delivers our signature expertise to learners on and off campus.

Aligned not just with UW's, but with the Haub School's own 2023–2028 strategic plan, the certificate reflects the school's goals to evolve its graduate curriculum, expand digital learning, and foster interdisciplinary solutions to real-world challenges.

DEMAND AND MARKET OUTLOOK

Proficiency in collaborative practice is increasingly valued across sectors. Professionals skilled in negotiation, conflict resolution, and stakeholder engagement are sought after by government agencies, nonprofit organizations, and private industry. This program aligns with national trends emphasizing interdisciplinary leadership and workforce development. It is intended to meet the needs of early- to mid-career professionals who seek specialized training without committing to a full graduate degree, as well as those who already hold advanced degrees but seek further specialization for professional advancement.

Collaboration is increasingly recognized as a critical "21st-century skill" valued across diverse industries. Federal and state agencies, nonprofits, and the private sector all emphasize the importance of collaborative governance. For example, the U.S. Institute for Environmental Conflict Resolution reported a 47% increase in federal agencies' use of collaborative processes between 2007 and 2017. These trends demonstrate the growing demand for professionals trained in cross-boundary, multi-institutional decision-making.

RESOURCE CONSIDERATIONS

The Collaborative Practice certificate leverages the Haub School's existing faculty and coursework, requiring no new course development. Transitioning to online delivery will rely on established university resources for instructional design and digital learning. Marketing efforts will similarly build on current infrastructure, maximizing cost-effectiveness while broadening reach and appeal.

ANTICIPATED INSTITUTIONAL IMPACT

Launching in Fall 2025, the certificate is poised to generate new enrollments and further UW's reputation as a leader in applied environmental and natural resource education. By equipping professionals with critical collaborative skills, the program aligns with the university's land-grant mission of serving Wyoming and the broader region. Graduates will contribute to resolving pressing challenges in governance, natural resource management, and beyond, positioning UW as a major regional player in innovative, hands-on education, responsive to modern workforce and community demands.

The program reinforces the Haub School's dedication to fostering interdisciplinary learning and exemplifies the university's commitment to accessible, high-quality education that addresses real-world needs.

OVERVIEW AND DESCRIPTION OF CERTIFICATE

The graduate certificate in Collaborative Practice equips graduate students and professionals with advanced skills in collaborative decision-making, negotiation, and stakeholder engagement.

Designed to address the growing need for professionals adept at navigating complex, interdisciplinary challenges, this program provides a foundation for effective collaboration in a range of sectors.

CERTIFICATE OBJECTIVES

The program's core objectives are to:

- Foster advanced skills in negotiation, conflict resolution, and stakeholder engagement to prepare students for leadership roles across industries.
- Provide interdisciplinary training that integrates principles of communication, governance, and applied problem-solving.
- Offer a flexible and accessible credential that supports career advancement for professionals at various stages in their careers, including those unable to pursue full-time graduate programs.

INSTITUTIONAL FIT

The Collaborative Practice Certificate builds on the Haub School's legacy of innovative, interdisciplinary education and complements existing programs, such as the Graduate Certificate in Environment, Natural Resources, and Society. Its key points of fit include:

- Non-Duplication: While other programs at UW may address aspects of collaboration or conflict resolution, this certificate uniquely targets mid-career professionals and graduate students seeking applied training in collaborative practice, filling a clear gap in UW's offerings.
- Interdisciplinary Synergy: The certificate leverages knowledge from a range of disciplines, ensuring wide-ranging perspectives and practical applications to several sectors.

• *Regional and National Relevance:* With its focus on collaborative governance and multi-stakeholder decision-making, the program meets the needs of Wyoming and the broader Intermountain West, where resource conflicts and governance challenges demand professionals skilled in collaboration.

CONTEXT & RATIONALE

Workforce and Professional Development

Across industries, professionals face increasingly complex challenges that demand effective collaboration among diverse stakeholders. From managing natural resources and public lands to developing sustainable business practices or navigating complex governance challenges. The Collaborative Practice certificate equips learners with these competencies, bridging theoretical principles with real-world applications to meet the needs of today's dynamic workforce.

The program combines the Haub School's expertise in governance and stakeholder-driven decision-making with interdisciplinary insights from other fields. Its curriculum emphasizes core competencies such as negotiation, facilitation, and stakeholder engagement, while offering an elective experience to suit the needs of various fields.

Addressing Gaps in Workforce Training

Collaborative practice and collaborative governance training remains underrepresented in higher education, particularly for nontraditional students and working professionals. Nationally, few programs offer flexible, cost-effective pathways for acquiring these skills.

The Collaborative Practice certificate aims to fill this gap, providing an accessible credential that allows professionals to enhance their capabilities without committing to a full graduate degree. This model is particularly valuable for early- and mid-career individuals seeking to advance in fields where stakeholder engagement and interdisciplinary teamwork are essential.

Meeting Regional Needs

The demand for collaborative problem-solving spans numerous sectors:
- Environmental and Natural Resource Management: Shared resource challenges, such as water allocation, habitat conservation, and energy resource management, require collaborative approaches that balance diverse interests.
- Public Administration and Governance: Professionals managing community planning, resource allocation, and regulatory compliance must work across departments and stakeholder groups to achieve effective governance.
- Business and Organizational Leadership: Training in teamwork, negotiation, and cross-disciplinary collaboration prepares professionals to lead in complex organizational contexts, from multinational corporations to small businesses.
- Conflict Resolution and Mediation: Sectors such as legal mediation, labor relations, and community advocacy rely on professionals skilled in fostering consensus and resolving disputes.
- Education: Collaborative training empowers educators to navigate dynamic classroom environments and design interdisciplinary solutions for educational challenges.

By addressing regional needs in resource management, governance, and conflict management—and simultaneously preparing graduates to tackle national and international challenges—the certificate contributes to building more resilient organizations and communities.

Accessibility

The hybrid delivery model allows students to balance career, family, and education, with a fully online option expanding access by Fall 2026. We anticipate that this flexibility will make the program particularly appealing to professionals in rural or underserved areas, ensuring that collaborative practice training reaches those who might otherwise lack access to such opportunities.

Stackable Credentials and Pathway to Degree Completion

The Collaborative Practice certificate is designed to align seamlessly with the Haub School's Master of Science in Environment, Natural Resources, and Society (MS ENRS) program. Embedded within the online track of the MS ENRS degree, the certificate will offer a coherent cluster of electives that allow master's students to specialize in this field.

Additionally, the certificate serves as a potential pathway to degree completion for non-degree-seeking students who later decide to pursue an advanced degree. By

completing the certificate, students establish a foundation for learning at UW that can lead directly into the MS ENRS program, enabling a smooth transition to a master's degree. This stackable credential model once again reflects the university's commitment to offering flexible, accessible education in support of lifelong learning and professional development.

Summary of Impact

The Collaborative Practice Certificate will prepare professionals to meet pressing, cross-sectoral challenges. Its hybrid format, interdisciplinary approach, and customizable curriculum underscore the Haub School's role as a leader in collaborative training, advancing workforce development and fostering resilient, innovative solutions.

STRATEGIC PLANNING

Alignment with University of Wyoming Strategic Plan

The Collaborative Practice certificate directly supports UW's strategic priorities by:

- Advancing Student Success: Equipping students with the practical skills needed to thrive in collaborative, leadership-focused roles.
- Serving Wyoming's Communities: Addressing pressing challenges in resource management, healthcare, and governance, and empowering local professionals to lead.
- *Promoting Accessibility:* Providing a flexible learning format that engages nontraditional students and supports statewide workforce development.

Alignment with Haub School Strategic Plan

The certificate aligns with the Haub School's goals to:

• Evolve graduate education by introducing stackable credentials that cater to professional schedules.

- Expand digital and hybrid learning opportunities, enhancing accessibility and broadening UW's reach.
- Provide interdisciplinary, applied education that addresses real-world challenges and prepares students for impactful careers.

By integrating seamlessly with both institutional and Haub School priorities, this certificate strengthens UW's mission to serve the state and region through education, research, and public service.

LEARNING OUTCOMES

The Graduate Certificate in Collaborative Practice prepares students to:

- 1. Demonstrate Collaborative Leadership: Apply principles of collaborative practice to lead diverse stakeholder groups in decision-making processes across a range of professional contexts.
- 2. *Facilitate Effective Negotiations:* Employ negotiation strategies and techniques to resolve conflicts and build consensus in complex, multi-party settings.
- 3. Design and Implement Stakeholder Engagement Processes: Develop and manage inclusive engagement processes that promote trust, transparency, and equitable outcomes.
- 4. Analyze Complex Systems: Use interdisciplinary tools and frameworks to evaluate and address challenges requiring collaboration across a range of professional sectors.
- 5. *Apply Practical Solutions:* Translate theoretical knowledge into actionable strategies, integrating stakeholder needs and organizational goals to achieve practical outcomes.

This program equips graduates with the practical, observable skills necessary to meet workforce demands and excel in professional environments where collaboration is critical to success.

CURRICULUM MAP AND PROGRAM STRUCTURE

The Collaborative Practice certificate requires nine credit hours, including two core courses (6 credits) and one elective (3 credits). Designed to provide practical, interdisciplinary training, the program balances process competencies, real-world application, and tailored learning opportunities. The program will initially be delivered in a hybrid format, with all core courses transitioning to fully online options by Fall 2026.

The certificate can be completed in as little as two semesters or extended up to two years, allowing flexibility for full-time students and working professionals alike.

ADMISSIONS STANDARDS

Admission to the graduate certificate program requires:

- A bachelor's degree or equivalent from a regionally accredited institution
- A minimum cumulative GPA of 3.000 in undergraduate coursework (4.000 scale)
- As needed, completion of undergraduate coursework that satisfies the prerequisites for core courses in the program

Applicants with professional experience in environment and natural resources management or policy may petition for conditional admission if their academic qualifications fall below the stated thresholds.

REQUIREMENTS

The certificate's nine credit hours are divided as follows:

- 1. Two required core courses (6 credits)
- 2. One elective (3 credits)

Core Courses

The program's required core courses focus on negotiation, collaborative principles, and applied practice. These courses emphasize both foundational skills and experiential learning opportunities:

• ENR 5450 Negotiation

• ENR 5910/5920 Principles and Methods in Collaborative Practice

Electives

Students choose one elective course from the following options. The chosen elective will deepen students' process competencies or build further contextual knowledge for applying collaborative governance skills:

- ENR 5550 Negotiation Analysis
- ENR 5921 Collaborative Practicum

Additional elective options may become available as the Haub School expands its online offerings, further enhancing access for remote and working learners.

CURRICULUM MAP

The table below outlines the program structure, with some courses requiring an additional online section by AY 2026-27 (denoted with * where an online section is in development):

	Required Core Courses		
Title	Focus & Student Learning Outcomes (SLOs)	Delivery	Credits
ENR 5450: Negotiation	Focus: Negotiation strategies, conflict resolution techniques, and facilitation skills. SLOs: 1, 2, 5	Online and/or in-person (Spring)	3
ENR 5910/5915: Principles and Methods in Collaborative Practice	Foundational frameworks and applied methods in collaborative governance. Students may enroll in 5910 (on-campus) or ENR 5915, a workshop-based course tailored to working professionals offered through the Ruckelshaus Institute's Collaboration Program in Natural Resources. SLOs: 1, 3, 4, 5	In-person, *online section available in AY 26 (Summer)	3

	Electives (Choose One)		
Title	Focus & Student Learning Outcomes (SLOs)	Delivery	Credits
ENR 5921: Collaborative Practicum	Real-world application of collaborative practice skills, including facilitative leadership and conflict resolution. Ideal for learners with advanced professional experience or currently working in relevant professional settings. SLOs: 1, 3, 4, 5	Online or in-person (Spring)	3
ENR 5550: Negotiation Analysis	Focuses on analytical strategies to maximize joint gains, evaluate options, and assess outcomes for fairness and effectiveness in negotiations. SLOs: 1, 2, 3, 5	*In-person, online section available in AY 26 (Fall)	3

COMPLETION TIMELINE

- Accelerated Pathway: Students can complete the program in as few as two semesters.
- Flexible Pathway: Students balancing coursework with professional commitments may opt for part-time study and complete the program over several semesters or 18 months.

COURSE DEVELOPMENT AND ONLINE MODALITY

No new course development is required for this program, as all core and elective courses are currently offered at UW. To meet the needs of distance learners and working professionals, all core courses will transition to fully online asynchronous delivery by Fall 2026.

The hybrid delivery model at launch and eventual shift to online options ensure the program remains accessible to diverse learners across Wyoming and beyond, supporting UW's commitment to expanding digital education.

DEGREE PROGRAM EVALUATION

The Collaborative Practice Certificate will be evaluated through a comprehensive assessment framework designed to measure its impact on student learning, professional growth, and workforce relevance. Key metrics include the following:

Evaluation of Student Learning

Assessment will focus on the mastery of core collaborative competencies, such as negotiation, facilitation, and stakeholder engagement. Students' performance will be evaluated through course-based projects, practical applications in the practicum, and faculty feedback. Custom rubrics will align with the program's defined learning outcomes to ensure consistent and meaningful evaluation.

Additionally, student learning outcomes are aligned to each of the courses in the curriculum, as noted in the table above, and the evaluation of these outcomes will be an integral part of the program's assessment framework.

Student and Alumni Feedback

To gauge the program's impact, students will provide feedback through exit surveys upon completion of the certificate. Follow-up surveys will also be conducted with alumni to evaluate how the program contributed to their career advancement and professional development. This data will help refine the curriculum and delivery methods.

Stakeholder and Employer Engagement

The Haub School will periodically survey employers, professional organizations, and other stakeholders to assess the program's success in preparing graduates for collaborative roles. Insights from these stakeholders will inform ongoing improvements and ensure alignment with workforce needs.

Program Metrics and Retention

Key indicators of program success will include enrollment trends, retention rates, and certificate completion timelines. These metrics will help to monitor the program's accessibility and effectiveness for a range of student populations, including part-time and online learners.

Periodic Program Review

Consistent with our process for other certificates, a formal review will be conducted every five years, examining:

- Enrollment and retention data
- Graduate outcomes and career placements/professional impact
- Stakeholder feedback and evolving workforce demands
- Evolving state of knowledge in the field

This review will ensure the program remains responsive to the needs of students and professionals across sectors.

Continuous Improvement

Feedback from students, alumni, and employers will be integrated into the program's iterative design process. These mechanisms will allow for timely updates to the curriculum, instructional methods, and elective offerings, ensuring the program stays current and impactful.

The Collaborative Practice Certificate is designed to maximize existing faculty, courses, and institutional infrastructure, requiring minimal additional investment. Key resource considerations are as follows:

Instructional Resources

Current Haub School instructors will deliver all core and elective courses. No new hires are anticipated. Existing partnerships, such as internal collaboration between Haub School academic programs and the Ruckelshaus Institute, as well as our cooperation with the Department of Agricultural & Applied Economics to deliver the cross-listed Negotiation course, will ensure continuity in instruction.

Online Course Transition

The program's shift to a fully online format by Fall 2026 will require adaptation of two core courses to asynchronous delivery. The Haub School's instructional designer and responsible faculty will lead this transition, ensuring courses meet UW's standards for digital learning quality and accessibility. This effort aligns with the university's broader goals of expanding online offerings to reach diverse learners.

Marketing and Recruitment

A modest investment in marketing will focus on digital campaigns targeting regional and national audiences, concurrent with efforts to advertise other new online offerings. Special emphasis will be placed on attracting working professionals and nontraditional students through direct outreach, professional networks, and collaboration with UW's Office of Admissions.

Administrative Oversight

The Haub School's existing administrative framework will oversee the program. As the school continues to expand its online education portfolio, existing roles such as the online course coordinator and temporary lecturer funded through current revenue streams will support course development and student retention. Future revenue from the Collaborative Practice certificate will contribute to maintaining high-quality program delivery and scaling capacity as enrollment grows.

Overall, this approach leverages existing institutional strengths while strategically investing in areas that enhance program accessibility and impact.

SUBSTANTIVE CHANGE DETERMINATION

The graduate certificate in Collaborative Practice represents a significant addition to the Haub School's curriculum but does not constitute a substantive change as defined by the Higher Learning Commission (HLC).

- Rationale: The program primarily leverages existing courses and faculty, integrates seamlessly with established UW programs, and requires minimal financial investment.
- HLC Consultation: Upon approval, the program will be submitted to the HLC Accreditation Liaison Officer to confirm alignment with accreditation standards for new certificate programs.

RELATIONSHIP TO OTHER OFFERINGS

The Collaborative Practice certificate complements existing offerings at UW without duplicating them. This program serves as an evolution of the Haub School's current graduate minor in collaborative practice, which will be phased out upon the certificate's launch. The certificate retains the same academic rigor and credit requirements of the minor while expanding access to non-degree-seeking professionals and online learners, thereby broadening its appeal and impact.

Complementarity

The Collaborative Practice certificate is distinct within UW's program portfolio, offering targeted training in negotiation, facilitation, and stakeholder engagement. Unlike other UW programs that address collaboration tangentially, this certificate focuses explicitly on developing practical, interdisciplinary skills for professionals and graduate students across sectors such as environmental and natural resource management, public administration, business, education, and more.

Interdisciplinary Collaboration

This certificate draws on the Haub School of Environment and Natural Resources and Ruckelshaus Institute's standing in the arena of collaborative practice, governance, and decision-making, while highlighting faculty expertise across other UW departments such as the Department of Agricultural & Applied Economics and the Department of Communication and Journalism. Its design ensures academic breadth and practical relevance, aligning with UW's commitment to interdisciplinary education.

By replacing the minor with this certificate, the Haub School strengthens its offerings while providing a more flexible and accessible pathway for a diverse range of learners.

SUMMARY OF DEMAND STATISTICS

Collaborative practice spans multiple disciplines and sectors, making it challenging to isolate a single career path or institutional code that fully captures market demand. Instead, trends in related fields, such as environmental and natural resources management, mediation, and dispute resolution, provide valuable insights into the demand for skills in negotiation, facilitation, and stakeholder engagement.

Job Outlook

According to the Bureau of Labor Statistics (BLS), employment of environmental specialists in general is projected to grow 7% from 2023 to 2033, outpacing the national average for all occupations (4%). This reflects heightened public interest in addressing environmental challenges, as well as the need for businesses and governments to consult with experts who can analyze complex problems and develop sustainable solutions. Over the next decade, approximately 8,500 annual job openings in this field are expected, driven by workforce replacements and the creation of new roles.

Similarly, employment of arbitrators, mediators, and conciliators is expected to grow 6% during the same period. These professions provide alternative dispute resolution methods. Approximately 300 annual job openings for arbitrators, mediators, and conciliators are projected, driven by workforce replacements and increasing reliance on arbitration and mediation clauses in contracts.

Occupational Title	SOC Code Employment, Projected Change, 20		23-33		
		2023	2033	Percent	Numeric
Arbitrators, mediators, and conciliators	23-1022	8,200	8,700	6	500
Conservation scientists	19-1031	25,900	27,400	6	1,400
Environmental scientists and specialists	19-2041	84,600	90,700	7	6,100

Employment projections data, Bureau of Labor Statistics



Projected percent change in employment, by field



SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program

Preliminary Market Analysis

According to Gray Associates' market analysis, online programs in dispute resolution and environmental policy exhibit strong growth at both regional and national levels. As for the study of collaboration skills within an environmental and/or natural resources college, there appears to be an open market with very limited competition. Moreover, employment trends in Wyoming and the broader Intermountain West highlight an urgent need for professionals capable of addressing complex challenges, including stakeholder conflicts, resource management, and interdisciplinary governance.

Highlights of the Analysis

- Strong Demand: Fields related to collaborative practice, such as dispute resolution and environmental management, show consistent growth in enrollment and completions.
- Online Appeal: Online program completions in environmental studies and dispute resolution are increasing nationally, as we see heightened demand for part-time, flexible credentials among working professionals.
- *Regional Gap:* There are a few extant dispute resolution programs in this region but research conducted by the UW Office of Online Education revealed that the programs are not part of an Environment and Natural Resources School or College.
- *Employment Trends:* Sectors such as federal and state agencies, nonprofits, and private industry consistently seek professionals with advanced skills in stakeholder collaboration, regulatory compliance, and interdisciplinary problem-solving.

While collaborative practice is an emerging focus in higher education, these associated trends underscore the growing relevance of this skill set and the potential for strong enrollment and career outcomes for graduates of the proposed certificate program.

The absence of direct institutional data for collaborative practice programs highlights the innovative and distinctive nature of this offering. By working at the cutting edge of an emerging need, the University of Wyoming is uniquely positioned to define and lead in this critical area, creating opportunities for both learners and employers to address pressing challenges in collaborative governance.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Environmental Scientists and Specialists, at https://www.bls.gov/ooh/life-physical-and-social-science/environmental-scientists-and-specialists.htm (visited November 23, 2024).

APPENDIX A: PRELIMINARY MARKET ANALYSIS



ONLINE Graduate Certificate Dispute Resolution

Feasibility Study--Includes:

- 1. Classification of Instructional Programs (CIP) Code Definitions¹
- 2. Overall Findings²
- 3. Market area and primary target markets^{2,4}
- 4. Educational market and student demand statistics, including peer comparisons of the size of enrollment, completions, and size trajectory (growth, decline) of comparator programs^{2,4}
- 5. Employment trends and projections given core competencies of the degree or certificate^{2,4}
- 6. Graduate salary trends and other post-completion trends^{2,4}
- 7. Tuition Analysis³

¹National Center of Education Statistics https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=56 ²Gray Decision Intelligence data subscription ³Various Higher Education Institutional websites ⁴Required for Feasibility Study, NOI & RFA

Prepared by Jayne Pearce, Office of Online & Continuing Education

12 December 2024

1. Classification of Instructional Programs (CIP) Code Definitions

30.2801 Dispute Resolution—Definition: A program that provides individuals with skills in negotiation, mediation, and arbitration, that can be applied to resolve disputes in a variety of settings, including business, legal, domestic, and labor relations.

2. Overall findings

At the bachelor award level there was only one completion in 2021, 2 completions in 2022, and 5 completions in 2023. Completions in this program are at the graduate level. Nationally, from 2013 to 2023 online program completions increased by 841.666% at all award levels, a 3.398% increase for onground completions at all award levels, and a 49.541% increase at all award levels for all program delivery methods (Chart One). The growth in this program has been achieved by offering this program online. Student demand for certificate options or advanced higher education credentials has emerged as a viable enrollment growth option in recent years. The Haub School has an opportunity to provide a

unique online graduate level certificate provided by an Environment and Natural Resource School/College. Additional research would be required to advertise/market 'one of a kind' or 'unique' but based on preliminary analysis the possibility is very good. Wage and employment data for a graduate certificate in Dispute Resolution 30.2801 is mixed. Bureau of Labor Statistics (BLS) one-year and threeyear historic job growth is strong and represents very positive employment trends, while wages are midrange. There appears to be an open market and opportunity with very limited competition. Professionals currently working in the Environment and Natural Resource field might find these skills very valuable.

Side Bar: There are over 2,800 CIP Codes, Dispute Resolution 30.2801 sits within the Multi/Interdisciplinary Studies section. It can be considered the catch-all or let's wait to review in 10 years and then perhaps move to a different section. Given the wide variety of programs in this section, providing a big picture view of completions or demand is impossible.

			Chart O	ne			
Dispute Resolution	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	All program award levels 10- year completion percentage increase or decrease
30.2801 Dispute Resolution (all							841.666% increase in all online Dispute Resolution award level programs
award levels-bachelor, postbaccalaureate certificate, master, post master's	24	412	436	226	426	652	3.398% increase in all on- ground Dispute Resolution award level programs
certificate, and doctoral)							49.541% increase in all Dispute Resolution award level programs

3. Market area and primary target markets

and

4. Educational market and student demand statistics, including peer comparisons of the size of enrollment, completions, and size trajectory (growth, decline) of comparator programs

Postbaccalaureate certificates experienced an 8.928% decrease in online completions from 2021-2023, and an overall 32.258% increase in overall completions. Master's online completions increased by 23.762% and overall, by 7.191% from 2021 to 2023. Most post master's certificates were completed online (Chart 4). Highlighted with bold and brown ink are online programs. There are a few in this region but research revealed that the programs are not part of an Environment and Natural Resources School or College. As noted previously this is a opportunity for the Haub School to present a unique certificate to the region and nation.

			Chart T	NO					
Postbaccalaureate of 30.2801 Dispute Resolution programs with the highest on-ground and ONLINE completion numbers									
			natio	nally					
Postbaccalaureate	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total	2023 Online	2023 On - ground	2023 Total

24

TOTAL	56	37	93	62	42	104	51	72	123
Syracuse University, NY	15	10	25	28	12	40	0	27	27
Missouri State University, Springfield MO	9	7	16	0	12	12	23	3	26
Kansas University	2	1	3	2	1	3	7	4	11
Walden University, MN	11	0	11	7	0	7	9	0	9
Mitchell Hamline School of Law, MN	0	0	0	0	0	0	0	8	8
Creighton University, NE	4	0	4	6	0	6	4	2	6
Boise State University, ID	4	4	8	3	0	3	4	1	5
Master of 30.2801 Dispute R	esolution	programs v	vith the hig	hest on-g	round and O	NLINE com	pletion nu	mbers natio	onally
Master	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total	2023 Online	2023 On - ground	2023 Total
TOTAL	101	191	292	198	95	293	125	188	313
Pepperdine University, CA	56	60	116	121	0	121	86	62	148
Columbia University in the City of New York	2	33	35	32	0	32	7	41	48
University of Southern, CA	0	28	28	0	33	33	0	31	31
Creighton University, NE	16	0	16	15	1	16	13	5	18
University of Massachusetts - Boston	8	0	8	0	16	16	0	18	18
Dominican University, IL	4	6	10	7	6	13	13	0	13
Touro University Worldwide,	7	0	7	14	0	14	4	0	4
CA	-	Ū	-		-		-	-	-
CA Post Master's Certificate of 30.2	2801 Dispu	ite Resoluti	on progran natio	ns with the nally	e highest on-	ground an	d ONLINE o	ompletion	numbers
CA Post Master's Certificate of 30.2 Post Master's Certificate	2801 Dispu 2021 Online	ite Resoluti 2021 On - ground	on progran natio 2021 Total	ns with the nally 2022 Online	e highest on- 2022 On - ground	ground an 2022 Total	d ONLINE o 2023 Online	completion 2023 On - ground	numbers 2023 Total
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL	2801 Dispu 2021 Online 0	ite Resoluti 2021 On - ground 8	on progran natio 2021 Total 8	ns with the nally 2022 Online 2	e highest on- 2022 On - ground 26	ground an 2022 Total 28	d ONLINE o 2023 Online 0	2023 On - ground 22	numbers 2023 Total 22
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California	2801 Dispu 2021 Online 0	2021 On ground 6	on progran natio 2021 Total 8 6	2022 Online 2 0	e highest on- 2022 On - ground 26 16	ground an 2022 Total 28 16	d ONLINE o 2023 Online 0 0	completion 2023 On - ground 22 12	numbers 2023 Total 22 12
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY	2801 Dispu 2021 Online 0 0	te Resoluti 2021 On - ground 8 6 1	on progran natio 2021 Total 8 6 1	2022 Online 2 0 0	2022 On - ground 26 16 10	2022 Total 28 16 10	d ONLINE of 2023 Online 0 0	2023 On - ground 22 12 10	numbers 2023 Total 22 12 10
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA	2801 Dispu 2021 Online 0 0 0	2021 On - ground 8 6 1 0	on progran natio 2021 Total 8 6 1 0	2022 Online 2 0 0 2	2022 On - ground 26 16 10 0	ground an 2022 Total 28 16 10 2	d ONLINE of 2023 Online 0 0 0 0	2023 On - ground 22 12 10 0	numbers 2023 Total 22 12 10 0
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI	2801 Dispu 2021 Online 0 0 0 0	te Resoluti 2021 On - ground 8 6 1 0 1	on progran natio 2021 Total 8 6 1 0 1	2022 Online 2 0 0 2 0 2 0	2022 On - ground 26 16 10 0 0	ground an 2022 Total 28 16 10 2 0	d ONLINE of 2023 Online 0 0 0 0 0	2023 On - ground 22 12 10 0 0	numbers 2023 Total 22 12 10 0 0
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate O	2801 Dispu 2021 Online 0 0 0 0 2 certificate,	te Resoluti 2021 On - ground 8 6 1 0 1 , Master, ar 30.	on progran natio 2021 Total 8 6 1 0 1 0 1 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0	2022 Online 2 0 0 2 0 ster's Awa	e highest on- 2022 On - ground 26 16 10 0 0 rd Level Reg tion	ground an 2022 Total 28 16 10 2 0 ional (CO,	d ONLINE of 2023 Online 0 0 0 0 0 1D, MT, NE	2023 On - ground 22 12 10 0 0 ND, SD, UT	numbers 2023 Total 22 12 10 0 0 8. WY)
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate C TOTAL	2801 Dispu 2801 Dispu 0 0 0 0 0 2ertificate, 27	te Resoluti 2021 On - ground 8 6 1 0 1 , Master, ar 30.	on progran natio 2021 Total 8 6 1 0 1 0 1 2801 Dispu 33	2022 Online 2 0 0 2 0 ster's Awa te Resolut	e highest on- 2022 On - ground 26 16 10 0 0 rd Level Reg tion	ground an 2022 Total 28 16 10 2 0 ional (CO, 34	d ONLINE of 2023 Online 0 0 0 0 0 1D, MT, NE	2023 On - ground 22 12 10 0 ND, SD, UT 38	numbers 2023 Total 22 12 10 0 0 & WY) 46
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate O TOTAL CO (CSU FoCo)	2801 Dispu 2801 Dispu 2021 Online 0 0 0 0 0 Certificate, 3	te Resoluti 2021 On - ground 8 6 1 0 1 , Master, ar 30. 6 2	on program natio 2021 Total 8 6 1 0 1 0 1 0 1 0 4 Post Mat 2801 Dispu 33 5	2022 Online 2 0 0 2 0 ster's Awa tte Resolut 28 10	2022 On - ground 26 16 10 0 rd Level Reg tion 6 5	ground an 2022 Total 28 16 10 2 0 ional (CO, 34 15	d ONLINE of 2023 Online 0 0 0 0 0 1D, MT, NE 8 0	2023 On - ground 22 12 10 0 0 ND, SD, UT 38 4	numbers 2023 Total 22 12 10 0 0 & WY) 46 4
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate O TOTAL CO (CSU FoCo) ID (Boise State University)	2801 Dispu 2801 Dispu 2021 Online 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	te Resoluti 2021 On - ground 8 6 1 0 1 , Master, ar 30. 6 2 4	on program natio 2021 Total 8 6 1 0 1 0 1 0 1 0 1 0 1 33 2801 Dispu 33 5 8	2022 Online 2 0 0 2 0 2 0 5ter's Awa te Resolut 28 10 3	2022 On - ground 26 16 10 0 0 rd Level Region 6 5 0	ground an 2022 Total 28 16 10 2 0 ional (CO, 34 15 3	d ONLINE of 2023 Online 0 0 0 0 0 0 1D, MT, NE 8 0 4	2023 On - ground 22 12 10 0 0 ND, SD, UT 38 4 1	numbers 2023 Total 22 12 10 0 0 8 WY) 46 4 5
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate O TOTAL CO (CSU FoCo) ID (Boise State University) MT	2801 Dispu 2021 Online 0 0 0 0 0 Certificate, 27 3 4 0	te Resoluti 2021 On - ground 8 6 1 0 1 , Master, ar 30. 6 2 4 0	on progran natio 2021 Total 8 6 1 0 1 0 1 0 1 0 1 0 2801 Dispu 33 5 8 0	2022 Online 2 0 0 2 0 5ter's Awa te Resolut 28 10 3 0	2022 On - ground 26 16 10 0 rd Level Region 5 0 0	ground an 2022 Total 28 16 10 2 0 ional (CO, 34 15 3 0	d ONLINE of 2023 Online 0 0 0 0 0 1D, MT, NE 8 0 4 0	2023 On - ground 22 12 10 0 0 ND, SD, UT 38 4 1 0	numbers 2023 Total 22 12 10 0 0 & WY) 46 4 5 0
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate O TOTAL CO (CSU FoCo) ID (Boise State University) MT ND	2801 Dispu 2801 Dispu 2021 Online 0 0 0 0 0 0 Certificate, 3 4 0 0 0	te Resoluti 2021 On _ ground 8 6 1 0 1 , Master, ar 30. 6 2 4 0 0 0	on progran natio 2021 Total 8 6 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 33 5 8 8 0 0 0	2022 Online 2 0 0 2 0 2 0 5ter's Awa te Resolut 28 10 3 0 0 0	2022 On - ground 26 16 10 0 rd Level Region 5 0 0 0	2022 Total 28 16 10 2 0 ional (CO, 34 15 3 0 0 0	d ONLINE of 2023 Online 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2023 On - ground 22 12 10 0 ND, SD, UT 38 4 1 0 0	numbers 2023 Total 22 12 10 0 0 8 WY) 46 4 5 0 0 0
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate O TOTAL CO (CSU FoCo) ID (Boise State University) MT ND NE (Creighton University)	2801 Dispu 2801 Dispu 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	te Resoluti 2021 On - ground 8 6 1 0 1 , Master, ar 30. 6 2 4 0 0 0 0	on program natio 2021 Total 8 6 1 0 1 0 1 0 1 0 2 8 8 0 0 0 0 20	2022 Online 2 0 0 2 0 2 0 5 ter's Awa te Resolut 28 10 3 0 0 15	2022 On - ground 26 16 10 0 rd Level Region tion 6 5 0 0 10	ground an 2022 Total 28 16 10 2 0 ional (CO, 34 15 3 0 0 16	d ONLINE of 2023 Online 0 0 0 0 0 0 0 0 0 0 0 1D, MT, NE 8 0 4 0 0 4 0 0 4	2023 On - ground 22 12 10 0 0 ND, SD, UT 38 4 1 0 33	numbers 2023 Total 22 12 10 0 0 8 WY) 46 4 5 0 0 37
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate O TOTAL CO (CSU FoCo) ID (Boise State University) MT ND NE (Creighton University) SD	2801 Dispu 2801 Dispu 2021 Online 0 0 0 0 0 0 Certificate, 27 3 4 0 0 20 0 0 20 0	te Resoluti 2021 On - ground 8 6 1 0 1 0 1 , Master, ar 30. 6 2 4 0 0 0 0 0 0 0	on program natio 2021 Total 8 6 1 0 1 0 1 0 1 0 1 0 2801 Dispu 33 5 8 0 0 0 20 0 0	2022 Online 2 0 0 2 0 2 0 2 0 2 0 2 0 3 5 4 2 8 10 3 0 0 15 0 0	2022 On - ground 26 16 10 0 0 rd Level Reg tion 6 5 0 0 0 1 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	ground an 2022 Total 28 16 10 2 0 ional (CO, 34 15 3 0 0 16 0 16 0 16 0	d ONLINE of 2023 Online 0 0 0 0 0 0 0 0 0 0 0 1D, MT, NE 8 0 4 0 0 4 0 0 4 0 0	2023 On - ground 22 12 10 0 0 ND, SD, UT 38 4 1 0 33 0	numbers 2023 Total 22 12 10 0 0 8 WY) 46 4 5 0 0 0 37 0
CA Post Master's Certificate of 30.2 Post Master's Certificate TOTAL University of Southern California Yeshiva University, NY Brenau University, GA Wayne State University, MI Bachelor, Postbaccalaureate O TOTAL CO (CSU FoCo) ID (Boise State University) CO (CSU FoCo) ID (Boise State University) NE (Creighton University) SD UT	2801 Dispu 2021 Online 0 0 0 0 0 0 0 0 0 0 0 0 0	te Resoluti 2021 On - ground 8 6 1 0 1 0 1 , Master, ar 30. 6 2 4 0 0 0 0 0 0 0 0 0	on program natio 2021 Total 8 6 1 0 1 0 1 0 2801 Dispu 33 5 8 0 0 0 20 0 0 0 0 0 0	2022 Online 2 0 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0	2022 On - ground 26 16 10 0 0 rd Level Regition 6 5 0 0 0 11 0 0 0	2022 Total 28 16 10 2 0 ional (CO, 34 15 3 0 0 0 16 0 0 0	d ONLINE of 2023 Online 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2023 On - ground 22 12 10 0 0 0 38 4 1 0 33 0 0	numbers 2023 Total 22 12 10 0 0 8 WY) 46 4 5 0 0 37 0 0

5. Employment trends and projections given core competencies of the degree or certificate.

For Dispute Resolution 30.2801 job postings per graduate is strong, the market is not saturated or stated differently, there is a strong hiring demand market. The Bureau of Labor Statistic (BLS) historic one-year and three-year employment growth is positive indicating a strong employment landscape.

Knowledge, skills, and abilities includes: a) oral expression and communication; b) resolve organizational disputes; c) arbitrate & mediate; d) critical thinking; and e) research laws, precedents and legal and scientific documents and statistical data.

6. Graduate salary trends and other post-completion trends.

Wages are average or in the moderate range. Postbaccalaureate certificate or master's entry level salary is \$74,598, it is in the 54th percentile. Postbaccalaureate and master's level median salary is \$105,856, it is in the 58th percentile.

7. Tuition

Tuition is an important consideration when moving a program online. Included is a brief analysis of each Online program description at the various higher education institutions (Chart Three). It is the start of the gap analysis that would allow UW to state that a specific certificate (e.g. dispute resolution) is distinctive or unique to the Rocky Mountain region.

Post Baccalaureate Certificate & Master 30.2801 Dispute Resolution ONLINE program tuition and areas of concentration						
Missouri State University, Springfield MO	Title: Conflict & Dispute Resolution. Learn to analyze, address, and manage conflict professionally and effectively. Practice superior communication skills and develop your abilities to work with and lead others. This certificate is interdisciplinary in nature, allowing you to select the courses that are most useful, and applicable, to your chosen or planned profession. 12 credits. Not part of Environmental Natural Resource program.	\$473.00	\$0.00	\$473.00		
Kansas State University	Title: Conflict Resolution. In this program, you will learn to address the complexity of people's lives, help them build a sense of community, foster mutual respect and cooperation, and assist them in seeing the perspectives of others and collaborating rather than using power as a basis for resolving disputes. 12 credits. Not part of Environmental Natural Resource program.	\$626.14	\$0.00	\$626.14		

Chart Three

Walden University, MN	Title: Conflict Management & Negotiation. Remedy. Resolve. Rebuild. In an ever-changing world, the need for conflict management and negotiation skills is more important than ever. Regardless of whether you're a professional who works in law or human resources or a manager who works in education or social services, difficult disputes inevitably arise. With comprehensive conflict management and mediation training, disagreements can be resolved with confidence, objectivity, and in the best interests of the parties. 20 units/12 credits. Not part of Environmental Natural Resources program.	\$955.00	\$0.00	\$955.00
Creighton University, NE	Title: Negotiation & Conflict Resolution. Conflict is inevitable in any work, community, or relationship setting, and every organization needs employees and leaders who are skilled in facilitation and conflict resolution. The techniques and perspectives you gain through the NCR Graduate Certificate program can lead to new opportunities in all fields and career paths, including healthcare, human resources, the legal system, business, nonprofit organizations, local and state governments, schools, and more. 15 credits. Not part of Environmental Natural Resources program.	\$1,000.00	\$39.16	\$1,039.16
Boise State University, ID	Title: Conflict Management. Preparing students to be confident, capable, and resilient leaders through the challenges in their professional and personal lives. Engaging students in innovative, experiential, and supported learning environments that are founded on self-discovery, our common humanity, and critical inquiry into civil discourse and collaborative engagement across diverse groups and perspectives. Not part of Environmental Natural Resources program.	\$550.00	\$0.00	\$550.00
Pepperdine University, CA	Title: Master of Dispute Resolution. The online Master of Dispute Resolution (MDR) program from Pepperdine Caruso School of Law prepares professionals to resolve conflicts and negotiate complex transactions between parties. Students in the program gain deeper insight into the legal, psychological, and cultural factors that affect workplace conflict and complex negotiations.	\$2,227.00	\$0.00	\$2,227.00
Columbia University in the City of New York	Title: Master in Science in Negotiation & Conflict Resolution. Conflict resolution skills are essential for forging and stewarding successful relationships between people, communities, and organizations. Columbia University's Master of Science in Negotiation and Conflict Resolution prepares students to analyze the root causes and dynamics of conflict and to transform disputes through reasoned and resourceful interventions. With courses led by some of the world's premier scholar-practitioners in negotiation and conflict resolution, the program focuses on developing self-awareness, tenacity, and interpersonal competency; building common ground; opening lines of communication; ensuring representation and recognition; and building sustainable possibilities for resolution. Flexible program options meet the needs of young and mid-career professionals as well as career-changing professionals.	\$2,640.00	\$36.33	\$2,676.33
Creighton University, NE	Could not find on webpage			

Dominican University, IL	Title: Mediation & Conflict Resolution. Mediation and negotiation skills are in tremendous demand in practically every field, from law enforcement and labor relations to international business and health care. The Bureau of Labor Statistics projected an 8% growth (much faster than average for all occupations) in demand for mediators nationwide from 2019–2029. Conflict is a reality of personal and professional life, and the practice of conflict resolution has emerged as an attractive alternative to costly litigation in overburdened courts.	\$625.00	\$0.00	\$625.00
Touro University Worldwide, CA	Master of Arts in Dispute Resolution. Earning an online Master of Arts in Dispute Resolutions prepares graduates for success in a wide variety of fields. The skills learned in the program are immediately applicable to real-world situations. Students develop expertise in areas that include negotiation, mediation, arbitration and facilitation, as well as the other foundations of dispute resolution and alternative dispute resolution.	\$500.00	\$0.00	\$500.00
			Average	\$1,074.63

APPENDIX B: PRO FORMA BUDGET

Anticipated Revenues & Expense

Name of Proposed Program: Graduate Certificate in Collaborative Practice

	Y	ear 1		Year 2		Year 3		Year 4	Comments
Revenue									
Tuition (College)		12,304		21,017		28,048		29,163	70% tuition share to college
Distance Delivery Fee (College)		630		1,008		1,260		1,260	\$14 per credit to college offering course
Financial Aid									
Other Fees									
Subtotal: Tuition & Fees (Net)		12,934		22,025		29,308		30,423	
Other Operating Revenue									
Total Revenue	\$	12,934	\$	22,025	\$	29,308	\$	30,423	
Operating Expense									
Salaries, Wages & Benefits									
Faculty Salary		-		-		-		-	
Staff Salary		-		-		-		-	
Temporary Lecturers		12,500		12,500		12,500		12,500	
Part-time Salary		-		2,500		2,500		5,000	
Graduate Assistant Stipends		-		-		-		-	
Supplemental Pay (Faculty - AY)		-		-		-		-	
Fringe Benefits Expense		413		495		495		578	Fringe rates based on FY25
Subtotal: Salaries, Wages & Benefits		12,913		15,495		15,495		18,078	
Other Operating Expense									
Professional Services									
Travel									
Advertising/Promotional									Marketing budget provided by UW Online
Training/Professional Development		200		200		200		200	Quality Matters training
Supplies		400		450					Laptops (x2)
Other									
Subtotal: Other Operating Expense		600		650		200		200	
Total Operating Expense	\$	13,513	\$	16,145	\$	15,695	\$	18,278	
	•	(====)	<u> </u>	F 000		40.000	<u> </u>	42.475	
Statement of Activities Net Result	Ş	(579)	Ş	5,880	Ş	13,613	Ş	12,145	

Semester	Course # / Name	Credit Hours	New Course (Yes/No)
Spring	ENR 5450 Negotiation	3.0	No
Summer	ENR 5910 Principles & Methods in Collaborative Practice	3.0	No
Fall	ENR 5921 Collaborative Practicum	3.0	No

Not Now	0.0
TOTAL HOURS	9.0

9.0

Projected enrollment of net new students.

	Year 1			Year 2				Year 3			Year 4	Year 5				
	Projected Total Enrollment	Tuition Rate (per credit)	Total Projected Revenue	Projected Total Enrollment	Tuition Rate (per credit)	Ti Pro <u>.</u> Re	otal jected venue									
Tuition Type*																
Resident	4	349.00	\$ 12,564	6	363.00	\$ 19,602	7	378.00	\$ 23,814	7	393	\$ 24,759	6	409	\$	22,086
Non-resident	1	557.00	\$ 5,013	2	579.00	\$ 10,422	3	602.00	\$ 16,254	3	626	\$ 16,902	5	651	\$	29,295
			\$17,577			\$30,024	Ļ		\$40,068			\$41,661				\$51,381

Salary Projections

		P	rojected	Salary	y Expense	e by Fis	cal Year	(no	fringe)	
Anticipated Job Title	Туре		Year 1		Year 2		Year 3		Year 4	Comments
Coordinator, Online Learning	Temporary Lecturer	\$	12,500	\$	12,500	\$	12,500	\$	12,500	Salary split given oversight of several certificate programs, one graduate program, and other online coursework; salary comp based on similar role in ECTL & COB (total starting salary = \$75K)
Adjunct	Part-time (non-benefited)	L		\$	2,500	\$	2,500	\$	5,000	Assumes one adjunct instructor in years 2 & 3 of program, with course split across two certificates, and two instructors in year 4 if enrollment increases.
		-								
							_			
								_		
		\$	12,500	\$	15,000	\$	15,000	\$	17,500	

Summary of Graduate Council Discussion and Vote on Haub School of Environment and Natural Resources Graduate Certificates

February 28, 2025.

The Graduate Council has considered feasibility studies for two graduate certificates submitted by the Haub School of Environment and Natural Resources, which include:

- Graduate Certificate in Collaborative Practice
- Graduate Certificate in Environmental and Natural Resources Law and Policy

The Graduate Council received the feasibility studies on February 4th. The Graduate Council held preliminary discussions on the feasibility studies during the Graduate Council meeting on February 10th. The Graduate Council then held a more detailed discussion in the February 24th meeting, where Temple Stoellinger and Courtney Carlson from the Haub School presented to the Graduate Council, engaged in discussion and answered questions. An aspect that emerged from the discussion was that while the number of elective courses currently offered in the online format was sufficient to start the certificate programs online and on campus, several elective options were only currently available for on campus instruction. This would need to be made very clear to enrolling students. The representatives from the Haub School were already aware of this and were working on ways to increase the elective options for those that enroll for online instruction.

Following this, the Graduate Council discussed the feasibility studies in private and a motion to move to a vote on the feasibility studies was accepted. The vote concluded on Thursday, February 27th with members of the Graduate Council voting unanimously (11:0) to approve each of the two feasibility studies. Comments that members of the Graduate Council wrote to justify their vote are shown below.

- These certificates leverage university resources that are already in place to facilitate career progression in an area within UW's interest. Core courses are already in place and taught in the format needed (online) and there are enough electives to start the program.
- These seem like well thought out and useful additions to UW's offerings. They serve clear needs in this day and age.
- Both of these are well thought out and low cost, high payoff additions to UW.
- While I am unfamiliar with the scope of these certificates to their respective areas, they seemed foundationally strong in relation to their areas. The core classes are already something that we have available. While the electives are not all set in stone, they are moving the needle on this in the right way now. Both certificates

Resolution in Support of the Graduate Certificate in Collaborative Practice

WHEREAS, the Haub School has proposed the addition of a graduate certificate in Collaborative Practice, as outlined in the attached proposal and feasibility study; and

WHEREAS, the Faculty Senate's Graduate Council (GC) and Academic Planning Committee (APC) have reviewed the proposal, as shown in the attached reports from GC and APC; and

WHEREAS, the GC and APC have recommended approval of the degree program, as shown in the attached reports.

THEREFORE, BE IT RESOLVED by the Faculty Senate of the University of Wyoming that Faculty Senate supports the recommendation of the GC and APC to create a graduate certificate in Collaborative Practice.

AUTHENTICATION: The foregoing Faculty Senate Resolution 487, duly adopted by the Faculty Senate of the University of Wyoming under date of April 21, 2025, is hereby transmitted to the President of the University of Wyoming for review in accordance with UW Regulations.

Jeva & Smout almenholtz

Treva E Sprout Ahrenholtz Secretary, Faculty Senate Dated: April 21, 2025



Office of Academic Affairs Dept. 3302 • 1000 E. University Avenue Laramie, WY 82071 (307) 766-4286 • (307) 766-6476 • fax (307) 766-2606 www.uwyo.edu/acadaffairs

April 29, 2025

Board of Trustees:

This letter serves as a Letter of Commitment for a new graduate certificate in Collaborative Practice to be offered by the Haub School of Environment and Natural Resources. The certificate program comprises 9 credit hours of coursework and addresses a pressing need for advanced skills in collaborative governance by preparing professionals to lead effectively, resolve conflicts, and build consensus. The Collaborative Practice certificate program will replace the existing Collaborative Practice minor and be offered through a flexible format to meet the needs of current graduate students and working professionals. Furthermore, the certificate will be 'stackable' to the MS in Environment, Natural Resources & Society, if certificate students desire to pursue a full graduate degree.

Needs

Proficiency in collaborative practice is increasingly valued across a variety of professional sectors, including government agencies, nonprofit organizations, and private industry. The certificate program is designed to meet the needs of early- to mid-career professionals without committing to a full graduate degree.

Requirements

The course hour requirement for this graduate certificate programs is 9 credit hours. Students will be required to take three three-credit hour courses, with two of these being required/core classes and the third being a choice of two electives. The certificate program can be completed in as little as two semesters or can be completed over 18 months.

Resources

No new, additional resources are required to stand up this new certificate program as no new courses are needed and instruction of the courses is already incorporated into Haub faculty members' workloads.

Timeline

The present implementation timeline is designed to enable students to enroll in this certificate program in the Fall 2025.

Campus Review

I affirm that the university community, including the Executive Team, Deans and Directors, Faculty Senate, Staff Senate and ASUW, have been provided the opportunity to review and present feedback on the proposed degree program.

Best,

J Boot Tuyen

Scott Turpen Interim Provost

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Request for Authorization: Graduate Certificate in Environment</u> and Natural Resources Law and Policy, Ahern, Koprowski, Stoellinger

☑ OPEN SESSION

□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

🛛 Yes

🗆 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The Haub School of Environment and Natural Resources is proposing a new graduate certificate in Environment and Natural Resources Law and Policy. The certificate program will comprise nine credit hours and will have a flexible hybrid delivery format. The program addresses the needs of early- to mid-career professionals working in the areas of resource management. The ENR Law and Policy certificate will add to the University's portfolio of graduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS:

Notice of Intent approved by the Academic Affairs & Student Affairs Committee and the full Board, May 2024.

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. The Academic and Student Affairs committee will report to the Board on recommended action for approval of the new degree program.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Request for Authorization for the Graduate Certificate in Environment and Natural Resources Law and Policy.

PROPOSED MOTION:

"I move to approve the Request for Authorization for the Graduate Certificate in Environment and Natural Resources Law and Policy."

Feasibility Study

Graduate Certificate in Environment and Natural Resources (ENR) Law and Policy

University of Wyoming Haub School of Environment and Natural Resources

December 2024

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The Graduate Certificate in Environment and Natural Resource (ENR) Law and Policy offered by the Haub School of Environment and Natural Resources at the University of Wyoming is designed to meet a growing regional and national need for specialized legal and policy training in environmental and natural resource management. This program leverages UW's interdisciplinary strengths and established partnerships to deliver targeted, accessible, and affordable professional development opportunities for graduate students and working professionals.

Wyoming, with nearly 50% of its land federally-owned and a rich legacy of resource stewardship, presents a unique setting for this program. Learners will acquire foundational knowledge of environmental laws and policy-making while applying these principles to challenges in public lands, wildlife, water resources, and energy development. By focusing on regional demand in the Intermountain West and offering flexibility through online delivery options, this program positions UW to serve not only Wyoming but also a broader audience of learners across the United States.

PROGRAM AT-A-GLANCE

- Certificate Title: Environment and Natural Resource Law and Policy
- Level of Certificate: Graduate
- Delivery Mode: In-person/hybrid or online asynchronous
- Estimated Startup Cost of Degree: \$13,513
- Anticipated Launch Date: Fall 2024

KEY PROGRAM FEATURES

Targeted Curriculum

A nine-credit certificate comprising one required foundational course (ENR Law & Policy) and a flexible selection of electives, allowing students to tailor their learning to specific areas such as wildlife law, NEPA compliance, public lands, and water law.

Flexible Delivery Options

Initial hybrid delivery with an online asynchronous option available by Fall 2026 to accommodate working professionals and distance learners.

Interdisciplinary Approach

Integrative coursework, emphasizing salient issues in law, economics, and political science, enriches the program and provides diverse perspectives.

STRATEGIC ALIGNMENT

The ENR Law & Policy Certificate aligns with UW's strategic objectives by:

- 1. Enhancing student success through career-focused skills in legal and regulatory frameworks.
- 2. Engaging with and serving Wyoming's communities and workforce needs in natural resource management.
- 3. Increasing enrollment and fostering diversity by creating an affordable, flexible pathway for professional development.

DEMAND AND MARKET OUTLOOK

Environmental law and policy expertise is increasingly critical for federal and state agencies, nonprofits, and private industry. Regional analysis indicates strong demand for graduates with applied knowledge in this field. Additionally, the certificate meets the needs of early- to mid-career professionals seeking career advancement without pursuing a full law degree.

RESOURCE CONSIDERATIONS

The program capitalizes on existing courses and faculty expertise, requiring no new instructional resources. Online course design and marketing will utilize existing UW infrastructure, ensuring cost-effectiveness while expanding UW's reach.

ANTICIPATED INSTITUTIONAL IMPACT

Launching in Fall 2025, this program is expected to generate enrollment growth, enhance UW's reputation as a regional leader in environmental and natural resources
education, and contribute directly to Wyoming's workforce by providing critical legal and policy training.

This certificate exemplifies the Haub School's commitment to delivering innovative, interdisciplinary education while fulfilling UW's mission as a land-grant university to serve the state and beyond. It provides an accessible, high-quality educational opportunity that supports both individual career advancement and regional needs in resource management.

OVERVIEW AND DESCRIPTION OF CERTIFICATE

The Graduate Certificate in Environment and Natural Resource (ENR) Law & Policy equips graduate students and professionals with foundational knowledge and applied skills in environmental and natural resource law and policy-making.

CERTIFICATE OBJECTIVES

The program's primary objectives are to:

- 1. Develop a comprehensive understanding of the legal and policy frameworks governing environmental and resource management, including public lands, wildlife, water, and energy.
- 2. Enhance interdisciplinary problem-solving skills through coursework and applied learning that integrates law, economics, and political science.
- 3. Provide a flexible, affordable credential that supports career advancement for early- to mid-career professionals, including those unable to commit to a full law degree.

INSTITUTIONAL FIT

This certificate builds on the Haub School's history of interdisciplinary education and complements existing programs, including the JD/MA in ENR and the MS in Environment, Natural Resources, and Society (ENRS). Key points of fit include:

- Non-Duplication: While the College of Law offers an energy and natural resources law certificate for on-campus JD students, our proposed program targets graduate students and professionals outside traditional law school pathways, meeting distinct workforce needs.
- Interdisciplinary Insights: The program's design incorporates expertise from across the Haub School's areas of interdisciplinary expertise, including ENR legal studies, economics, and history, enriching its academic breadth.
- *Filling a Regional Niche*: Wyoming and the Intermountain West are characterized by vast public lands and diverse natural resources that create both opportunities

and challenges with respect to management, requiring professionals with specialized knowledge in ENR law and policy.

CONTEXT & RATIONALE

Workforce and Professional Development

ENR professionals must regularly update their knowledge to keep pace with constantly evolving environmental regulations and policies. However, it is challenging for many to return to school full-time to acquire the knowledge and skills necessary for career advancement. The University of Wyoming is uniquely positioned to fill this gap by providing specialized training through the proposed Graduate Certificate in ENR Law and Policy.

This certificate equips students and working professionals with the expertise to craft scientifically grounded environmental policies, laws, and management strategies. The curriculum covers the fundamentals of environmental law and policy while allowing students the flexibility to tailor their learning, preparing them for roles ranging from resource management to regulatory compliance.

Nationally, the environmental law and policy field lacks accessible career development programs tailored for working professionals. The proposed certificate addresses this gap by offering an affordable, part-time, and online-friendly study option. This format increases access for nontraditional students, enabling them to advance their careers without significant disruption to their professional or personal lives, while simultaneously generating enrollment revenue for UW.

Regional and National Demand

The American West faces urgent challenges related to resource management, including public land use, water rights, wildlife conservation, and energy development. These challenges demand policy and legal solutions informed by scientific expertise and interdisciplinary approaches. The certificate will prepare professionals for roles in state and federal resource management agencies, nonprofits, and businesses, addressing critical gaps in workforce training. It leverages UW's strengths in environmental law, policy, and collaboration to meet growing regional and national workforce demands.

Accessible Learning

Obtaining a law degree is a significant three-year commitment, primarily designed for careers as practicing attorneys. However, many roles requiring expertise in environmental and natural resource law do not necessitate a full law degree. The Haub School and its campus partners—including the College of Law—have designed this graduate certificate to meet the needs of students and professionals seeking targeted law and policy training.

Unlike the UW College of Law's certificate in Energy, Environmental, and Natural Resources Law, which is restricted to JD students, the ENR Law and Policy certificate serves a broader audience. It offers focused training to graduate students and working professionals not enrolled in law school, equipping them for non-legal careers that engage with legal and regulatory processes. This program fills a distinct niche and enhances UW's ability to address Wyoming's and the region's pressing environmental and natural resource challenges.

Summary of Impact

In summary, we anticipate that this certificate will be of interest to current UW students as well as prospective learners in light of the following:

- Workforce Needs: Federal and state agencies, nonprofits, and private industries increasingly require professionals adept in navigating complex legal and regulatory frameworks.
- National Trends: Nationally, environmental law and policy expertise is in high demand, with growing opportunities for professionals in land management, environmental compliance, and sustainable development.
- Accessibility and Flexibility: This hybrid program provides a lower-cost, time-efficient pathway for career advancement, particularly attractive to professionals already working in the field.
- UW's Role: As Wyoming's flagship land-grant university, UW is uniquely positioned to address regional workforce gaps while leveraging its interdisciplinary expertise and commitment to public service.

STRATEGIC PLANNING

The ENR Law & Policy Certificate is designed to meet UW's strategic objectives and advance goals established in the Haub School's 2023-2028 strategic plan.

- UW Strategic Plan Alignment:
 - Student Success: Provides career-focused skills that prepare students for success in a rapidly evolving workforce.
 - Service to Wyoming: Addresses critical workforce needs in resource management, supporting local, state, and federal stakeholders.
 - Accessibility: Expands access to education through flexible online offerings, engaging nontraditional students from across Wyoming and beyond.
- Haub School Strategic Plan:
 - Supports the Haub School's goals to evolve its graduate curriculum, expand digital learning, and create stackable, interdisciplinary certificates that align with professional calendars and workforce needs.

This alignment ensures the program not only meets institutional priorities but also amplifies UW's role as a leader in addressing environmental and natural resource challenges through education and innovation.

LEARNING OUTCOMES

The Graduate Certificate in ENR Law & Policy prepares students to:

- 1. Understand Key Legal and Policy Frameworks: Develop a comprehensive understanding of foundational laws, such as NEPA, public lands law, wildlife statutes, and water rights, and their application to environmental and resource management.
- 2. Analyze and Apply Policy Solutions: Use interdisciplinary tools to evaluate environmental challenges and propose informed, evidence-based policy solutions.
- 3. Enhance Professional Capabilities: Gain the skills necessary to navigate regulatory processes, draft legal documents, and participate effectively in stakeholder negotiations.
- 4. Specialize in Specific Domains: Tailor their expertise through elective courses in areas such as energy law, tribal governance, or negotiation.

This program emphasizes practical, real-world applications, equipping graduates to meet the needs of employers and communities in the Intermountain West and beyond.

CURRICULUM MAP AND PROGRAM STRUCTURE

The graduate certificate requires nine credit hours, comprising one required course and flexible elective options. Courses are designed to accommodate the needs of on-campus/hybrid learners initially, transitioning to two learner pathways—on-campus or distance—no later than Fall 2026.

The graduate certificate is designed to be completed in as little as nine months or up to eighteen months, depending on individual schedules and course availability. This flexibility ensures the program is accessible to both full-time students and working professionals.

ADMISSIONS STANDARDS

Admission to the graduate certificate program requires:

- A bachelor's degree or equivalent from a regionally accredited institution
- A minimum cumulative GPA of 3.000 in undergraduate coursework (4.000 scale)
- As needed, completion of undergraduate coursework that satisfies the prerequisites for core courses in the program

Applicants with professional experience in environment and natural resources law or policy may petition for conditional admission if their academic qualifications fall below the stated thresholds.

REQUIREMENTS

The certificate's nine credit hours are divided as follows:

- 1. Required course (3 credits): ENR 5750 ENR Law & Policy
- 2. Keystone electives (3 credits): Chosen from an approved list representing essential cross-disciplinary knowledge, such as wildlife law, NEPA compliance, or energy law.
- 3. Custom electives (3 credits): Allowing students to tailor their expertise to specific interests.

CURRICULUM MAP

The table below outlines the program structure, including alignment with student learning outcomes (SLOs), with some courses requiring an additional online section (denoted with * where an online section is in development):

Course Type	Course Number	Course Title	Credi ts	Delivery	Key Topics Covered	SLOs
Foundations Course (required)	ENR 5750	*ENR Law & Policy	3	Hybrid (Online by 2025)	Fundamentals of environmental law and policy-making.	1, 2, 3
Keystone Electives (choose 3	ENR 5760	Wildlife Law	3	Online	Biodiversity law, public trust, federal statutes.	1, 2, 4
credits)	ENR 5770	*NEPA Law and Policy	2	Hybrid	NEPA requirements, judicial decisions, comment drafting.	1, 2, 4
	ENR 5780	*Public Lands	1	Hybrid	History, legal frameworks, resource use, preservation.	1, 2, 4
Custom Electives (choose 3 credits)	ENR 5450	Negotiation	3	Online	Conflict resolution, negotiation strategies, and mediation.	2, 3, 4
	LAW 6700- 01	Indian Law	3	Online	Federal-tribal-state jurisdiction, sovereignty, and regulation.	1, 4

AGEC 4700	Economics of Range Resources	3	On-campus	Economic decision theory for range resource management.	2, 4
AGEC 4720	Water Resource Economics	3	On-campus	Water resource allocation and development, economic principles.	2, 4
INST/P OLS 5555	Political Ecology: Conservation & Sustainability	3	On-campus	Politics, power, and inequality in human- environment relations.	2,4
LAW 6860	Water Law & Policy	3	On-campus	Water allocation, environmental impacts, federal/state laws.	1, 4
LAW 6915-01	Agricultural Law	3	On-campus	Varies annually; legal issues in agriculture.	1, 4

COMPLETION TIMELINE

- Accelerated Pathway: Students taking three courses in consecutive semesters (e.g., Fall & Spring) can complete the program in as few as nine months.
- Flexible Pathway: Students balancing coursework with professional commitments may opt for part-time study and complete the program over several semesters or 12-18 months.

COURSE DEVELOPMENT AND ONLINE MODALITY

Several courses within the certificate program require transition to online asynchronous delivery to accommodate distance learners and working professionals. These

adjustments will be prioritized upon approval of the certificate program, ensuring alignment with UW's digital learning goals and increasing access for geographically diverse learners.

Priority courses slated for transition to online delivery during AY2025-2026 include:

- ENR 5750: ENR Law & Policy
- ENR 5760: Wildlife Law
- ENR 5770: NEPA Law & Policy
- ENR 5780: Public Lands

The Graduate Certificate in ENR Law & Policy will be evaluated based on the following measures:

Student Learning Outcomes

Assessment of student work will include course-based assignments, capstone projects, and feedback from faculty. Rubrics aligned with the program's core competencies will be used to evaluate mastery of legal and policy principles.

Student Feedback

Exit surveys and post-completion feedback will assess how well the certificate prepared students for career advancement and professional growth.

Employer Feedback

Periodic surveys and interviews with employers of graduates, conducted independently by the Haub School's Career Services team, will help measure the program's effectiveness in meeting workforce needs.

Enrollment and Retention

Program success will be tracked through enrollment numbers, retention rates, and certificate completion within the intended timeframe.

Five-Year Review

A formal program review will be conducted after five years, examining enrollment trends, graduate outcomes, and stakeholder feedback as these relate to program design and curriculum, in order to ensure continued relevance and success.

NEW RESOURCES REQUIRED

The certificate primarily leverages existing faculty, courses, and institutional resources, minimizing the need for additional investments, as described below.

Instructional Resources

No new faculty hires are needed; current instructors will deliver the courses. However, adjustments may be necessary to move select courses online.

Online Course Development

Some courses will require redesign and professional instructional design support to meet online learning standards. This will be coordinated with UW's Office of Online and Continuing Education.

Marketing and Recruitment

Modest investment in marketing will be necessary to attract students, focusing on regional and national audiences. This will include digital campaigns and targeted outreach to working professionals.

Administrative Oversight

As the Haub School proposes to significantly expand its online education portfolio in the next 3-5 years, we anticipate hiring a coordinator to oversee online teaching and learning. Revenue from current online instruction presently funds a temporary lecturer responsible for online program and course development. We anticipate utilizing future revenue to fund this position, assuring excellence in program design, delivery, and student retention.

SUBSTANTIVE CHANGE DETERMINATION

The Graduate Certificate in ENR Law & Policy represents a significant new offering within the Haub School's curriculum but does not constitute a substantive change as defined by the Higher Learning Commission (HLC).

- Rationale: The program primarily uses existing courses and faculty, integrates with established UW programs, and does not require a significant financial investment.
- HLC Consultation: Upon approval, the program will be submitted to the HLC Accreditation Liaison Officer to confirm it aligns with accreditation standards for new certificate programs.

RELATIONSHIP TO OTHER OFFERINGS

This program complements existing offerings at UW without duplicating them.

Complementarity

While the College of Law offers a certificate in Energy, Environmental, and Natural Resources Law for JD students, the proposed certificate serves non-law students and working professionals seeking targeted expertise in legal and regulatory frameworks.

Interdisciplinary Collaboration

Students choose electives from a short menu of courses drawing from faculty expertise across UW departments, enhancing the relevance and breadth of learning.

SUMMARY OF DEMAND STATISTICS

Executive Summary of Findings

The data from the feasibility study conducted by the UW Office of Online and Distance Education supports the strong potential for a graduate certificate in Environment and Natural Resource Law and Policy, with a growing market for related credentials across both national and regional levels:

- Significant growth in postbaccalaureate certificates: Completion rates for postbaccalaureate certificates in natural resources and conservation (CIP Code 03.0201) have increased by 471.9% over the past decade. Programs like these align with a growing demand for specialized, flexible training options in environmental law and policy.
- 2. Regional highlights: While there are limited offerings within the Intermountain West region, the University of Denver is a leader in online completions for environmental management programs, accounting for 20.74% of national online completions in its category. This indicates room for a Wyoming-based program to fill a geographic and market gap.
- Employment trends and earnings: Jobs for natural resources professionals remain in strong demand, with stable employment growth projected nationally. Entry-level salaries for postbaccalaureate certificate holders are competitive, averaging \$67,864, with master's graduates earning a median of \$94,233 in the field.
- 4. Tuition comparisons: Tuition for similar programs varies significantly, with online programs like Harvard University's Natural Resource Management certificate costing \$835 per credit and University of Denver's program costing \$1,112 per credit. UW's pricing could leverage its land-grant mission to offer competitive tuition, making this certificate an accessible, high-value option for professionals.

Market Demand for the Graduate Certificate

Programs in environmental law and policy demonstrate strong growth across regional and national markets. Data from Gray Associates highlights substantial increases in certificate completions in natural resources and conservation, with a 471.9% growth over the past decade.

Regional Trends

Within the Intermountain West, the University of Denver leads in online certificate completions, representing over 20% of national completions in the Environmental/Natural Resources Management & Policy category. Despite this, opportunities for similar programs remain sparse in the region, suggesting a significant opportunity for the University of Wyoming to meet this demand.

Tuition Positioning

Nationally, tuition for related programs ranges from \$455 to \$1,112 per credit hour. By leveraging its land-grant mission, UW can offer a competitively priced certificate, increasing accessibility for working professionals.

Employment and Earnings Outlook

- Employment Demand: The Bureau of Labor Statistics projects stable growth in jobs requiring expertise in natural resource management and policy as well as in the legal professions.
- Earnings Potential: Graduates from similar programs report competitive salaries, with entry-level certificate holders earning an average of \$67,864 and master's-level professionals earning a median of \$94,233.

Occupational Title SOC Cod		Employment,	Projected	Change, 2023-33		
		2023	2033	Percent	Numeric	
Arbitrators, mediators, and conciliators	23-1022	8,200	8,700	6	500	
Environmental scientists and specialists	19-2041	84,600	90,700	7	6,100	
Lawyers	23-1011	859,000	903,300	5	44,200	

Employment projections data, Bureau of Labor Statistics



Projected percent change in employment, by field



SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program

APPENDIX A: PRELIMINARY MARKET ANALYSIS



ONLINE Graduate Certificate Natural Resource Management & Policy

and

Online Graduate Certificate Energy, Environment, and Natural Resource Law

Feasibility Study--Includes:

- 1. Classification of Instructional Programs (CIP) Code Definitions¹
- 2. Overall Findings²
- 3. Market area and primary target markets^{2,4}
- 4. Educational market and student demand statistics, including peer comparisons of the size of enrollment, completions, and size trajectory (growth, decline) of comparator programs^{2,4}
- 5. Employment trends and projections given core competencies of the degree or certificate^{2,4}
- 6. Graduate salary trends and other post-completion trends^{2,4}
- 7. Tuition Analysis³

¹National Center of Education Statistics https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=56 ²Gray Decision Intelligence data subscription ³Various Higher Education Institutional websites ⁴Required for Feasibility Study, NOI & RFA

Prepared by Jayne Pearce, Office of Online & Continuing Education

12 December 2024

1. Classification of Instructional Programs (CIP) Code Definitions

03.0201 Environmental/Natural Resources Management & Policy, General-Definition: A program that prepares individuals to plan, develop, manage, and evaluate programs to protect and regulate natural habitats and renewable natural resources. Includes instruction in the principles of wildlife and conservation biology, environmental science, animal population surveying, natural resource economics, management techniques for various habitats, applicable law and policy, administrative and communications skills, and public relations.

91

22.0207 Energy, Environment, and Natural Resources Law—Definition: An advanced, professional study of the law, policies, and regulations governing the energy industry, environmental protection, natural resources and land use, and related topics.

2. Overall findings

Nationally, from 2013 to 2023 all master program completions increased by 24%, post master's certificate completions increased by 45%, and postbaccalaureate certificate completions increased by 95% (Chart One). Specifically, postbaccalaureate certificate programs in all 03 (CIP Code) Natural Resources & Conservation programs increased by 471.900% from 2013 to 2023. Post master's certificate programs in all 03 Natural Resources & Conservation programs increased by 18.75% from 2013 to 2023 (Chart Two). The completion growth in postbaccalaureate certificates indicates an additional market for higher education institutions to increase enrollments. Student demand for fast (certificate) options enhances student opportunity in the employment marketplace. Wage and employment data for the graduate certificate in ENR Law and Policy will be the same as master award level data for Natural Resources Management & Policy (03.0201). Federal agencies (BLS, Census Bureau...) and private employment agencies (Indeed, Monster...) do not parse the differences consistently between graduate certificates and master's programs, only between bachelor and graduate programs. Market analysis of Energy, Environment, & Natural Resources Law (22.0207) does not reveal many opportunities. It is a very small program nationally and discussion with the UW Law School regarding possible professional development or licensure requirements for practicing lawyers might be an enrollment option (Chart Three). This is not to say that this certificate will have enrollment challenges as it is staple academic component of many graduate programs and perhaps an integral component of a stackable certificate master program proposal.

All postbaccalaureate, post master's and master programs completions	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	2013 vs. 2023 Completions
Postbaccalaureate certificates	9,102	26,505	35,607	32,711	36,816	69,527	95.262% increase over ten years
Post master's certificates	2,975	14,928	17,903	10,950	14,955	25,905	44.696% increase over ten years
Master	175,867	591,799	767,666	398,751	551,842	950,593	23.828% increase over ten years

03 Natural Resources & Conservation											
Postbaccalaureate Certificate Program Completions 2013 vs 2023	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	Postbaccalaureate 10-year completion percentage increase or decrease				
							1,280.769% increase in postbaccalaureate certificates				
TOTAL	26	95	121	359	333	692	250.526% increase in postbaccalaureate certificates				
							471.900% increase in postbaccalaureate certificates				

Chart Two

Post Master's Certificate Program Completions 2013 vs 2023	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	Post Master's 10-year completion percentage increase or decrease
							zero to 10 completions in post master's certificates
TOTAL	0	0	16	10	9	19	43.75% decrease in post master's certificates
							18.75% increase in post master's certificates

			Chart Th	ree			
No Postbaccalaureate Certificate Program Completions 2013 vs 2023	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	Postbaccalaureate 10-year completion percentage increase or decrease
							na
& Natural Resources Law	0	0	0	0	0	0	na
							na
Master Program Completions 2013 vs 2023	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	Master 10-year completion percentage increase or decrease
							In 2013 there were zero completions, in 2023 there were 36 Master completions
22.0207 Energy, Environment, & Natural Resources Law	0	92	92	36	82	118	10.869 % decrease in Master completions
							28.260% increase in Master completions
Post Master's Certificate Program Completions 2013 vs 2023	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	Post Master's 10-year completion percentage increase or decrease
							In 2013 there were zero completions, in 2023 there were 5 Post Master's Certificate completions
22.0207 Energy, Environment, & Natural Resources Law	0	23	23	5	26	31	13.043% increase in Post Master's Certificate completions
							34.782% increase in Post Master's Certificate completions

3. Market area and primary target markets

and

4. Educational market and student demand statistics, including peer comparisons of the size of enrollment, completions, and size trajectory (growth, decline) of comparator programs

Below is a snapshot of the postbaccalaureate certificates and post master's certificates programs in the nation with the highest completion numbers in all 03 Natural Resources & Conservation areas (Chart Four).

03 Natural Resources & Conservation											
Postbaccalaureate Certificate Program Completions 2013 vs 2023	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	Postbaccalaureate 10-year completion percentage increase or decrease				
03.0201 Environmental / Natural Resources Management & Policy, General; Virginia Polytechnic Institute and State University	0	0	0	53	0	53					
03.0204 Environmental / Natural Resources Economics; University of Chicago	0	0	0	0	46	46	In 2023 the top five programs with the highest completion numbers did not have				
03.0601 Wildlife, Fish & Wildlands Science & Management; Oregon State University	0	0	0	30	12	42	postbaccalaureate certificate programs in 2013. Two of the top five programs are one of the programs analyzed and				
03.0201 Environmental / Natural Resources Management & Policy, General; University of Denver	0	0	0	28	12	40	one is from the University of Denver				
03.0209 Energy and Environmental Policy; Harvard University	0	0	0	36	0	36					
Post Master's Certificate Program Completions 2013 vs 2023	2013 Online	2013 On - ground	2013 Total	2023 Online	2023 On - ground	2023 Total	Post Master's 10-year completion percentage increase or decrease				
03.0104 Environmental Science; Louisiana State University and Agriculture & Mechanical Arts	0	0	0	10	4	14					
03.0201 Environmental / Natural Resources Management & Policy, General; University of Michigan, Ann Arbor	0	0	0	0	3	3	There are not many completions at the post master's award level. One of				
03.0103 Environmental Studies; University of Michigan, Ann Arbor	0	0	0	0	1	1	the top five programs is in Environmental / Natural Resources Management and Policy while two are				
03.0104 Environmental Science; Youngstown State University, Ohio	0	0	0	0	1	1	Environmental Studies.				
03.0103 Environmental Studies; Oklahoma State University, Main Campus	0	2	2	0	0	0					

Chart Four

Specific analysis of postbaccalaureate certificates in Natural Resources Management and Policy 03.0201 reveals there is one program in the region with online completions. The University of Denver program represents 20.740% of the online completions in the nation. The University of Montana has a very small

program and Utah State University had online completions in 2021 and 2022 but nothing in 2023, perhaps a change from the pandemic or a realignment in program availability (Chart Five).

Postbaccalaureate Certificate o	of 03.0201 highest o	Environme n-ground a	ntal/Natura nd ONLINE	al Resourc completio	es Managen n numbers r	nent & Poli nationally	cy, General	programs	with the
Postbaccalaureate Certificate of 03.0201 Environmental/Natural Resources Management & Policy, General	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total	2023 Online	2023 On - ground	2023 Total
TOTAL	80	92	172	116	53	169	135	26	161
Virginia Polytechnic Institute & State University	33	25	58	52	0	52	53	0	53
University of Denver	0	34	34	0	45	45	28	12	40
University of Connecticut	0	12	12	21	0	21	28	7	35
Harvard University	15	0	15	18	0	18	18	0	18
American Public University, WV	8	0	8	6	0	6	5	0	5
Postbaccalaureate Certific	ate Regio	nal (CO, ID, Man	MT, NE ND agement &	, SD, UT & Policy, Ge	WY) 03.020 eneral	1 Environn	nental/Nat	ural Resou	rces
TOTAL									
CO (University of Denver)	0	34	34	0	45	45	28	12	40
ID (University of Idaho)	0	0	0	0	0	0	0	0	0
MT (University of Montana)	0	0	0	0	0	0	0	1	1
ND (North Dakota State University, Main Campus)	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0
UT (Utah State University)	11	0	11	10	0	10	0	0	0
WY	0	0	0	0	0	0	0	0	0

Chart Five

Given the low number of completions for Energy, Environment, & Natural Resource Law 22.0207 at the postbaccalaureate certificate, master, and post master's certificate award level determining student demand with confidence is challenging. Additional program research and discussions with the UW College of Law is recommended. Most programs reviewed represent programs for practicing attorneys. Information is below (Chart Six)

Master of 22.0207 Energy, Environment, Natural Resources Law programs with the highest on-ground and ONLINE completion numbers nationally											
Master	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total	2023 Online	2023 On - ground	2023 Total		
TOTAL	43	125	168	44	101	145	36	82	118		
University of Oklahoma, Norman Campus	31	38	69	26	24	50	5	9	24		
Lewis & Clark College, OR	5	8	13	16	0	16	19	3	22		

Chart Six

Pace University, NY	0	14	14	0	10	10	0	15	15		
George Washington University,	0	8	8	0	12	12	0	13	13		
Georgetown University, DC	0	11	11	0	18	18	0	12	12		
		only three	(3) progran	ns online ir	n the nation						
University of Tulsa, Ok	7	5	12	2	0	2	2	2	4		
Master Regional (CO,	ID, MT, N	E ND, SD, U	T & WY) 22	.0207 Ene	rgy, Environ	ment, & Na	atural Reso	urces Law	I		
TOTAL	0	7	7	0	6	6	0	1	1		
CO (University of Denver)	0	7	7	0	6	6	0	1	1		
ID	0	0	0	0	0	0	0	0	0		
MT	0	0	0	0	0	0	0	0	0		
ND	0	0	0	0	0	0	0	0	0		
NE	0	0	0	0	0	0	0	0	0		
SD	0	0	0	0	0	0	0	0	0		
UT	0	0	0	0	0	0	0	0	0		
WY	0	0	0	0	0	0	0	0	0		
Post Master's Certificate of 22.0207 Energy, Environment, Natural Resources Law programs with the highest on-ground and ONLINE completion numbers nationally											
	2021	2021 On	2021	2022	2022 On	2022	2023	2023	2023		
Post Master's Certificate	Online	- ground	Total	Online	- ground	Total	Online	On - ground	Total		
Post Master's Certificate	Online 11	- ground 31	Total 42	Online 7	- ground 49	Total 56	Online 5	On - ground 26	Total 31		
TOTAL Louisiana State University & Agricultural & Mechanical College	Online 11 0	- ground 31 9	Total 42 9	Online 7 0	- ground 49 25	Total 56 25	Online 5 0	On - ground 26 17	Total 31 17		
TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School	Online 11 0 11	- ground 31 9 13	Total 42 9 24	Online 7 0 7	- ground 49 25 8	Total 56 25 15	Online 5 0 5	On - ground 26 17 5	Total 31 17 10		
TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana	Online 11 0 11 0 0 0	- ground 31 9 13 2	Total 42 9 24 2	Online 7 0 7 0 0	- ground 49 25 8 5	Total 56 25 15 5	Online 5 0 5 0 0	On - ground 26 17 5 4	Total 31 17 10 4		
TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah	Online 11 0 11 0 0 0 0	- ground 31 9 13 2 7	Total 42 9 24 2 7	Online 7 0 7 0 0 0 0	- ground 49 25 8 5 11	Total 56 25 15 5 11	Online 5 0 5 0 0 0 0 0	On - ground 26 17 5 4 0	Total 31 17 10 4 0		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah	Online 11 0 11 0 11 0 0 0 0 0 0 0	- ground 31 9 13 2 7 (1) program	Total 42 9 24 2 7 m is online a	Online 7 0 7 0 0 0 at Vermon	- ground 49 25 8 5 11 t Law & Grad	Total 56 25 15 5 11 d School	Online 5 0 5 0 0 0 0	On - ground 26 17 5 4 0	Total 31 17 10 4 0		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah Post Master's Certificate Region	Online 11 0 11 0	ground 31 9 13 2 7 (1) program D, MT, NE N	Total 42 9 24 2 7 m is online ID, SD, UT 8	Online 7 0 7 0	- ground 49 25 8 5 11 t Law & Grad	Total 56 25 15 5 11 d School Environm	Online 5 0 5 0 0 0 ent, & Natu	On - ground 26 17 5 4 0	Total 31 17 10 4 0 ces Law		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah Post Master's Certificate Regio TOTAL	Online 11 0 11 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0	- ground 31 9 13 2 7 (1) program D, MT, NE N 9	Total 42 9 24 2 7 m is online and a second	Online 7 0 7 0 0 at Vermon & WY) 22.0 0	- ground 49 25 8 5 11 t Law & Grad D207 Energy , 16	Total 56 25 15 5 11 d School Environm 16	Online 5 0 5 0 0 0 ent, & Natu	On - ground 26 17 5 4 0 ural Resour 4	Total 31 17 10 4 0 ces Law 4		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah TOTAL CO	Online 11 0 11 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0	- ground 31 9 13 2 7 (1) program D, MT, NE N 9 0	Total 42 9 24 2 7 m is online ID, SD, UT 8 9 0	Online 7 0 7 0 0 0 at Vermon & WY) 22.0 0 0	- ground 49 25 8 5 11 t Law & Grad 207 Energy , 16 0	Total 56 25 15 5 11 d School Environm 16 0	Online 5 0 5 0 0 ent, & Natu 0 0	On - ground 26 17 5 4 0 ural Resour 4 0	Total 31 17 10 4 0 ces Law 4 0		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah Post Master's Certificate Region CO ID	Online 11 0 11 0 01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ground 31 9 13 2 7 e (1) program D, MT, NE N 9 0 0	Total 42 9 24 2 7 n is online ID, SD, UT 8 9 0 0	Online 7 0 7 0 0 0 0 at Vermon & WY) 22.0 0 0 0 0	- ground 49 25 8 5 11 t Law & Grad D207 Energy 16 0 0	Total 56 25 15 5 11 d School Environm 16 0 0	Online 5 0 5 0 0 0 ent, & Natu 0 0 0 0	0n - ground 26 17 5 4 0 ural Resour 4 0 0	Total 31 17 10 4 0 ces Law 4 0 0 0		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah Post Master's Certificate Region CO ID MT (University of Montana)	Online 11 0 11 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0	ground 31 9 13 2 7 (1) program D, MT, NE N 9 0 0 2	Total 42 9 24 2 7 m is online : ID, SD, UT 8 9 0 0 2	Online 7 0 7 0 0 0 0 at Vermon & WY) 22.0 0 0 0 0 0 0 0 0 0	- ground 49 25 8 5 11 t Law & Grad 0 207 Energy, 16 0 0 5	Total 56 25 15 5 11 3 School Environm 16 0 5 5	Online 5 0 5 0 0 0 ent, & Natu 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	On - ground 26 17 5 4 0 ural Resour 4 0 0 0 4	Total 31 17 10 4 0 ces Law 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah Post Master's Certificate Region CO ID MT (University of Montana) ND	Online 11 0 11 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0	- ground 31 9 13 2 7 c (1) program 0, MT, NE N 9 0 0 0 2 0	Total 42 9 24 2 7 m is online 1D, SD, UT 8 9 0 0 2 0 2 0 2 0 2 0	Online 7 0 7 0 0 0 0 at Vermon & WY) 22.0 0 0 0 0 0 0 0 0 0 0 0 0	- ground 49 25 8 5 11 t Law & Grad 207 Energy 16 0 0 5 0	Total 56 25 15 5 11 d School 5 Environm 16 0 0 5 0	Online 5 0 5 0 0 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	On - ground 26 17 5 4 0 ural Resour 4 0 0 4 0	Total 31 17 10 4 0 ces Law 4 0 4 0 4 0 4 0 4 0 4 0 0 0 0 0 0		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah Post Master's Certificate Region CO ID MT (University of Montana) ND NE	Online 11 0 11 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0	ground 31 9 13 2 7 e (1) program D, MT, NE N 9 0 2 0 2 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total 42 9 24 2 7 m is online ID, SD, UT 8 9 0 2 0 0 2 0 0 0 0 0 0 0 0 0 0	Online 7 0 7 0 0 0 at Vermon & WY) 22.0 0 0 0 0 0 0 0 0 0 0	- ground 49 25 8 5 11 t Law & Grad 0 207 Energy, 16 0 0 5 0 0 0 0 0	Total 56 25 15 5 11 3 School Environm 16 0 5 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0	Online 5 0 5 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0	0n - ground 26 17 5 4 0 0 ural Resour 4 0 0 0 4 0 0 0	Total 31 17 10 4 0 ces Law 4 0 4 0 4 0 4 0 0 0 0 0 0 0 0 0 0 0		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah Opst Master's Certificate Region Optimized colspan="2">Optimized co	Online 11 0 11 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0	- ground 31 9 13 2 7 (1) program 0, MT, NE N 9 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0	Total 42 9 24 2 7 nis online ID, SD, UT 8 9 0 2 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Online 7 0 7 0 0 0 0 at Vermon & WY) 22.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- ground 49 25 8 5 11 t Law & Grad 0 207 Energy, 16 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0	Total 56 25 15 5 11 d School Environm 16 0 5 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Online 5 0 5 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0	On - ground 26 17 5 4 0 ural Resour 4 0 0 0 4 0 0 0 4 0 0 0 0	Total 31 17 10 4 0 ces Law 4 0 4 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Post Master's Certificate TOTAL Louisiana State University & Agricultural & Mechanical College Vermont Law & Grad School University of Montana University of Utah Post Master's Certificate Region CO ID MT (University of Montana) ND ND UNIVERSITY OF UTAL	Online 11 0 11 0	ground 31 9 13 2 7 e (1) program D, MT, NE N 9 0 2 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 7	Total 42 9 24 2 7 m is online ID, SD, UT 8 9 0 2 0 0 0 0 0 0 0 7	Online 7 0 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- ground 49 25 8 5 11 t Law & Grad 0 207 Energy, 16 0 0 0 5 0 0 0 0 11	Total 56 25 15 5 11 3 School Environm 16 0 5 0 0 0 0 11	Online 5 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	On - ground 26 17 5 4 0 0 ural Resour 4 0 0 0 4 0 0 0 0 0 0 0 0 0	Total 31 17 10 4 0 ces Law 4 0 4 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		

5. Employment trends and projections given core competencies of the degree or certificate.

For Natural Resources Management & Policy 03.0201 job postings per graduate is strong, the market is not saturated or stated differently, there is a strong hiring demand market. The Bureau of Labor Statistic (BLS) historic one-year and three-year employment growth is positive indicating a strong employment landscape. However, for Energy, Environment, & Natural Resources Law 22.0207 the job market shows limited opportunity, suggesting that graduates may have a difficult time finding employment. The market is saturated

Knowledge, skills, and abilities includes: a) deductive reasoning; b) administration and management; c) complex problem solving; d) critical thinking; e) information gathering; f) performing statistical analysis; g) analyzing data and information; h) understanding scientific writing; i) analyze geospatial data; and j) Microsoft Office and GIS ability is considered a plus.

6. Graduate salary trends and other post-completion trends.

Wages are average or in the moderate range, which may reflect a high percentage of public and nonprofit sector employment in this field for Natural Resources Management & Policy 03.0201. Post baccalaureate certificate or master's entry level salary is \$67,864 (03.0201). Master level median salary is \$94,233 (03.0201). These salary rankings are in the 41^{st} - 46^{th} percentile representing average salary opportunities for graduates in this field. Wages for postbaccalaureate and master's entry level salary for Energy, Environment, & Natural Resources Law (22.0207) is just a bit better and in the 50th percentile at \$73,621. Graduate level median salary is \$117,438 and in the 81st percentile ranking.

7. Tuition

Tuition is an important consideration when moving a program online. Included is a brief analysis of each Online program description at the various higher education institutions. It is the start of the gap analysis that would allow UW to state that a specific certificate (e.g. dispute resolution) is distinctive or unique to the Rocky Mountain region. Averaging the average tuition of the two programs is not appropriate for this analysis given Energy, Environment, & Natural Resource Law is delivered by Law Schools and mostly intended for practicing attorney's (Chart Seven).

	chareseven								
Postbaccalaureate Certificate of 03.0201 Environmental/Natural Resources Management & Policy, General ONLINE program tuition and areas of concentration									
	Areas of Concentration	Online Tuition Rate (pch)	Fees (pch)	Total (pch)					
Virginia Polytechnic Institute & State University	Title: Natural Resource Management, topics includes: a) Biodiversity; b) Climate Change; c) Green Infrastructure; d) Urban Ecology; e) Circular Economy; and f) Environmental Policy	\$950.00	\$100.00	\$1,050.00					

Chart	Seven
-------	-------

		-						
University of Denver	Title: Natural Resource Management, designed to: Guide the management and protection of natural resources like water, land, and forests to preserve them for generations to come. Sharpen skills in: a) Developing strategies to effectively manage use of lands in wilderness systems, wild and scenic river corridors, parks, and open spaces; b) Assessing the theoretical basis and practical impacts of recreational land use; c) Crafting comprehensive natural resource management plans; and d) Advocating for use of natural resources that are sustainable biologically, physically, socially, and economically	\$1,112.00	\$0.00	\$1,112.00				
University of Connecticut	Title: Sustainable Environmental Planning and Management; Certificate designed for: a) Professionals in the natural resources and sustainable environmental fields looking to enhance their skills and advance their careers; b) College graduates with a Bachelor's degree looking to break into the field; and c) Professionals who have been in the workforce for a period of time and are interested in going to graduate school, but need the credentials to apply for a Master's Degree program.	\$925.00	\$0.00	\$925.00				
Harvard University	vard University Title: Natural Resource Management and Sustainable tecosystems. Learn to evaluate and design practices, technologies, and systems that bring sustainable solutions to communities and organizations. 4 Courses.							
American Public University, WV	Title: Environmental Sustainability and/or Environmental Planning and Design. Includes: a) Sustainability fundamentals, energy and environmental policy, economics, and global resource allocation; b) Environmental policy impacts, national/global energy resources, and societal interaction with the environment; and c) Public- and private- sector strategies for the implementation of sustainable practices and design in local, regional, national, and worldwide environments.	\$455.00	\$0.00	\$455.00				
		L	Average	\$875.40				
Master & Post Master's Certific	ate 22.0207 Energy, Environment, & Natural Resources Law ON concentration	ILINE prograi	m tuition a	nd areas of				
University of Oklahoma, Norman Campus	Designed for professionals, provided by the College of Law. Whether you're already practicing energy law and seek to broaden your expertise or anticipate future involvement in energy work, the online LL.M. program comprehensively addresses all facets of energy law. From contract law specific to working in energy and natural resources to courses in upstream, midstream, and downstream law, this program will provide legal background to handle complex deals and negotiations.	\$1,689.05	\$0.00	\$1,689.05				
Lewis & Clark College, OR	\$1,631.00	\$0.00	\$1,631.00					
University of Tulsa, Ok	unable to find program on webpages							

Vermont Law & Grad School	34 credit program; emphasis in energy law	\$1,508.00	\$100.00	\$1,608.00
			Average	\$1,642.68

APPENDIX B: PRO FORMA BUDGET

Anticipated Revenues & Expense

Name of Proposed Program: Graduate Certificate in Environment and Natural Resource (ENR) Law & Policy

	Year 1		Year 2	Year 3	Year 4	Comments
Revenue						
Tuition (College)	13,6	14	22,378	29,459	37,050	70% tuition share to college
Distance Delivery Fee (College)	6	30	1,008	1,260	1,512	\$14 per credit to college offering course
Financial Aid						
Other Fees						
Subtotal: Tuition & Fees (Net)	14,2	44	23,386	30,719	38,562	
Other Operating Revenue						
Total Revenue	\$ 14,2	44	\$ 23,386	\$ 30,719	\$ 38,562	
Operating Expense						
Salaries, Wages & Benefits						
Faculty Salary		-	-	-	-	
Staff Salary		-	-	-	-	
Temporary Lecturers	12,5	00	12,500	12,500	12,500	
Part-time Salary		-	2,500	2,500	5,000	
Graduate Assistant Stipends		-	-	-	-	
Supplemental Pay (Faculty - AY)		-	-	-	-	
Fringe Benefits Expense	4	13	495	495	578	Fringe rates based on FY25
Subtotal: Salaries, Wages & Benefits	12,9	13	15,495	15,495	18,078	
Other Operating Expense						
Professional Services						
Travel						
Advertising/Promotional						Marketing budget provided by UW Online
Training/Professional Development	2	00	200	200	200	Quality Matters training
Supplies	4	00	450			Laptops (x2)
Other						
Subtotal: Other Operating Expense	6	00	650	200	200	
Total Operating Expense	\$ 13,5	13	\$ 16,145	\$ 15,695	\$ 18,278	
		_		 	 	
Statement of Activities Net Result	\$ 7	32	\$ 7,241	\$ 15,024	\$ 20,285	

Complete the worksheet to reflect anticipated coursework required of each student in the proposed program. Indicate in Column E whether each course is new ("Yes") or is currently being taught ("No").

Semester	Course # / Name	Credit Hours	New Course (Yes/No)
Fall	ENR 5750 Law & Policy	3.0	No
Spring	ENR 5760 Wildlife Law	3.0	No
Fall	AGEC/ENR 5450 Negotiation	3.0	No

TOTAL HOURS9.0Net New0.0

9.0

	Projected enrollment of <i>net new</i> students.																			
		Year 1				Year 2				Year 3				Year 4				Year 5		
	Projected Total Enrollment	Tuition Rate (per credit)	P. F	Total rojected Revenue	Projected Total Enrollment	Tuition Rate (per credit)	P	Total Projected Revenue	Projected Total Enrollment	Tuition Rate (per credit)	P	Total Projected Revenue	Projected Total Enrollment	Tuition Rate (per credit)	Pi R	Total rojected Revenue	Projected Total Enrollment	Tuition Rate (per credit)	P. I	Total rojected Revenue
Tuition Type*																				
Resident	3	349.00	\$	9,423	5	363.00	\$	16,335	6	378.00	\$	20,412	7	393	\$	24,759	8	409	\$	29,448
Non-resident	2	557.00	\$	10,026	3	579.00	\$	15,633	4	602.00	\$	21,672	5	626	\$	28,170	6	651	\$	35,154
				\$19,449				\$31,968	\$42,084					\$52,929						\$64,602

*See Student Fee Book for tuition rates (note that "main campus" and "online" refer to the degree program type (i.e., how the student is classified), and not the the location of any particular course offerings.

Salary Projections

		P	rojected	Salary	y Expense	by Fi	scal Year	(no	fringe)	
Anticipated Job Title	Туре		Year 1		Year 2		Year 3		Year 4	Comments
Coordinator, Online Learning	Temporary Lecturer	\$	12,500	\$	12,500	\$	12,500	\$	12,500	Salary split given oversight of several certificate programs, one graduate program, and other online coursework; salary comp based on similar role in ECTL & COB (total starting salary = \$75K)
Adjunct	Part-time (non-benefited)	L		\$	2,500	\$	2,500	\$	5,000	Assumes one adjunct instructor in years 2 & 3 of program, with course split across two certificates, and two instructors in year 4 if enrollment increases.
		E								
		Ś	12.500	Ś	15.000	Ś	15.000	Ś	17.500	



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This form is to be used with all new degree/certificate proposals as outlined in the process on the Academic Affairs website at https://www.uwyo.edu/acadaffairs/degrees. Departments shall use this form to provide documentation of collaboration and support for any courses and/or resources that will be contributing to the new degree/certificate that are not within the home department.

Date: 1/28/25

Name of Proposal: Grad. Cert. ENR Law & Policy

Department: Haub School of ENR

College:N/A

The above-named degree/certificate proposal has been reviewed by the following departments/colleges and all appropriate courses and resources have been discussed prior to proposal submission:

Temple Stoellinger

Department Head

Department Head John Koprowski

Dean

Signature

Signature

Dean

Signature

Submitted on: _____(date)

Ву: _____

1

Summary of Graduate Council Discussion and Vote on Haub School of Environment and Natural Resources Graduate Certificates

February 28, 2025.

The Graduate Council has considered feasibility studies for two graduate certificates submitted by the Haub School of Environment and Natural Resources, which include:

- Graduate Certificate in Collaborative Practice
- Graduate Certificate in Environmental and Natural Resources Law and Policy

The Graduate Council received the feasibility studies on February 4th. The Graduate Council held preliminary discussions on the feasibility studies during the Graduate Council meeting on February 10th. The Graduate Council then held a more detailed discussion in the February 24th meeting, where Temple Stoellinger and Courtney Carlson from the Haub School presented to the Graduate Council, engaged in discussion and answered questions. An aspect that emerged from the discussion was that while the number of elective courses currently offered in the online format was sufficient to start the certificate programs online and on campus, several elective options were only currently available for on campus instruction. This would need to be made very clear to enrolling students. The representatives from the Haub School were already aware of this and were working on ways to increase the elective options for those that enroll for online instruction.

Following this, the Graduate Council discussed the feasibility studies in private and a motion to move to a vote on the feasibility studies was accepted. The vote concluded on Thursday, February 27th with members of the Graduate Council voting unanimously (11:0) to approve each of the two feasibility studies. Comments that members of the Graduate Council wrote to justify their vote are shown below.

- These certificates leverage university resources that are already in place to facilitate career progression in an area within UW's interest. Core courses are already in place and taught in the format needed (online) and there are enough electives to start the program.
- These seem like well thought out and useful additions to UW's offerings. They serve clear needs in this day and age.
- Both of these are well thought out and low cost, high payoff additions to UW.
- While I am unfamiliar with the scope of these certificates to their respective areas, they seemed foundationally strong in relation to their areas. The core classes are already something that we have available. While the electives are not all set in stone, they are moving the needle on this in the right way now. Both certificates

would further the University's goals and ideally reach a larger target audience because of the distance learning routes.

- The programs will benefit both our students and UW.
- Based on the presentation that was done, I believe these certificate courses are coming fill a gap which is necessary in the field and as such I affirm this will go a long way to contribute to Graduate Education and the flexibility to pursue knowledge .
- The proposed certificates are well thought out, do not require additional resources, and have a strong target market.
- Align with UW mission, doesn't require significant resources, and provides needing training for professionals in Wyoming and beyond.
- the presentation to grad council was excellent and the documents provided suggest how the programs will work together and scaffold toward an effective and competitive offering
- These program are likely to appeal to professionals in Wyoming and elsewhere who seek this career development but do not have the flexibility to attend graduate school.

As is evident from these comments, there was widespread and enthusiastic support for these feasibility studies. It was felt that the Haub School adeptly identified these opportunities and put together strong and realistic feasibility studies that leveraged current strengths and course offerings.

Sincerely,

Dareal Bolimon

Jared Bushman, PhD Chair of the Graduate Council Associate Professor, School of Pharmacy University of Wyoming jbushman@uwyo.edu 307-766-4198

Note: Dr. Temple Stoellinger is the representative of the Haub School to the Graduate Council and was part of the Haub team that drafted and submitted the feasibility studies. Due to the potential for a COI, Dr. Stoellinger abstained from private discussions on the topic of these certificates within the Graduate Council and abstained from the vote on the feasibility studies.

Resolution in Support of the Graduate Certificate in Environment and Natural Resources Law and Policy

WHEREAS, the Haub School has proposed the addition of a graduate certificate in Environment and Natural Resources Law and Policy, as outlined in the attached proposal and feasibility study; and

WHEREAS, the Faculty Senate's Graduate Council (GC) and Academic Planning Committee (APC) have reviewed the proposal, as shown in the attached reports from GC and APC; and

WHEREAS, the GC has recommended approval of the degree program, as shown in the attached report from the GC; and the concerns of the APC have been addressed.

THEREFORE, BE IT RESOLVED by the Faculty Senate of the University of Wyoming that Faculty Senate supports the recommendation of the GC and APC to create a graduate certificate in Environment and Natural Resources Law and Policy.

AUTHENTICATION: The foregoing Faculty Senate Resolution 486, duly adopted by the Faculty Senate of the University of Wyoming under date of April 21, 2025, is hereby transmitted to the President of the University of Wyoming for review in accordance with UW Regulations.

Jeva & Sport almenholtz

Treva E Sprout Ahrenholtz Secretary, Faculty Senate Dated: April 21, 2025


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April 29, 2025

Board of Trustees:

This letter serves as a Letter of Commitment for a new graduate certificate in Environment and Natural Resources (ENR) Law & Policy to be offered by the Haub School of Environment and Natural Resources. The certificate program comprises 9 credit hours of coursework and addresses a pressing need for advanced knowledge of law and policy related to resource management, including public lands, wildlife, water, and energy. The ENR Law & Policy certificate program will be offered through a flexible format to meet the needs of working professionals.

Needs

Environmental law and policy expertise is increasingly critical for federal and state agencies, nonprofits, and private industry. The certificate program is designed to meet the needs of early- to mid-career professionals without committing to a full graduate degree.

Requirements

The course hour requirement for this graduate certificate programs is 9 credit hours. Students will be required to take three three-credit hour courses, with one of these being a required/core class, and the remaining being electives. The certificate program can be completed in as little as nine months or can be completed over 12-18 months.

Resources

No new, additional resources are required to stand up this new certificate program.

Timeline

The present implementation timeline is designed to enable students to enroll in this certificate program in the Fall 2025.

Campus Review

I affirm that the university community, including the Executive Team, Deans and Directors, Faculty Senate, Staff Senate and ASUW, have been provided the opportunity to review and present feedback on the proposed degree program.

Best,

J Scott Tuyen

Scott Turpen Interim Provost

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Request for Authorization: Bachelor of Science in Applied</u> <u>Computing Concurrent Major</u> Hilaire, Dale, Allen, McMillian

 \boxtimes OPEN SESSION

□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

🛛 Yes

🗆 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

 \boxtimes Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The School of Computing (SOC) in the College of Engineering and Physical Sciences has proposed a BS in Applied Computing Degree. After reviews and approval by the faculty senate, and by agreement, the SOC is putting forth a BS in Applied Computing Concurrent Major. This bachelor's degree will be offered concurrently with another major, which will allow students to focus on the practical application of computing techniques to solve real-world problems across diverse fields.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS:

The Notice of Intent was approved by the Academic and Student Affairs Committee and the full Board in November 2024.

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. The Academic and Student Affairs committee will report to the Board on recommended action for approval of the new degree program.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Request for Authorization for the Bachelor of Science in Applied Computing Concurrent Major.

PROPOSED MOTION:

"I move to approve the Request for Authorization for the Bachelor of Science in Applied Computing Concurrent Major."

Feasibility Study for B.S. in Applied Computing

Executive Summary

Degree or Certificate Title: Applied Computing

Level of Degree or Certificate: Bachelors - concurrent major

Delivery Mode(s): on campus

Estimated Startup Cost of Degree: None, existing resources will be utilized to start the program

Anticipated Launch Date: Fall 2025

Description:

The B.S. in Applied Computing (concurrent major) will focus on the practical application of computing techniques to solve real-world problems across diverse fields. The program combines core computing skills with interdisciplinary expertise preparing students to apply computational thinking in areas such as science, social sciences, arts, and business. Through hands-on learning and project-based experiences, students will gain proficiency in programming, data analysis, and problem-solving, equipping them for a range of careers in industries that rely on digital technologies and computational tools.

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Feasibility Study Required Contents:

Overview and Description of Degree or Certificate, Purpose, Strategic Plan Overlay

The objectives of the B.S. degree in Applied Computing (concurrent major) are to provide an accessible program that equips students with practical computing skills and domain (discipline) expertise so that they can analyze real-world problems, design and implement computer-based solutions, and effectively collaborate and communicate with diverse audiences. In short, this degree will produce graduates who can solve practical problems in a wide range of workplace settings using applied computing.

The curriculum leverages the expertise of existing faculty and existing courses within the School of Computing (SoC) and the university by building on courses offered in the Minor in Computing and introducing new courses developed by SoC core and affiliated faculty. The degree also takes advantage of courses available in other disciplines, expanding students' exposure to diverse computing methods and applications. A key component of the degree is its reliance on an area of application—provided by the student's co-major in another field—which ensures students gain domain-specific knowledge and a practical context for applying computing skills. The SoC has and will continue to support faculty efforts from across campus to modify or develop computing-related courses to broaden options even further. The overall structure of the degree is meant to foster an interdisciplinary convergence of coursework and resources, complementing the efforts of units that integrate (or wish to integrate) applied computing methods into their disciplines.

The B.S. in Applied Computing addresses the demand for a digitally literate workforce skilled in computational thinking by creating a new and more accessible degree pathway. Existing computing programs at UW include Applied Software Development, Computer Engineering and Computer Science. The first one is narrowly focused on programming languages, tools, and processes used in software development. The second two focus on theory, algorithms, and the mathematical foundations of computing. These two programs require a series of sequential math-intensive prerequisites, which rightly serve an essential purpose for students who are pursuing these degrees. However, this structure creates barriers and bottlenecks for students who wish to pursue more applied computing degrees. Such barriers can especially impact students from underrepresented groups, who may have had fewer prior opportunities to study foundational topics. In contrast, the B.S. in Applied Computing offers a more flexible curriculum, with modular integration of math essentials and fewer course prerequisites, allowing students to engage with computing concepts earlier and through experiential learning. This approach enables a broader range of students, including those transferring from community colleges, to gain the skills they need to succeed in applied computing degrees.

The demand for professionals who can apply computing skills to solve real-world problems is high and growing. This demand is driven by the increasing digitization of all types of operations and the need to understand and utilize digital information and tools in almost every field. This is true for businesses that have employees with strong applied computing skills who can create new content and experiences, develop innovative solutions, and make data-driven decisions, as well as consider the societal and ethical implications of their computing-related products and actions. Because computing is integral to almost every field, graduates of this degree will have valuable, transferable skills.

The B.S. in Applied Computing (concurrent major) addresses the Mission and strategic plan of the University of Wyoming and the School of Computing. UW's mission states: *As Wyoming's university, we unlock the extraordinary in every person through education, research, innovation, engagement, and service.* The proposed B.S. in Applied Computing empowers students from a diverse range of academic backgrounds and interests to combine critical domain expertise with the beneficial power of computers.

Students will ultimately be prepared to innovate and solve real world challenges enhancing their lives as well as the communities around them. Below are highlights of how this program addresses strategic goals of UW and the SoC.

- Coursework and experiential learning in the program emphasize interdisciplinary applications, allowing students from diverse fields such as science, social science, arts, and humanities to gain computing skills tailored to their disciplinary needs (UW Student Success, Institutional Excellence; SoC provide pathways for more students in computing).
- Flexible entry points related to non-linear and fewer prerequisites allow students, including those transferring from community colleges, to incorporate computing into their primary discipline or career goals. This approach makes computing accessible and relevant to more students (UW Student Success, Supportive Community; SoC provide pathways for more students in computing, increase diversity in computing).
- Industry and research partnerships provide students with hands-on experience in applying computing skills to real-world challenges, positioning them for competitive roles in technologydriven careers. This combination of practical training and industry connections supports the state's initiatives to attract and support tech businesses and drive local innovation (UW – Student Success, Institutional Excellence, Engage with and Serve Wyoming; SoC – establish pipeline of tech-savvy graduates for Wyoming and beyond).

Learning Outcomes

- 1. Design, implement, and evaluate interdisciplinary computing solutions to successfully analyze and address complex real-world, and discipline-specific challenges, such as those in business, humanities, and health sciences.
- 2. Adapt and apply computing principles that emphasize usability, scalability, and integration within applied contexts rather than theoretical advancement.
- 3. Effectively communicate computing solutions to diverse audiences, including technical and nontechnical stakeholders, ensuring clarity, impact, and alignment with industry and societal needs.
- 4. Evaluate ethical, legal, and professional considerations in applied computing practice, making informed decisions that account for domain-specific challenges and responsibilities.
- 5. Collaborate effectively in interdisciplinary teams, applying computing expertise to contribute meaningfully to projects that integrate domain knowledge and computing methodologies.

Curriculum Map and Program Structure

Curriculum Outline: Includes foundational computing methods coupled with interdisciplinary courses focused on the applied use of computational tools for discipline specific problems. Note: This is a concurrent major: i.e students must complete the required hours and coursework in Applied Computing (below) and in their chosen concurrent major.

The anticipated credit breakdown (total = 120 credits):

- <u>Applied Computing Core</u> requirement (18 credits): breadth and depth of computing applications, ethics and society; programming; quantitative thinking; computing practice;
 - COMP 2000 Computing and Society: (2 credits)
 - COMP 2400 Foundations of Programming: (3 credits)
 - COMP 3000 Basic Computing: (3 credits)
 - COMP 3250 Storytelling with Data: (3 credits)
 - COMP 3300 Math Essentials for Applied Computing: (3 credits)
 - COMP 3400 Probability and Practice: (3 credits)
 - COMP 4051 Computing Seminar: (1 credit)

- <u>Experiential Learning</u> requirement (3 credits): undergraduate research; internship; independent study; practicum
 - COMP 4000 Practicum 1: (1-6 credits)
- <u>Applied Computing Elective</u> requirement (15 credits): data visualization and storytelling; data analysis and modeling; software applications; tools and methods; automation, and efficiency; communication and collaboration; and creative and innovative problem-solving;
- <u>Other Major:</u> students must complete the required hours and coursework in their chosen other major.
- <u>University Studies Program (USP)</u> (30 credits)

Example Schedule Generalized - (see Appendix A for examples with existing majors)

Course Code	Course Name	Term Taken	Credits
	First year experience (Saddle Up)	Fall Year 1	1
COMP 2000	Computing and Society (Applied Computing Core)	Fall Year 1	2
	Discipline course 1 (Other major)	Fall Year 1	3
	USP 1 (H)	Fall Year 1	3
	USP 3 (Q)	Fall Year 1	3
	USP 2 (C1)	Fall Year 1	3
COMP 2400	Foundations of Programming [or COSC 1010 or GIST 2190] (Applied	Spring Year 1	3
	Computing Core)		
	Discipline course 2 (Other major)	Spring Year 1	3
	Applied Computing Elective 1	Spring Year 1	3
	USP 4 (C2)	Spring Year 1	3
	USP 5 (PN)	Spring Year 1	3
COMP 3000	Basic Computing (Applied Computing Core)	Fall Year 2	3
	Discipline course 3 (Other major)	Fall Year 2	3
	Discipline course 4 (Other major)	Fall Year 2	3
	Applied Computing Elective 2	Fall Year 2	3
	USP 6 (H)	Fall Year 2	3
*COMP 3300	Math Essentials for Applied Computing (Applied Computing Core)	Spring Year 2	3
	Discipline course 5 (Other major)	Spring Year 2	3
	Discipline course 6 (Other major)	Spring Year 2	3
	Applied Computing Elective 3	Spring Year 2	3
	USP 7 (V)	Spring Year 2	3
COMP 3250	Storytelling with Data (Applied Computing Core)	Fall Year 3	3
	Discipline course 7 (Other major)	Fall Year 3	3
	Discipline course 8 (Other major)	Fall Year 3	3
	Applied Computing Elective 4	Fall Year 3	3
	USP 8 (PN)	Fall Year 3	3
*COMP 3400	Probability and Practice (Applied Computing Core)	Spring Year 3	3
	Discipline course 9 (Other major)	Spring Year 3	3
	Discipline course 10 (Other major)	Spring Year 3	3
	Discipline course 11 (Other major)	Spring Year 3	3
	Applied Computing Elective 5	Spring Year 3	3
COMP 4000	Practicum 1 [or COMP 4950] - (Experiential Learning requirement)	Fall Year 4	3
	Discipline course 12 (Other major)	Fall Year 4	3
	Discipline course 13 (Other major)	Fall Year 4	3
	Discipline course 14 (Other major)	Fall Year 4	3

	Discipline course 15 (Other major)	Fall Year 4	3
COMP 4051	Computing Seminar (Applied Computing Core)	Spring Year 4	1
	Discipline course 16 (Other major)	Spring Year 4	3
	Discipline course 17 (Other major)	Spring Year 4	3
	Discipline course 18 (Other major)	Spring Year 4	3
	USP 9 (C3)	Spring Year 4	3

Applied Computing Core + Experiential Learning (ACC) = 21; Applied Computing Electives (ACE) = 15+ credits; Other Major (OM)

Course Descriptions

NEW Courses for Computing Core:

- COMP 2400 Foundations of Programming: 3 Credit Hours Introduces computational problemsolving across scientific, social, and human domains. Students will learn the foundations of programming and computational thinking motivated by problems from a diverse range of disciplines. Practical applications include dissecting literary texts, investigating historical archives and modeling human-made and naturals systems. No prior programming experience required.
- COMP 3250 Storytelling with Data: 3 Credit Hours Effectively communicating with data is an essential skill that involves technical and communications skills. This course focuses on developing both the technical and communication skills needed to generate effective data visualizations that tell compelling stories. This will all be done using the open-source programming language R.
- COMP 3300 Math Essentials for Applied Computing: 3 Credit Hours Introduces essential mathematical tools (e.g. derivatives, matrix algebra and graphs) used in applied computing, focusing on problem-solving with code instead of hand-written calculations. Students learn to use these tools to understand and build complex ideas and algorithms. Coding projects address real-world applications including social and biological data sets and ML/AI. Suitable for students across disciplines.
- COMP 3400 Probability and Practice: 3 Credit Hours This course introduces the key concepts of data distribution and sampling and using mathematical tools and probabilistic modeling to build simulations of diverse applications. Students will use real-world data to predict the likelihood of future events or outcomes, gaining a deeper understanding of our world.
- COMP 4051 Computing Seminar: 1 Credit Hours Interdisciplinary seminar in computing. Students interact with presenters, discuss common literature and present their own research and applied projects. Seminar topics will be presented by a combination of internal faculty, UW Derecho Professors, School of Computing Faculty Fellows and Graduate Computing Scholars, visiting scholars, co-sponsored guests, and industry experts.

The above courses will meet elective and in some cases core requirements for other SoC programs (existing and new). Other units may wish to utilize them to meet their degree requirements, as applicable. In addition, there are several courses of interest being considered for the proposed B.S. in Data Science degree that would serve as applied computing electives for the B.S. in Applied Computing. These courses include 2000-level Databases course; Survey of AI Applications; Data Mining; and Data Wrangling in Python. The plan is to develop these as new, modified or cross-listed courses with partnering units for the B.S. in Data Science degree (e.g. the Department of Electrical Engineering and Computer Science and the Department of Mathematics and Statistics). COMP 2400, COMP 3250 and COMP 4051 have successfully progressed through the CAP process (Fall 2024).

Possible Modes of Delivery:

To be offered on the UW Main campus. This fits best with current faculty resources and with the problem-based learning and experiential nature of course activities. The Market Analysis suggests that there is a significant opportunity for providing online learning options for this degree in Wyoming. The SoC has secured grant funding for the installation of a teaching space in the SI Building to utilize SAGE3 (Smart Amplified Group Environment) on the UW campus; a similar installation at UW Casper is also being pursued. SAGE3 is a software platform designed for real-time interactive information and visualization sharing that can be used for collaborative research and instruction. Two SoC faculty members will be piloting the use of this system as a teaching platform in Spring 2025. This may allow for developing a hyflex learning environment, thereby paving the way for future online sections of SoC courses. Additional resources would likely be needed in the form of pedagogical training, course module development, and support staff (graduate students, learning assistants, team teaching) to be able to deliver curriculum using best practices for hyflex modality.

Assessment Plan

Below are assessment strategies for each of the 5 learning outcomes for the B.S in Applied Computing:

- Design, implement, and evaluate interdisciplinary computing solutions to successfully analyze and address complex real-world problems.
 Assessment Methods: Projects, case studies, and portfolios Evaluation Criteria: Effectively analyzes problems, selects suitable tools and methods, builds effective solutions, and evaluates outcomes with reflections
- 2. Apply computer science principles and domain knowledge to produce effective solutions across disciplines.

Assessment Methods: Written exams, coding assignments, case-specific problem sets, and practical lab assignments.

Evaluation Criteria: Demonstrates core knowledge, applies computing methods to specific challenges, and develops solutions that meet interdisciplinary needs.

3. Communicate computing solutions effectively and responsibly across various disciplines and professional contexts.

Assessment Methods: Formal presentations, project reports, and peer reviews. Evaluation Criteria: Clearly conveys computing concepts to diverse audiences, adapts communication style as needed, and collaborates well with others in interdisciplinary settings.

4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

Assessment Methods: Analysis of ethical case studies, project audits for ethical compliance, reflective essays, and discussions on professional scenarios.

Evaluation Criteria: Identifies ethical issues, addresses privacy and legal impacts, and makes sound judgments in line with ethical principles.

 Function effectively as a member or leader of a team engaged in applied computing activities appropriate to interdisciplinary contexts. Assessment Methods: Group projects, peer reviews, professional skills assessments, and selfreflections.

Evaluation Criteria: Contributes to team goals, demonstrates adaptability, provides constructive feedback, and reflects on team effectiveness.

Degree Program Evaluation

The Applied Computing degree program evaluation plan will employ a combination of internal and external assessment methods, gathering artifacts and feedback from students, alumni, employers, and

industry partners. Internal metrics will include assessments of learning outcomes, student enrollment, retention, and persistence data, and graduate exit surveys, while external metrics will be derived from alumni tracking, alumni surveys, and employer surveys to gauge the program's real-world impact. Advisory board input will provide additional oversight, ensuring that the program's mission, objectives, and curriculum remain aligned with current standards and evolving industry needs. Analysis of post-program employment or graduate study outcomes will also provide insight into program effectiveness.

Substantive Change Determination

Response from HLC New Degree Program Screening Form: the Higher Learning Commission (HLC) has determined that no individual approval is needed for the BS in Applied Computing program.

New Resources Required

- Faculty and instructional staffing: The School of Computing has faculty already teaching core and elective courses in support of the Minor in Computing. These existing courses meet similar requirements for the B.S. in Applied Computing. Teaching capacity is sufficient to cover all new core requirements and several elective options in the B.S. in Applied Computing. Eight joint faculty hires have been made since Fall 2023. Each hire has teaching responsibilities in SoC programs and will meet the needs of the B.S. Applied Computing degree. Additional joint hires are in planned or in progress.
- **Program administration and staff support:** The SoC has a program coordinator and adequate staff support to ensure the appropriate scheduling of courses. A new Academic Advising Professional dedicated to SoC programs was recently hired.
- **Technology:** Resources related to technology are sufficient for the launch of this program. Future technological needs will be determined along with content developments. Program administration will encourage using research funding sources to maintain program technology that supports success.
- Library and digital resources: See the above technology considerations that will be applied equally to needed resources here.
- Marketing: The SoC has a marketing coordinator to advocate for adequate resources needed to promote, recruit, and maintain program enrollment. The SoC lead will work with Institutional Marketing to develop an appropriate and affordable marketing plan for all external resource needs.
- **Support:** Total projected additional revenues due to added course requirements, assuming a minimum of 10 students per year, is calculated below:

Increased tuition generation per year (based on AY24-25 rates):

- Per resident student in program at \$5,190 per year (block tuition)
- Per non-resident students in program at \$21,600 (block tuition)
- Estimate: 5 resident students and 5 non-resident each year = \$133,950

Summary of Demand Statistics*

The Office of Online & Continuing Education generated a market analysis from Gray Associates' data, July 2024 (see the Appendix B for entire report). Below is a brief summary of that report with some added context.

The B.S. degree in Applied Computing addresses a growing need in an emerging field where direct comparisons are limited. This program offers a new pathway for students interested in computing

careers, especially graduates from regional schools and international students. While it is challenging to assess specific demand for Applied Computing, general demand for computer-related degrees is strong and continues to grow nationwide. Although some Applied Computing programs exist as certificates or concentration areas, most are embedded within traditional Computer Science programs, and the distinct focus of this program at the University of Wyoming presents a unique opportunity to meet this demand with a more applied, accessible, interdisciplinary approach.

Educational Market & Demand

A market analysis reveals robust growth in computer and information technology occupations, with projected employment growth at 9% or higher from 2023 to 2033—significantly above the national average of 4% across all occupations (U.S. Bureau of Labor Statistics). Regional data highlights a strong transfer market for computing, including significant interest in associate degrees and undergraduate certificates. Wyoming has a relatively small market share in regional completions, suggesting there is an opportunity to increase completions. CIP Code data shows increasing completion rates in Computer Science, IT, and related fields across comparable institutions, particularly in online formats. From 2020 to 2022, the completion rates for regional online bachelor's programs surged, suggesting there could be a strategic advantage of offering online options at UW to attract students from diverse geographic locations.

Employment Trends & Projections

In the computing field, job roles such as programming, IT, cybersecurity, and data management show stable demand and growth, *especially in interdisciplinary applications*. Wyoming's job market aligns with national trends. By addressing these workforce needs, the Applied Computing program can support both state and national employment trends.

Graduate Salary & Post-Completion Outcomes

The job market for computing graduates is promising, with competitive entry-level salaries and increasing job placements. Flexible, accessible program options have shown strong post-graduation employment rates, which suggests that UW's offering of an Applied Computing program with can effectively meet Wyoming's workforce requirements and appeal to students seeking flexible educational paths.

Additional Context

To add context, we extracted information from the Bureau of Labor Statistics Employment Projections data (Table 1). We selected occupations that rate computing and information technology skills as *very important* to *extremely important* (skill rating 3.5-5.0), and project *+6.0% or greater* employment growth (2023-2033; <u>https://www.bls.gov/emp/documentation/definitions.htm</u>). We excluded engineering and computer science occupations. The purpose is to highlight the range of interdisciplinary and more applied employment occupations and their respective current wages. Graduates of the B.S. in Applied Computing would be prepared to fill positions like these in Wyoming and beyond.

Table 1. Select Occupation Titles, Their Predicted Employment Growth (2023-2033) and Median Annual Wages (2023). All Rate the Import of Computing and Information Technology Skills as Very Important or Extremely Important.

2023 National Employment Matrix title	Employment change (%)	Median annual wage
	2023–33	(\$) 2023
Data scientists	36.0	108,020
Information security analysts	32.7	120,360
Medical and health services managers	28.5	110,680
Operations research analysts	23.0	83,640
Actuaries	21.8	120,000
Logisticians	19.3	79,400
Financial managers	16.5	156,100
Occupational health and safety specialists	14.9	81,140
Forensic science technicians	13.6	64,940
Management analysts	10.6	99,410
Construction managers	9.1	104,900
Materials scientists	8.7	106,160
Financial risk specialists	8.4	106,090
Market research analysts and marketing specialists	8.3	74,680
Marketing managers	8.2	157,620
Social and community service managers	8.2	77,030
Producers and directors	8.0	82,510
Animal scientists	7.9	70,140
Human resources specialists	7.9	67,650
Architects, except landscape and naval	7.8	93,310
Chemists	7.6	84,680
Natural sciences managers	7.5	157,740
Dietitians and nutritionists	7.4	69,680
Environmental scientists and specialists, including health	7.3	78,980
Project management specialists	7.2	98,580
Soil and plant scientists	7.2	68,240
Compensation, benefits, and job analysis specialists	7.0	74,530
Health education specialists	7.0	62,860
Mathematical science occupations, all other	6.9	70,620
Microbiologists	6.7	85,470
Biological technicians	6.6	51,430
Securities, commodities, and financial services sales agents	6.6	76,900
Cartographers and photogrammetrists	6.3	76,210
Social science research assistants	6.3	56,400
Administrative services managers	6.2	106,470
Registered nurses	6.0	86,070

APPENDIX A. Example Schedules of B.S. in Applied Computing concurrent major with OTHER MAJOR

Course Code	Course Name	Term Taken	Credits
	First year experience (Saddle Up)	Fall Year 1	1
COMP 2000	Computing and Society (ACC)	Fall Year 1	2
GEOL 1100	Physical Geology (OM)	Fall Year 1	4
	USP H	Fall Year 1	3
	USP C1	Fall Year 1	3
GEOL 2120	Quantitative GeoMethods (OM), (USP Q)	Fall Year 1	3
COMP 2400	Foundations of Programming (ACC)	Spring Year 1	3
GEOL 2010	Mineralogy (OM)	Spring Year 1	4
CHEM 1020	General Chemistry I (UPS PN)	Spring Year 1	4
	USP C2	Spring Year 1	3
COMP 3000	Basic Computing (ACC)	Fall Year 2	3
GEOL 2000	Geochemical Cycles and the Earth System (OM)	Fall Year 2	4
GIST 2310	Introduction to GIS (ACE)	Fall Year 2	4
GEOL 2100	Stratigraphy and Sedimentation (OM)	Fall Year 2	4
*COMP 3300	Math Essentials for Applied Computing (ACC)	Spring Year 2	3
GIST 3140	Introduction to Remote Sensing (ACE)	Spring Year 2	3
PHYS 1110	General Physics (OM), (USP PN)	Spring Year 2	4
MATH 2200	Calculus I (OM)	Spring Year 2	4
COMP 3250	Storytelling with Data (ACC)	Fall Year 3	3
*COMP 3400	Probability and Practice (ACC)	Fall Year 3	3
GEOL 3005	Principles of Geophysics (OM)	Fall Year 3	4
GEOL 2020	Introduction to Petrology (OM)	Fall Year 3	4
CHEM 1030	General Chemistry II (OM)	Spring Year 3	3
GEOG 4000	Terrain Analysis (ACE)	Spring Year 3	3
GEOL 4610	Structural Geology and Tectonics (OM)	Spring Year 3	4
	USP H	Spring Year 3	3
	USP V	Spring Year 3	3
GEOL 4717	Experiential Learning (Geology Summer Field Course) (OM)	Summer	6
GEOL 4250	Mathematical Geosciences (OM)	Fall Year 4	3
GEOL 3250	Computers and Geoscience (OM), (ACE)	Fall Year 4	4
GEOL/ENR	Environmental Data Analysis (OM), (ACE)	Fall Year 4	Л
4525			4
COMP 4000	Experiential Learning (ACC)	Spring Year 4	3
COMP 4051	Computing Seminar(ACC)	Spring Year 4	1
GEOL 3550	Natural Hazards and Society (OM)	Spring Year 4	3
GEOL 3000+	Upper level Geology Elective	Spring Year 4	4
GEOL 4820	Capstone (OM), (USP C3)	Spring Year 4	3

Applied Computing concurrent major with B.S. in Geology

Applied Computing Core + Experiential Learning (ACC) = 21; Applied Computing Electives (ACE) = 15+ credits; Other Major (OM)

Course Code	Course Name	Term Taken	Credits
	Saddle Up	Fall Year 1	1
COMP 2000	Computing and Society (ACC)	Fall Year 1	2
	Language requirement (OM), (USP H)	Fall Year 1	4
	USP PN	Fall Year 1	3
	USP COM1	Fall Year 1	3
	USP Q	Fall Year 1	3
COMP 2400	Foundations of Programming (ACC)	Spring Year 1	3
HIST 1110	Western Civilization I (OM)	Spring Year 1	3
ART 1115	Digital Media (ACE)	Spring Year 1	3
	USP COM 2	Spring Year 1	3
	Language requirement (OM), (USP H)	Spring Year 1	4
COMP 3000	Basic Computing (ACC)	Fall Year 2	3
HIST 1211	US to 1865 (OM)	Fall Year 2	3
ITEC 2360	Teaching with Technology (ACE)	Fall Year 2	3
HIST 1120	Western Civilization II (OM)	Fall Year 2	3
	USP PN	Fall Year 2	3
*COMP 3300	Math Essentials for Applied Computing (ACC)	Spring Year 2	3
GIST 2310	Introduction to GIS (ACE)	Spring Year 2	4
HIST 1221	US from 1865 (OM)	Spring Year 2	3
	USP V	Spring Year 2	3
	Language requirement (OM)	Spring Year 2	3
*COMP 3400	Probability and Practice (ACC)	Fall Year 3	3
COMP 3250	Storytelling with Data (ACC)	Fall Year 3	3
HIST 3020	Historical Methods (OM)	Fall Year 3	3
HIST 2050	Introduction to Public History (OM)	Fall Year 3	3
HIST 3000 +	Upper level history elective (OM)	Fall Year 3	3
HIST 3000	Secret History of Science (OM)	Spring Year 3	3
HIST 2070	Introduction to Museology (OM)	Spring Year 3	3
GIST 2110	Techniques in Cartography (ACE)	Spring Year 3	3
HIST 3000 +	Upper level history elective (OM)	Spring Year 3	3
	Language requirement (OM)	Spring Year 3	3
COMP 4000	Experiential Learning (ACC)	Fall Year 4	3
HIST 4412	Global Environment History (OM)	Fall Year 4	3
COMP XXXX	Survey of AI Applications (ACE)	Fall Year 4	3
HIST 3000 +	Upper level history elective (OM)	Fall Year 4	3
COMP 4051	Computing Seminar (ACE)	Spring Year 4	1
HIST 4475	American Environmental History (OM)	Spring Year 4	3
HIST 4030	Senior Capstone (OM), (USP COM 3)	Spring Year 4	3
HIST 3000 +	Upper level history elective (OM)	Spring Year 4	3
HIST 3000 +	Upper level history elective (OM)	Spring Year 4	3

Applied Computing concurrent major with B.A in History

Applied Computing Core + Experiential Learning (ACC) = 21; Applied Computing Electives (ACE) = 15+ credits; Other Major (OM)

Course Code	Course Name	Term Taken	Credits
	First year experience (Saddle Up)	Fall Year 1	1
COMP 2000	Computing and Society (ACC)	Fall Year 1	2
ECON 1010	Principles of Macroeconomics (OM)	Fall Year 1	3
	USP H	Fall Year 1	3
MATH XXXX	Calculus I or Business Calculus – (OM), (USP Q)	Fall Year 1	4
ENGL 1010	College Composition and Rhetoric USP COM 1	Fall Year 1	3
COMP 2400	Foundations of Programming (ACC)	Spring Year 1	3
ACCT 2010	Principles of Accounting I (OM)	Spring Year 1	3
FIN 2100	Principles of Finance (OM)	Spring Year 1	3
ECON 1020	Principles of Microeconomics (OM)	Spring Year 1	3
	USP 3 COM 2	Spring Year 1	3
*COMP 3300	Math Essentials for Applied Computing (ACC)	Fall Year 2	3
ACCT 2020	Principles of Accounting II (OM)	Fall Year 2	3
STAT 2050	Fundamentals of Statistics (OM)	Fall Year 2	4
MKT 2100	Intro to Marketing (OM)	Fall Year 2	3
	USP H	Fall Year 2	3
COMP 3000	Basic Computing (ACC)	Spring Year 2	3
DSCI 2100	Intro to Operations and Supply Chain Management (OM)	Spring Year 2	3
IMGT 2400	Intro to Information Management (OM), (ACE)	Spring Year 2	3
	USP V	Spring Year 2	3
	USP PN	Spring Year 2	3
*COMP 3400	Probability and Practice (ACC)	Fall Year 3	3
COMP 3250	Storytelling with Data (ACC)	Fall Year 3	3
MKT 4240	Consumer Behavior (OM)	Fall Year 3	3
COMP 3XXX	Introduction to Databases (ACE)	Fall Year 3	3
IMGT 4500	Data and Business Analytics (OM), (ACE)	Fall Year 3	3
MATH XXXX	Math Applications for Business or Calc II (OM)	Spring Year 3	3
MGT 2010	Legal Environment of Business (OM)	Spring Year 3	4
MKT 4250	Digital Marketing (OM), (ACE)	Spring Year 3	3
	Unrestricted elective	Spring Year 3	3
COMP 4051	Computing Seminar (ACC)	Spring Year 3	1
COMP 4000	Experiential Learning (ACC)	Fall Year 4	3
MKT 4520	Marketing Research and Analysis (ACE)	Fall Year 4	3
MGT 2100	Management and Organizations (OM)	Fall Year 4	3
	Upper Level Business elective (OM)	Fall Year 4	3
MKT 4450	Advanced Marketing Management (OM)	Spring Year 4	3
	USP COM3	Spring Year 4	3
MGT 4800	Business Strategy and Policy (OM)	Spring Year 4	3
MKT 3000+	Upper Level MKT elective (OM)	Spring Year 4	3
	Upper Level Business elective (OM)	Spring Year 4	3

Applied Computing concurrent major with B.S.B in Marketing

Applied Computing Core + Experiential Learning (ACC) = 21; Applied Computing Electives (ACE) = 15+ credits; Other Major (OM)

APPENDIX B. Complete Executive Summary of Demand Statistics



New Academic Program Feasibility Study

Bachelor of Computing

Executive Summary of Demand Statistics*

Describe and outline:

- 1. Market area and primary target markets.
- 2. Educational market and student demand statistics, including peer comparisons of the size of enrollment, completions, and size trajectory (growth, decline) of comparator programs.
- 3. Employment trends and projections given core competencies of the degree or certificate.
- 4. Graduate salary trends and other post-completion trends.

*available from Gray Decision Intelligence data subscription

Request from Dr. Beth McMillian, School of Computing

Prepared by Jayne Pearce, Office of Online & Continuing Education

23 July 2024

Limitation:

The Gray Decision Intelligence database subscription requires a CIP Code match to produce data. There is not a CIP Code titled **Computing**. The request from Dr. McMillian is two-fold. First, computing related CIP Codes: a) Information Technology 11.0103; b) Computer Programming - Programmer 11.0201; c) Computer Science 11.0701; d) Information Science - Studies 11.0401; e) Modeling, Virtual Environments & Simulation 11.0804; f) Computer Software & Media, Other 11.0899; g) Computer Engineering, General 14.0901; and h) Data Processing & Data Technology - Technician 11.0301. Second, multidisciplinary attempting to meet the interdisciplinary aspect of this proposed new bachelor's degree: a) Multi –

Interdisciplinary Studies, General 30.0000; b) Science, Technology & Society 30.1501; c) Human Computer Action 30.3101; d) Computational Science 30.3001; and e) N/A 32.0104.

1) Market area and primary target markets-

-

a) Below reveals the size of the student transfer market regionally and nationally. It includes associate and undergraduate certificate completions. Gray DI is not able to separate undergraduate certificates by lower and or upper division courses, therefore all are included. Given the significant regional number of completions at the undergraduate certificate level, the School of Computing should consider designing the new computing degree program with undergraduate certificate options embedded within the program.

2-digit CIP Code 11 Computer & Information Sciences and Support Services Instructional programs that focus on the computer and information sciences and prepare individuals for various occupations in information technology and computer operations fields.											
National Completions for all 11 Computing, Associates &	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total		
Undergraduate Certificates Completions	18,591	60,589	79,180	31,745	52,478	84,223	32,840	55,459	88,299		
СО	312	946	1,258	956	565	1,521	842	759	1,601		
ID	46	303	349	53	371	424	121	271	392		
MT	3	129	132	1	89	90	3	99	102		
ND	13	60	73	29	65	94	18	91	109		
NE	103	270	373	194	282	466	170	259	429		
SD	78	204	282	76	158	234	85	164	249		
UT	161	1,261	1,422	17	1,879	1,896	90	3,323	3,413		
WY	20	73	93	38	68	106	28	55	83		
REGIONAL TOTAL	REGIONAL TOTAL 736 3,246 3,982 1,364 3,477 4,831 1,357 5,021 6,378										

Regional Associate	Completions										
Program Completions	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total		
11.0701 Computer Science; Salt Lake Community College	158	0	158	0	170	170	0	164	164		
11.0701 Computer Science; Weber State University	0	107	107	0	159	159	76	68	144		
11.0701 Computer Science; Utah Valley University	0	82	82	0	153	153	0	137	137		
11.0701; Computer Science; Metropolitan Community College Area	36	58	94	116	0	116	94	10	104		

11.0103; Information Technology; BYU Idaho	4	2	6	21	17	38	67	10	77
11.0701; Computer Science; Southeast Community College, NE	0	53	53	0	74	74	0	75	75
11.0701; Computer Science; Arapahoe Community College, CO	0	15	14	0	11	11	0	74	74
11.0701; Computer Science; Front Range Community College	25	33	58	36	32	68	37	32	69
11.0103; Information Technology; Colorado Technical University, Colorado Springs	24	1	25	30	0	30	31	0	31
11.0701; Computer Science; Lake Area Technical College, SD	5	20	25	16	9	25	24	6	30
Regional				(Completions				
Undergraduate									
Undergraduate Certificate Program Completions	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
Certificate Program Completions 11.0201; Computer Programming; Utah Valley University	2020 Online	2020 On - ground 17	2020 Total 17	2021 Online	2021 On - ground 49	2021 Total 49	2022 Online	2022 On - ground 535	2022 Total
Certificate Program Completions 11.0201; Computer Programming; Utah Valley University 11.0101; Computer Science & Information Sciences, General; Utah Valley University	2020 Online 0	2020 On - ground 17 15	2020 Total 17 15	2021 Online 0	2021 On - ground 49 44	2021 Total 49 44	2022 Online 0	2022 On - ground 535 462	2022 Total 535 462
Certificate Program Completions 11.0201; Computer Programming; Utah Valley University 11.0101; Computer Science & Information Sciences, General; Utah Valley University 11.0901; Computer System Networking, Telecom; Utah Valley University	2020 Online 0 0	2020 On - ground 17 15 47	2020 Total 17 15 47	2021 Online 0	2021 On - ground 49 44 73	2021 Total 49 44 73	2022 Online 0 0	2022 On - ground 535 462 433	2022 Total 535 462 433
Certificate Program Completions 11.0201; Computer Programming; Utah Valley University 11.0101; Computer Science & Information Sciences, General; Utah Valley University 11.0901; Computer System Networking, Telecom; Utah Valley University 11.0101; Computer Science & Information Sciences, General; Salt Lake City Community College	2020 Online 0 0	2020 On - ground 17 15 47 437	2020 Total 17 15 47 437	2021 Online 0 0	2021 On - ground 49 44 73 454	2021 Total 49 44 73 454	2022 Online 0 0	2022 On - ground 535 462 433 368	2022 Total 535 462 433 368

11.0801; Web/Digital/Multi- Media; Utah Valley University	0	1	1	0	2	2	0	223	223
11.0202; Specific Applications & Computer Programming; Turing School of Software & Design, CO	0	0	0	150	0	150	131	0	131
11.0201; Computer Programming; Weber State University	0	18	18	0	105	105	0	124	124
11.0205; Computer Programming, Specific Applications; Turing School of Software & Design, CO	0	0	0	167	0	167	113	0	113
11.0101; Computer Science & Information Sciences, General; Arapahoe Community College, CO	0	7	7	0	0	0	0	111	111

b) The below chart reveals the number of Wyoming residents who from 2018-2022 completed a bachelor's degree in Computer and Information Sciences & Support Service Programs (2-digit CIP Code 11) via an online program at a higher education institution outside of Wyoming. It appears cybersecurity/information assurances and information technology programs are the most preferred by Wyoming residents. The chart also reveals that 163 Wyoming residents completed a bachelor degree in a computer related field over five years outside of Wyoming or not at UW.

Comput	Ctata	C Digit CID Code & Drogram Title		& Program Title					
Campus State		6 Digit CIP Code & Program Title	2018	2019	2020	2021	2022		
American Public University	WV	11.0103 Information Technology	1	1	1	1	1		
BYU	ID	11.0103 Information Technology	0	0	0	0	1		
Colorado Technical University	CO	11.0103 Information Technology	1	1	1	1	1		
CSU Global Campus	СО	11.0103 Information Technology	3	3	3	3	3		
University of Phoenix, Arizona	AZ	11.0103 Information Technology	1	1	1	1	1		
Western Governors University	UT	11.0103 Information Technology	3	4	5	5	5		
BYU	ID	11.0201 Computer Programming	0	0	0	0	1		
Western Governors University	UT	11.0201 Computer Programming	1	2	3	4	4		
Western Governors University	UT	11.0202 Computer Programming, Specific Applications	1	0	0	0	0		
BYU	ID	11.0701 Computer Science	1	1	1	1	1		
Colorado Technical University	CO	11.0701 Computer Science	0	0	0	0	1		

Oregon State University	OR	11.0701 Computer Science	1	1	1	1	0
Park University	MO	11.0701 Computer Science	2	2	1	1	1
Southern New Hampshire University	NH	11.0701 Computer Science	1	1	1	0	2
Western Governors University	UT	11.0701 Computer Science	0	0	1	3	5
Western Governors University	UT	11.0802 Data Modeling/Warehousing & Database Administration	0	0	0	1	1
Western Governors University	UT	11.0902 Computer Systems Networking and Telecommunications	0	0	0	1	2
Western Governors University	UT	11.1001 Network & System Administration	1	1	1	0	0
Western Governors University	UT	11.1002 System Networking & LAN/WAN Management	0	0	2	4	3
American Public University	WV	11.1003 Cybersecurity/Information Assurances	1	1	1	1	1
Colorado Technical University	CO	11.1003 Cybersecurity/Information Assurances	0	0	1	0	0
Western Governors University	UT	11.1003 Cybersecurity/Information Assurances	4	7	8	8	8
American Public University	WV	11.1005 Information Technology Project Management	1	1	1	1	1
			23	27	33	37	43
				Т	OTAL 16	3	

c) In the computing field at the bachelor level Wyoming or the University of Wyoming holds a very small percentage of the regional bachelor market. Wyoming or the University of Wyoming did not offer a computing program online in 2022 while there were 5,759 online bachelor completions regionally. UW had 33 completions in 2022 in the computing field while there were 4,475 bachelor completions regionally offered on campus/on-ground.

National CIP Code 11				Bach	elor Comple	tions			
Computer and Information	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
Sciences and Support Services	15,596	86,173	101,769	23,916	85,950	109,866	21,524	92,337	113,861
СО	1,086	1,146	2,232	1,344	872	2,216	957	1,599	2,516
ID	177	405	582	162	358	520	379	384	763
MT	1	141	142	0	126	126	0	144	144
ND	3	177	180	26	161	187	22	144	166
NE	269	410	679	432	401	833	385	385	770
SD	92	236	328	100	265	365	84	246	330
UT	2,884	1,532	4,416	3,890	1,534	5,424	3,932	1,540	5,472
WY	0	44	44	0	46	46	0	33	33
REGIONAL TOTAL	4,512	4,091	8,603	5,954	3,763	9,717	<mark>5,759</mark>	<mark>4,475</mark>	<mark>10,194</mark>

d) Below are the number of bachelor completions via the requested CIP Codes in the nation

Completions

Requested CIP Code program review	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
11.0201 Computer Programming - Programmer, General	543	850	1,393	1,106	765	1,871	1,113	887	2,000
11.0701 Computer Science	3,393	58,326	61,719	6,560	59,644	66,204	5,470	63,805	69,275
11.0401 Information Science - Studies	1,915	7,719	9,634	2,553	7,184	9,737	2,480	11,098	13,578
11.0103 Information Technology	4,433	7,720	12,153	6,265	6,978	13,243	5,480	8,098	13,578
11.0804 Modeling, Virtual Environments & Simulation	26	436	462	58	441	499	37	505	542
TOTAL	10,310	75,051	85,361	16,542	75,012	91,554	14,580	84,393	98,973
11.0899 Computer Software and Media Applications, Other	91	624	715	360	276	636	121	689	810
14.0901 Computer Engineering, General	49	9,730	9,779	162	10,044	10,206	60	9,902	9,962
11.0301 Data Processing and Data Processing Technology - Technician	21	147	168	64	106	170	30	154	184
TOTAL	161	10,501	10,662	586	10,426	11,012	211	19,745	19,956
						I			
TOTAL	10,310	75,051	85,361	16,542	75,012	91,554	14,580	84,393	98,973
TOTAL	161	10,501	10,662	586	10,426	11,012	211	19,745	19,956
COMPUTING RELATED PROGRAMS	10,471	85,552	96,023	17,128	85,438	102,566	14,791	104,138	118,929
	1		I	1		I			
30.0000 Multi - Interdisciplinary Studies, General	1,485	5,910	7,395	3,463	4,347	7,810	2,323	5,121	7,444
30.1502 Science, Technology and Society	0	853	853	0	861	861	0	837	837
30.3101 Human Computer Interaction	348	277	625	310	308	618	498	376	874
30.3001 Computational Science N/A	0	0	0	0	0	0	0	0	0

32.0104 N/A	0	0	0	0	0	0	0	0	0
Multi/Inter- Disciplinary TOTAL	1,833	7,040	8,873	3,773	5,516	9,289	2,821	6,334	9,155

e) Below is a view of bachelor completions of the requested CIP Code computer programs at the regional level.

Bachelor 11.0201				(Completions				
Computer Programming, General	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
TOTAL (National)	543	850	1,393	1,106	765	1,871	1,113	887	2,000
CO-zero completions	0	0	0	0	0	0	0	0	0
ID	0	0	0	0	0	0	138	20	158
MT-zero completions	0	0	0	0	0	0	0	0	0
ND-zero completions	0	0	0	0	0	0	0	0	0
NE	49	5	54	67	5	72	56	4	60
SD-zero completions	0	0	0	0	0	0	0	0	0
UT	377	41	378	625	26	651	619	31	650
WY-zero completions	0	0	0	0	0	0	0	0	0
Regional Totals	426	46	<mark>432</mark>	692	31	723	813	55	<mark>868</mark>
Bachelor 11.0701		[(Completions	1			
General	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
TOTAL (National)	3,393	64,326	67,719	6,560	59,644	66,204	5,484	63,791	69,275
со	185	967	1,152	572	678	1,250	222	1,326	1,548
ID	114	281	395	95	255	350	105	276	381
MT	1	134	135	0	122	122	0	136	136
ND	2	168	170	19	146	165	16	134	150
NE	42	268	310	59	266	325	61	268	329
SD	22	122	144	28	146	174	21	120	141
UT	135	784	919	459	764	1,223	698	728	1,426
WY	0	44	44	0	46	46	0	33	33
Regional Totals	501	2,768	<mark>3,269</mark>	1,232	2,423	3,655	1,123	3,021	<mark>4,144</mark>
Bachelor 11.0401					Completions				
Information	2020	2020 On -	2020	2021	2021 On -	2021	2022	2022 On	2022
TOTAL (Netional)	Online	ground	Total	Online	ground	Iotal	Online	- ground	Iotal
	1,912	7,719	9,034	2,553	7,184	9,737	2,480	7,100	9,585
	0	65	65	0	83	83	0	/4	74
	0	21	21	0	0	0	0	0	U
IVIT-zero completions	0	0	0	0	U	0	0	0	0
ND	U	U	U	1	1	2	1	1	2

NE	17	73	90	32	59	91	17	44	61
SD	8	10	18	9	12	21	5	9	14
UT	0	265	265	0	177	177	0	144	144
WY-zero completions	0	0	0	0	0	0	0	0	0
Regional Totals	25	434	<mark>459</mark>	42	332	374	23	272	<mark>295</mark>

Bachelor 11.0103					Completions				
Information Science/Studies	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
TOTAL (National)	1,915	7,719	9,634	2,553	7,184	9,737	2,480	7,100	9,585
СО	0	65	65	0	83	83	0	74	74
ID	0	21	21	0	0	0	0	0	0
MT-zero completions	0	0	0	0	0	0	0	0	0
ND	0	0	0	1	1	2	1	1	2
NE	17	73	90	32	59	91	17	44	61
SD	8	10	18	9	12	21	5	9	14
UT	0	265	265	0	177	177	0	144	144
WY-zero completions	0	0	0	0	0	0	0	0	0
Regional Totals	25	434	<mark>459</mark>	42	332	374	23	272	<mark>295</mark>

Bachelor 11.0804 Modeling, Virtual		Completions										
Environments & Simulation	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total			
TOTAL (National)	26	438	464	58	441	499	37	505	542			
СО	0	19	19	0	16	16	0	11	11			
ID	0	0	0	9	7	16	0	21	21			
MT-zero completions	0	0	0	0	0	0	0	0	0			
ND-zero completions	0	0	0	0	0	0	0	0	0			
NE-zero completions	0	0	0	0	0	0	0	0	0			
SD-zero completions	0	0	0	0	0	0	0	0	0			
UT	0	18	18	0	22	22	0	19	19			
WY-zero completions	0	0	0	0	0	0	0	0	0			
Regional Totals	0	37	<mark>37</mark>	9	45	54	0	51	<mark>51</mark>			

Bachelor 11.0899 Computer Software	Completions										
& Media Applications, Other	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total		
TOTAL (National)	91	624	715	360	276	636	121	689	810		
CO-zero completions	0	0	0	0	0	0	0	0	0		
ID-zero completions	0	0	0	0	0	0	0	0	0		
MT-zero completions	0	0	0	0	0	0	0	0	0		
ND-zero completions	0	0	0	0	0	0	0	0	0		
NE-zero completions	0	0	0	0	0	0	0	0	0		

SD-zero completions	0	0	0	0	0	0	0	0	0
UT	0	18	18	0	11	11	0	14	14
WY-zero completions	0	0	0	0	0	0	0	0	0
Regional Totals	0	18	<mark>18</mark>	9	11	11	0	14	<mark>14</mark>

Bachelor 14.0901					Completions				
Computer Engineering, General	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
TOTAL (National)	49	9,730	9,779	162	10,044	10,206	60	9,902	9,962
СО	4	59	63	0	52	52	2	84	86
ID	0	29	29	19	25	44	0	29	29
MT	0	24	24	0	21	21	0	17	17
ND	0	33	33	0	35	35	0	22	22
NE	0	40	40	0	43	43	0	38	38
SD	0	15	15	0	8	8	0	17	17
UT	0	131	131	0	113	113	0	87	87
WY	0	11	11	0	8	8	0	12	12
Regional Totals	4	342	<mark>346</mark>	19	305	324	2	306	<mark>308</mark>

Bachelor 11.0301	Completions								
Data Processing Technology	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
TOTAL (National)	21	147	168	64	106	170	30	154	184
СО	0	0	0	0	0	0	0	0	0
ID	0	0	0	0	0	0	0	0	0
MT	0	0	0	0	0	0	0	0	0
ND	1	3	4	2	6	8	0	1	1
NE	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0
UT	0	0	0	0	0	0	0	0	0
WY	0	0	0	0	0	0	0	0	0
Regional Totals	1	3	<mark>4</mark>	2	6	8	0	1	<mark>1</mark>

Bachelor 30.0000 Multi-	Completions								
/Interdisciplinary Studies, General	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
TOTAL (National)	0	0	0	0	0	0	0	0	0
					-		-		

Bachelor 30.1501	Completions									
Science, Technology, and Society	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total	
TOTAL (National)	0	853	<mark>853</mark>	0	861	861	0	837	<mark>837</mark>	
CO-zero completions	0	0	0	0	0	0	0	0	0	
ID-zero completions	0	0	0	0	0	0	0	0	0	

MT-zero completions	0	0	0	0	0	0	0	0	0
ND-zero completions	0	0	0	0	0	0	0	0	0
NE-zero completions	0	0	0	0	0	0	0	0	0
SD-zero completions	0	0	0	0	0	0	0	0	0
UT-zero completions	0	0	0	0	0	0	0	0	0
WY-zero completions	0	0	0	0	0	0	0	0	0
Regional Totals	0	0	0	0	0	0	0	0	0
Bachelor 30.3101			-		Completions		-	-	
Human Computer Interaction	2020 Online	2020 On - ground	2020 Total	2021 Online	2021 On - ground	2021 Total	2022 Online	2022 On - ground	2022 Total
TOTAL (National)	348	277	<mark>625</mark>	310	308	618	498	377	<mark>875</mark>
CO-zero completions	0	0	0	0	0	0	0	0	0
ID-zero completions	0	0	0	0	0	0	0	0	0
MT-zero completions	0	0	0	0	0	0	0	0	0
ND-zero completions	0	0	0	0	0	0	0	0	0
NE-zero completions	0	0	0	0	0	0	0	0	0
SD-zero completions	0	0	0	0	0	0	0	0	0
UT-zero completions	0	0	0	0	0	0	0	0	0
WY-zero completions	0	0	0	0	0	0	0	0	0
Regional Totals	0	0	0	0	0	0	0	0	0
				-	-		-		-
Bachelor 30.3001					Completions				
Computational	2020	2020 On -	2020	2021	2021 On -	2021	2022	2022 On	2022
	Online	ground	Total	Online	ground	Total	Online	- ground	Total
TOTAL (National)	0	0	0	0	0	0	0	0	0
					0				
Bachelor 30.0104	2020	2020.0.	2020	2021	Lompletions	2021	2022	2022.0	2022
Unknown	Online	2020 On - ground	2020 Total	Online	ground	2021 Total	2022 Online	2022 On - ground	2022 Total
TOTAL (National)	0	0	0	0	0	0	0	0	0

2) Educational market and student demand statistics, including peer comparisons of the size of enrollment, completions, and size trajectory (growth, decline) of comparator programs.

a) Nationally, computing related programs are in high demand. The nation showed a 11.88% increase in overall bachelor completions from 2020-2022 (3-years) in computing related fields, Colorado increased by 12% consistent with the national average and Wyoming/UW declined by 25% during this same timeline. Online completions in the nation increased by 38% while UW did not show any online completions from 2020-2022

b) Wyoming/UW holds .0289% of the national completion market for computing related programs at the bachelor level, North Dakota .14579 of the market, and Utah 4.8058% of the overall completion market.

c) Three of the requested CIP Codes reviewed showed a regional completion increase from 2020-2022 (3-years) Computer Programming, General 100.925% increase; Computer Science 26.766% increase and Modeling, Virtual Environments & Simulation 37.837% increase. All others showed a regional decline.

d) There are no Science, Technology, & Society or Human Computer Interaction bachelor completions regionally. Although Human Computer Interaction revealed a national increase in bachelor completions of 40% from 2020-2022 (3 years). Science, Technology and Society revealed a national decline in completions

e) International recruitment opportunity. Most if not all Computer related programs are US Department of Homeland Security STEM approved programs. Human Computer Interaction is also US Department of Homeland Security STEM approved while Science, Technology, and Society is not currently on the list. A partnership with UW International office is highly recommended.

f) Overall findings: The market is large and the opportunity is great. The completion numbers signify strong student demand. While on ground enrollments/students are important at the University of Wyoming, an online program has the best chance of high enrollment numbers (50+ completions annually after a three-year break in period). As noted above, there are <u>very</u> few online programs in computing related fields. Additionally, research suggests the importance of internships and industry partnerships to address the professional development of students and a skills gap that has difficulty addressing the constant change in the fundamental technology used in the computing industry and the need for project management skills. A project management certificate or area of concentration within the major and in partnership with the College of Business is recommended for discussion.

3) Employment trends and projections given core competencies of the degree or certificate.

a) Bureau of Labor Statistics (BLS) One-year historic employment growth, three-year historic employment growth, and ten-year future growth for all computing fields is very strong. It is moderate to strong for Human Computer Interaction and Science, Technology, and Society.

b) The employment market is not saturated. There are many opportunities for employment in the computing field.

c) Core Competencies include:

- Deductive and Inductive Reasoning
- Mathematical Reasoning
- Complex Problem Solving
- Write Computer Programs or Code
- Optimize Software Performance
- Design Data Processing Systems
- Design Computer & Information Systems or Applications
- Design Databases
- Apache, Eclipse, & JavaScript

4) Graduate salary trends and other post-completion trends.

Program	Entry 25th percentile wages	With bachelor median wages
11.0201 Computer Programming	\$71,188	\$86,745
11.0701 Computer Science	\$78,848	\$100,218
11.0401 Information Science/Studies	\$68,579	\$90,202
11.0103 Information Technology	\$70,850	\$92,950
11.0804 Modeling, Virtual Environments & Simulation	\$55,410	\$77,086
11.0899 Software, Media Applications, Other	\$55,410	\$77,086
14.0901 Computer Engineering	\$79,499	\$101,924
11.0301 Data Processing Technology	\$73,565	\$91,178
30.1501 Science, Technology, and Society	\$56,932	\$82,368
30.3101 Human Computer Interaction	\$56,932	\$82,368
AVERAGE	\$66,721	\$88,213

This template is intended to be used as a basic guide to generate a projection of additional expenses and revenues at the University.

Cells in orange are variables which can be updated as needed. Please enter information in numerical tab order.

Cells in gray calculate automatically

		Fiscal Year			
		1	2	3	4
Row	Revenue				
1	Cummulative Total NEW headcount enrollment	10	20	30	40
2	NEW Resident enrollment (# of new students entering the program each year)	5	5	5	5
3	NEW Non Resident Enrollment (# of new students entering the program each year)	5	5	5	5
4	Resident (credit hours delivered outside of NEW Program)	135	270	390	525
5	Resident (credit hours delivered in NEW Program)	15	30	<mark>60</mark>	65
6	Non Resident (credit hours delivered outside of NEW Program)	135	270	390	525
7	Non Resident (credit hours delivered in NEW Program)	15	30	<mark>60</mark>	65
8	Total Resident credit hours generated**	150	300	450	590
9	Total Non Resident credit hours generated**	150	300	450	590
10					
11	Per Credit Tuition*				
12	Resident (Posted Tuition Rate)	\$173	\$180	\$187	\$195
13	Nonresident (Posted Tuition Rate)	\$720	\$749	\$779	\$810
14	Prior Year's Non Resident Discount Rate (updated annually by the budget office)	30%	30%	30%	30%
15	Estimated Actual Non Resident Per Credit Tuition	\$504	\$524	\$545	\$567
16	Total Resident Tuition generated outside of NEW Program	\$23,355	\$48,578	\$72,976	\$102,166
17	Total Resident Tuition in NEW Program	\$2,595	\$5 <mark>,</mark> 398	\$11 <mark>,227</mark>	\$12,649
18	Total Non Resident Tuition outside of NEW Program	\$68, <mark>040</mark>	\$141,523	\$ <mark>212,59</mark> 9	\$297,639
19	Total Non Resident Tuition in NEW Program	\$7,560	\$15,725	\$32,708	\$36,851
20					

21 Total Tuition from NEW Enrollment	\$101,550	\$211,224	\$329,509	\$449,304
22				
23 Fees				
24 Program Per Credit Hour	\$25	\$25	\$25	\$25
25 Program Fee Revenue	\$7,500	\$15,000	\$22,500	\$29,500
26 Advising Fee Per Credit Hour	\$10.00	\$10.00	\$10.00	\$10.00
27 Advising Fee Revenue	\$3,000	\$6,000	\$9 ,000	\$11,800
28 Mandatory Fee (Per Full Time Student)	\$883.00	\$883.00	\$883.00	\$883.00
29 Mandatory Fee Revenue	\$8,830	\$17,660	\$26,490	\$35,320
30				
31 Total New Revenue Generated Within New Program	\$17,655	\$36,122	\$66,435	\$79,000
32 Total New Revenue Generated Outside of the Program	\$103,225	\$ <mark>213,762</mark>	\$ <mark>321,0</mark> 65	\$446,925
33 Total New Revenue Generated	\$120,880	\$249,884	\$387,499	\$525,924
34				
35 New Program Expense Assumptions				
36 Compensation and benefits				
37 Faculty	\$15,000	\$10,000	\$10,000	\$10,000
38 Other administrative staff				
39 Graduate Assistants				
41 Supplies				
42 Travel				
43 Marketing	\$5,000	\$5,000	\$5,000	\$5,000
44 Capital expense	0	0	0	0
45 Other (specify)	0	0	0	0

4	6
4	υ

47 Projected Financial Results for New Program	FY1	FY2	FY3	FY4
48 Total Expenses	\$20,000	\$15,000	\$15,000	\$15,000
49 Total New Revenues Remaining with Program	\$17,655	\$36,122	\$66,435	\$79,000
50 New Program's Total Surplus or Deficit	-\$2,345	\$21,122	\$51,435	\$64,000
51 Operating margin (surplus or deficit / revenues)	-0.13	0.58	0.77	0.81

Enter Course of Study, Credit Hours, indica	te if the course is new and	d if the course will be offered throu
---	-----------------------------	---------------------------------------

Freshman Fall	15	NEW Course	Distance Option
COMP 2000 Computing and	2	🗆 Yes	□ Yes
USP Q	3	🗆 Yes	□ Yes
USP C1	3	🗆 Yes	□ Yes
USP H	3	□ Yes	□ Yes
Disc. Concentration 1	4	□ Yes	□ Yes
Freshman Spring	15	_	
USP PN	3	□ Yes	□ Yes
USP C2	3	□ Yes	□ Yes
Unrestricted elective	3	□ Yes	□ Yes
COMP 2400 Foundations o	3	☑ Yes	□ Yes
Disc. Concentration 2	3	□ Yes	□ Yes

Sophmore Fall	15		
USP V	3	🗆 Yes	🗆 Yes
USP PN	3	🗆 Yes	🗆 Yes
COMP 3000 Basic Computi	3	🗆 Yes	□ Yes
Applied Comp. Elec 1	3	🗆 Yes	🗆 Yes
Disc. Concentration 3	3	🗆 Yes	□ Yes
Sophmore Spring	15		
Sophmore Spring USP H	15 3	□ Yes	□ Yes
Sophmore Spring USP H COMP 3300 Math Essentia	15 3 3	□ Yes ☑ Yes	□ Yes □ Yes
Sophmore Spring USP H COMP 3300 Math Essentia Applied Comp. Elec 2	15 3 3 3	☐ Yes☑ Yes☐ Yes	□ Yes □ Yes □ Yes
Sophmore Spring USP H COMP 3300 Math Essentia Applied Comp. Elec 2 Unrestricted elective	15 3 3 3 3	☐ Yes☑ Yes☐ Yes☐ Yes	□ Yes □ Yes □ Yes □ Yes

Junior Fall	15	_	
COMP 3250 Storytellling w	3	⊡ Yes	🗆 Yes
COMP 3400 Probabilty and	3	⊡ Yes	🗆 Yes
Applied Comp. Elec 3	3	□ Yes	□ Yes
Unrestricted elective	3	□ Yes	□ Yes
Disc. Concentration 5	3	□ Yes	□ Yes
Junior Spring	15	_	
COMP 3500 Advanced Com	3	🗆 Yes	🗆 Yes
Applied Comp. Elec 4	3	□ Yes	□ Yes
Unrestricted elective	3	□ Yes	□ Yes
Disc. Concentration 6	3	🗆 Yes	🗆 Yes
Disc. Concentration 7	3	□ Yes	🗆 Yes

Senior Fall	15	
COMP 4000 Practicum 1	6 🗆 Yes	□ Yes
Applied Comp. Elec 5	3 🗆 Yes	□ Yes

Applied Comp. Elec 6	3	🗆 Yes	□ Yes
Disc. Concentration 8	3	🗆 Yes	□ Yes
		□ Yes	🗆 Yes
Senior Spring	16		
USP C3	3	🗆 Yes	□ Yes
COMP 4051 Computing Ser	1	🗹 Yes	⊡ Yes
Unrestricted electives	6	🗆 Yes	🗆 Yes
Disc. Concentration 9	3	🗆 Yes	🗆 Yes
Disc. Concentration 10	3		

Total Hours

			NEW CREDIT HOURS OFFERED								
				BY ACADEMIC YEAR				'EAR			
					1		2		3		4
Freshman Fall	New Course	hours	Fall		Spring	Fall	Spring	Fall	Spring	Fall	Spring
COMP 2000 Computing	FALSE		2	0		0		0		0	
USP Q	FALSE		3	0		0		0		0	
USP C1	FALSE		3	0		0		0		0	
USP H	FALSE		3	0		0		0		0	
Disc. Concentration 1	FALSE		1	0		0		0		0	
Freshman Spring											
USP PN	FALSE		3		0		0		0		0
USP C2	FALSE		3		0		0		0		0
Unrestricted elective	FALSE		3		0		0		0		0
COMP 2400 Foundation	TRUE		3		3		3		3		3
Disc. Concentration 2	FALSE		3		0		0		0		0
		3	כ	0	3	0	3	0	3	0	3
						_					
Sophmore Fall						0		0		0	
USP V	FALSE		3			0		0		0	
USP PN	FALSE		3			0		0		0	
COMP 3000 Basic Comp	FALSE		3			0		0		0	
Applied Comp. Elec 1	FALSE		3			0		0		0	
Disc. Concentration 3	FALSE		3			0		0		0	
Sophmore Spring							0		0		0
USP H	FALSE		3				0		0		0
COMP 3300 Math Essen	TRUE		3				3		3		3
Applied Comp. Elec 2	FALSE		3				0		0		0
Unrestricted elective	FALSE		3				0		0		0
Disc. Concentration 4	FALSE		3				0		0		0
		3)	0	0	0	3	0	3	0	3
Junior Fall			_								
COMP 3250 Storytelllin	TRUE		3					3		3	
COMP 3400 Probabilty	TRUE		3					3		3	
Applied Comp. Elec 3	FALSE		3					0		0	
Unrestricted elective	FALSE		3					0		0	
Disc. Concentration 5	FALSE		3					0		0	
Junior Spring									0		0
COMP 3500 Advanced	FALSE		3						0		0
Applied Comp. Elec 4	FALSE		3						0		0
Unrestricted elective	FALSE		3						0		0
Disc. Concentration 6	FALSE		3						0		0
Disc. Concentration 7	FALSE		3						0		0

		30	0	0	0	0	6	0	6	0
Senior Fall									0	
COMP 4000 Practicum	FALSE	6							0	
Applied Comp. Elec 5	FALSE	3							0	
Applied Comp. Elec 6	FALSE	3							0	
Disc. Concentration 8	FALSE	3							0	
	FALSE								0	
Senior Spring										0
USP C3	FALSE	3								0
COMP 4051 Computing	g TRUE	1								1
Unrestricted electives	FALSE	6								0
Disc. Concentration 9	FALSE	3								0
		28	0	0	0	0	0	0	0	1
Total Hours		118	0	3	0	6	6	6	6	7
Tooching lood	fall	coring								
faculty line 1		o c	0	1	0	1	1	1	1	1
faculty line 2		9 6	0	0	0	0	0	л Т	1	1
faculty line 3		9 6	0	0	0	0	0	0	0	1 0
faculty line A		9 6	0	0	0	0	0	0	0	0
faculty life 4		9 0	0	0	0	0	0	0	0	0
		0.43								
Compensation	Salary	Benefits	1		2		3		4	
faculty line 1		\$0	0	ç	\$0		\$0	\$0		
faculty line 2		\$0	0	\$0			\$0		\$0	
faculty line 3		\$0	0	ç	\$0		\$0		\$0	
faculty line 4		\$0	0	ç	50		\$0	\$0		
			0		\$0		\$0		\$0	

For more specific salary and benefit data please contact the Budget Office at 766-9028

SoC Response to APC Concerns Re: BS Applied Computing and BS Data Science

Thank you for your thoughtful review of the proposed **B.S. in Applied Computing** and **B.S. in Data Science** degrees. We appreciate the committee's engagement in ensuring that new programs are distinct, valuable, and well-integrated within the university's academic offerings. Below, we provide additional clarification in response to the key concerns raised during the February 20 meeting.

B.S. in Applied Computing

1) APC Concern: The learning objectives for the B.S. in Applied Computing are very similar to the B.S. Computer Science learning objectives (one is identical). The course work is different from the Computer Science degree but learning objectives are similar. More discussion is needed to identify how the degree is different and explain why the proposed degree is not just a duplicate of an existing degree.

We recognize the committee's concern regarding the overlap in learning objectives between Applied Computing and Computer Science. To better reflect the distinct focus of Applied Computing, we have rewritten the duplicate learning objective to state: "Evaluate ethical, legal, and professional considerations in applied computing practice, making informed decisions that account for domain-specific challenges and responsibilities," and we are working to modify the other learning objectives to emphasize the interdisciplinary, applied and experiential nature of the program. While some objectives may be similar, the core distinction lies in the application and focus of the coursework:

- **Computer Science** focuses on foundational computing principles to study computer processes and to develop new software and systems. Students develop skills preparing students for careers in software engineering, cybersecurity, and theoretical computing research. Core curriculum categories/courses include: programming, data structures, algorithms, software design, programming language, operating systems, systems, theory, ethics, security and design. In addition a significant number of hours from math and science courses are required.
- Applied Computing emphasizes practical implementation of computing solutions in industryspecific contexts, integrating computing with disciplinary domains such as business, environmental science, or health sciences. Applied Computing students develop computational and problem-solving skills tailored to real-world applications rather than deep theoretical computing. Core curriculum categories/courses include: ethics and society, programming, quantitative thinking, software applications, tools and methods, data visualization and storytelling, data analysis and modeling, and experiential learning. In addition a significant number of hours from within an application area (discipline concentration from an existing different degree) are required.



Visual representation of the major curricular areas, Applied Computing and Computer Science

As we have progressed through the degree proposal process, it has become evident that a concurrent major may be the best fit for the Applied Computing proposal. This conclusion is based on ongoing discussions with campus partners and stakeholders and through student input. Given its alignment with the mission of the School of Computing and its consistency with successful models already in place at UW, we would like to request a discussion on this possibility. Please see **Attachment A** for concurrent major rationale, curriculum map, and comparison.

2) APC Concern: Has the proposed major been discussed with the faculty teaching the existing Computer Science degree?

We have engaged with faculty teaching in the Computer Science program by circulating the NOI and FSA to the Dept. of Electrical Engineering and Computer Science (EECS), holding open forum meetings presenting the degree, and incorporating feedback from these processes. We are dedicated to continuing to refine the distinctions between the two degrees, and in general between the different missions of EECS and the School of Computing. Working with the Head of EECS, we have established a joint committee with SoC and EECS members which is meeting regularly to work on opportunities, for example for joint marketing of computing-related degrees, as well as issues such as defining the distinctions between degrees. We welcome further discussion to clarify any concerns, particularly those related to the overlap and/or differentiation between the Computer Science and Applied Computing programs.

3) APC Concern: Would a minor be more appropriate than a major if there is significant overlap?

A computing minor is available. It does allow students to add computing knowledge to another degree without significant additional coursework. However, it does not provide the structured, more substantial curriculum of the Applied Computing degree that balances computing fundamentals and skills with domain-specific application and experiential learning.

B.S. in Data Science

4) APC Concern: The B.S. in Data Science has different concentrations that students select such as Biology. How would a student be advised on deciding to obtain a Data Science degree vs a Biology degree with a minor in Computer Science?

The Data Science major provides a unique and integrated interdisciplinary approach that balances components from multiple fields in a way that cannot be replicated by any existing major-minor combination. We highlight the following differences when comparing the Data Science to a Biology degree plus Computer Science minor:

- Data Science ensures students have training on (1) foundations in math/stats and computing as well as (2) core data science areas including scientific writing and communication, data ethics, data mining, data wrangling, databases, machine learning and artificial intelligence (ML/AI), and study design. In addition, the data science degree requires (3) experiential learning and (4) a depth of training in a concentration area.
- Biology plus minor in Computer Science would develop extensive training in a concentration area (biology) and training in computer science foundations. The Computer Science minor requires 18 COSC credits, and following the prerequisite constraints, would cover computing foundations only rather than any core Data Science areas. The ML/AI courses require additional

prerequisites and thus do not fit easily within the Computer Science minor. Moreover, mathematics and statistics training necessary for Data Science is also beyond the reach of a Biology degree plus minor in Computer Science combination.

In summary, we would advise all students to major in the degree program that best matches their primary area of interest and post-graduate plans, whether it is biology, computer science, or data science. Data Science majors should have a strong affinity for math, stats, <u>and</u> computing and a desire to apply these methods. However, if the student is most interested in depth in biology with foundations of computer science (and not depth in ML/AI/stats), then Biology major plus Computer Science minor is more appropriate. In the end, we wish to provide additional pathways for students to get

5) APC Concern: There is so much overlap with the proposed Data Science degree and many other degrees and minors it is unclear how the Data Science degree fits into the whole at UW.

Data Science with a Biology concentration is just one example. That combination does include some course overlap with Biology plus Computer Science minor. However, many other degree areas on campus do not have overlap or have any curricular focus on the fundamentals of Data Science. Thus, the Data Science degree provides a pathway for students who wish to pursue this rapidly growing field.

The proposed Data Science degree is a good fit for UW. UW has demonstrated a sustained interest in developing Data Science degrees through multiple past efforts (this one has representation from COB, A&S, CALSNR, and CEPS). It aligns with UW's mission and strategic goals by equipping students with essential skills to leverage data and computational methods across disciplines. The degree will leverage institutional synergies and support through UW's Data Science Center, Data Hub, 3D Visualization Center, Advanced Research Computing Center, NCAR Wyoming Supercomputing Center and other computing/data science initiatives, ensuring a well-integrated and future-ready program. With the growing demand for data science education—driven by advancements in AI and interdisciplinary applications —UW is well-positioned to fill a critical gap in data science in the region.
BS Applied Computing Concurrent Major: Following discussions with partners across campus and student input, we respectfully request to add a concurrent major option to the Applied Computing degree proposal. This option is a natural fit with the mission of the SoC to integrate computing across disciplines. Discussions with the Haub School and Honors College reinforced the value and feasibility of this approach, building on successful concurrent major models at UW.

Rationale for Concurrent Major option:

- Strengthens Interdisciplinarity Bridges computing with other fields, fostering innovation and problemsolving by integrating computational methods into various disciplines.
- Aligns with National Trends Matches the growing demand for dual and interdisciplinary majors, reflecting industry needs for professionals with both domain expertise and computing proficiency.
- Adds Value to Existing Degrees Enhances career opportunities across disciplines, increasing graduates' adaptability and competitiveness in the job market.
- **Expands Recruitment Opportunities** Provides additional degree options to attract students to existing programs/academic units and the School of Computing at the UW.

BS APPLIED COMPUTING – CONCURRENT MAJOR

Curriculum Map and Program Structure

Curriculum Outline: total credits = 120 Applied Computing Core requirement: (18 credits) COMP 2000 Computing and Society: (2 credits) COMP 2400 Foundations of Programming: (3 credits) COMP 3000 Basic Computing: (3 credits) COMP 3250 Storytelling with Data: (3 credits) COMP 3300 Math Essentials for Applied Computing: (3 credits) COMP 3400 Probability and Practice: (3 credits) COMP 4051 Computing Seminar: (1 credit) Experiential Learning requirement: (3 credits) COMP 4000 Practicum 1: (1-6 credits) Applied Computing Elective requirement: (15 credits) – options from many disciplines/programs

University Studies Program (USP): (28 - 30 credits)

Complete other existing major (any): (54 credits of 120 are available based on above curriculum map)

Table 1. Comparison between BS Applied Computing (standalone) and Concurrent Major

		Concurrent
REQUIREMENTS for BS Applied Computing	Standalone	Major
TOTAL CREDITS	120	120
Applied Computing Core	21	18
Experiential Learning	6	3
Applied Computing Elective	18	15
Discipline Concentration	30	n/a
OTHER Existing Major	n/a	54*
University Studies Program	30	30
Unrestricted Electives	15*	0*
*value represents credits available out of 120; could increase based on double counting of credits from other requirement areas (e.g. USP and or Applied Computing Electives)		

The Key Differences include: (1) The Concurrent Major requires 3 fewer credits each from Applied Computing Core, Experiential Learning and Applied Computing Elective curricular areas (9 total); **(2)** The Concurrent Major requires students to complete an entire additional existing major instead of a Discipline Concentration; **(3)** The Concurrent Major has limited space for unrestricted electives.

B.S. Applied Computing – modified learning outcomes APC review from 20250220

Learning Outcomes:

- 1. Design, implement, and evaluate interdisciplinary computing solutions to successfully analyze and address complex real-world, and discipline-specific challenges, such as those in business, humanities, and health sciences.
- 2. Adapt and apply computing principles that emphasize usability, scalability, and integration within applied contexts rather than theoretical advancement.
- 3. Effectively communicate computing solutions to diverse audiences, including technical and non-technical stakeholders, ensuring clarity, impact, and alignment with industry and societal needs.
- 4. Evaluate ethical, legal, and professional considerations in applied computing practice, making informed decisions that account for domain-specific challenges and responsibilities.
- 5. Collaborate effectively in interdisciplinary teams, applying computing expertise to contribute meaningfully to projects that integrate domain knowledge and computing methodologies.



Office of Academic Affairs Dept. 3302 • 1000 E. University Avenue Laramie, WY 82071 (307) 766-4286 • (307) 766-6476 • fax (307) 766-2606 www.uwyo.edu/acadaffairs

April 29, 2025

Board of Trustees:

This letter serves as a Letter of Commitment for a new Bachelor of Science in Applied Computing-Concurrent Major by the School of Computing, currently in the College of Engineering and Physical Sciences. The degree program comprises 120 hours of coursework and addresses a practical application of computing techniques to solve real-world problems across diverse fields.

Needs

This program is designed to meet the needs to combine core computing skills with interdisciplinary expertise in tandum with a major of their choice. Students will gain proficiency in programming, data analysis, and problem solving, equipping them for a range of careers in industries that rely on digital technologies and computational skills.

Requirements

This BS in Applied Computing-Concurrent Major will have students completing 120 hours of applicable coursework. Applied Computing Core classes will be 18 credit hours, experiential learning with be 3 credit hours, applied computing electives will be 15 credit hours, University Studies program will be 30 hours, and OTHER exhisting Major will be 54 credit hours.

Resources

No new, additional resources are required to stand up this new concurrent BS in Applied Computing.

Timeline

The present implementation timeline is designed to enable students to enroll in this concurrent major in Fall 2025.

Campus Review

I affirm that the university community, including the Executive Team, Deans and Directors, Faculty Senate, Staff Senate and ASUW, have been provided the opportunity to review and present feedback on the proposed degree program.

Best,

J Scott Tuyen

Scott Turpen Interim Provost

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: Notice of Intent: PhD in Health Sciences, Ahern, Hardigan, Smith

 \boxtimes OPEN SESSION

 \Box CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

□ Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The College of Health Sciences proposes a new interdisciplinary PhD in Health Sciences. The degree program will comprise 72 credit hours and will initially have concentrations in Kinesiology and Health and in Communication Sciences and Disorders. The interdisciplinary nature and design of the proposed PhD program will facilitate scalability, sustainability, and timely evidence-based response to evolving health science workforce and knowledge discovery needs. The PhD in Health Sciences will add to the University's portfolio of graduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. A Notice of Intent to the Board will allow the program proposers to complete review internally with the shared-governance bodies (Faculty Senate, ASUW, and Staff Senate), and Deans' Council. Academic Affairs and the School of Graduate Education support the degree proposal. The Request for Authorization will be submitted for the Board's consideration and approval in the 2025-2026 academic year.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Notice of Intent for the PhD in Health Sciences.

PROPOSED MOTION:

"I move to approve the Notice of Intent for the PhD in Health Science."

NOTICE OF INTENTION (NOI) FOR A DOCTORAL (Ph.D.) PROGRAM IN *HEALTH SCIENCES*

A. Name of Proposed Program: Doctoral Program in Health Sciences

B. Description of Academic Program & Outcomes:

The Ph.D. program in Health Sciences aims to equip candidates with comprehensive knowledge, research skills, and disciplinary expertise to excel in diverse health-related careers. These careers may span higher education, research, innovation, clinical/applied practice, and program development. By offering advanced education in health sciences, this program is designed to address current and future unmet needs across various health-related social and behavioral science disciplines. The vision is to establish doctoral program in Health Sciences with specified concentrations and interdisciplinary elements that is flexible and resilient to the dynamic needs and demands of an ever-evolving world. The core coursework for all health science doctoral students will cover essential content areas (e.g., research methods, psych-biosocial & behavioral statistics, and ethics), complemented by specialized and interdisciplinary graduate courses. Individual concentrations will enable students to acquire disciplinary expertise and specialization through faculty-mentored research and elective coursework. This comprehensive approach ensures a well-rounded and versatile doctoral training experience.

The overarching "umbrella" design of the <u>interdisciplinary</u> *Health Sciences* doctoral program is intentional to facilitate scalability, sustainability, and timely evidence-based response to evolving workforce and knowledge discovery needs. This Notice of Intent (NOI) proposes two inaugural health-related social and behavioral science concentrations: 1) *Kinesiology and Health*; and 2) *Communication Sciences and Disorders* that will be housed and administered within their respective units that both already possess graduate programs at the masters level. This NOI is specific to these two concentrations with acknowledgement that future/new concentrations (e.g., social work, nursing) would necessitate proposal, review, and approval processes (per UW policy).

Doctoral candidates will gain an integrative educational experience inclusive of depth and breadth in core health sciences coursework and concentration-specialized coursework and research engagement. The multi-stage *Kinesiology and Health* program will be in-person (main campus), and the *Communication Sciences and Disorders* program will utilize a hybrid (on-campus and distance learning) model. Doctoral training outcomes, with concentration specificity, will be achieved through research, discipline-focused learning, service, and professional development. The program outcomes/goals include:

Research: (a) Describe, evaluate, and synthesize concepts and theories in the given field; (b) Acquire a variety of research skills and practice in the scientific process; (c) Collective & independent research activity – projects, experiments, and training; (d) Present and publish in a variety of regional, national, and international platforms; and/or (e) Engage in grant writing and submission in pursuit of internal/external funding consistent with discipline demands.

Teaching: (a) Assist and/or lead undergraduate instruction or internship/experiential learning; (b) Teach and supervise students (clinical settings if applicable), (c) Engage in teacher mentorship/development to acquire breadth of experience, e.g., developing syllabi, assessment, and instructional strategy diversity; and/or (d) Develop fundamental pedagogical knowledge and skills.

Service: (a) Engage in school/university committees; (b) Pursue opportunities to serve in leadership roles appropriate for graduate students (regional, national, or university levels); and/or (c) Actively engage in community service/extension and programming as appropriate within the discipline.

Professional Development: Seek and engage in opportunities to develop and refine research and writing skills, instructional practice, contemporary discipline knowledge, and health science breadth and depth of knowledge and proficiency.

C. Program Content & Relation to other Programs: *Kinesiology & Health* and *Communication Sciences Disorders* Concentrations

The Divisions of Kinesiology and Health (DK&H) and Communication Disorders are significant contributors to the College's teaching, research, and service missions. The absence of a doctoral program (particularly in health-related social and behavioral sciences) impedes mission, enrollment, and research growth at the UW. The proposed program provides the social and behavioral science complement to the current Biomedical Sciences (BMS PhD program) that serves biological/physiological science faculty at the UW. The *Kinesiology and Health* and *Communication Disorders* concentrations are logical and achievable extensions of strong Master of Science programs in the Divisions. Two parallel degree plans are proposed:

The *Kinesiology and Health* concentration will include a masters and doctoral hybridized program to incorporate teaching and learning experiences devoid of substantial new resource allocation. This approach directly aligns with national trends in kinesiology and the current BMS program but with focus on the social and behavioral sciences. The hybridized model capitalizes on the broad College and DK&H faculty expertise to create strong interdisciplinary knowledge and appreciation of the multi-dimensional nature of kinesiology and health while also affording extensive specialized training. The 72-credit hour doctoral program is anticipated to include 9 required/core coursework credits, 3-6 seminar credit hours, complemented by 12-15 concentration credit hours, 9-12 elective credit hours, 6 research credit hours, and 30 dissertation credit hours. In the concentration, specialization can be established based on programmatic offerings, student goals, and the interdisciplinary expertise outside of the DK&H. Elective and research hours facilitate interdisciplinary opportunities for students by leveraging existing and building new relationships with several UW academic programs, e.g., epidemiology, education, psychology, biomedical sciences, and others.

The *Communication Sciences and Disorders* concentration is tailored for candidates who hold a MA/MS in communication sciences and disorders or related discipline. The concentration aims to prepare individuals for tenure-track academic positions, research roles, and leadership positions within the field. Key features include:

- Hybrid in-person and distance learning options provides flexibility, convenience, and enhances accessibility to students to engage with the curriculum and program.
- Face-to-Face Residency Experiences: Certain aspects of the program will require in-person residency experiences, fostering a sense of community and facilitating technical learning with instrumentation and other technology available on campus.
- Part-Time Enrollment Option: The program will allow students to enroll part-time initially, allowing for greater flexibility in managing their academic and personal commitments and better serving employed speech-language pathologists.

These features cater to the diverse needs of students and create a comprehensive learning environment integrating theoretical knowledge and clinical application. The 72-credit hour *Communication Sciences and Disorders* doctoral concentration consists of: 9 semester credit hours of core coursework for all health science doctoral students (e.g., research methods, psych biosocial & behavioral statistics, ethics), 12-15 core concentration credits, 12-15 elective credits, 6 research/prospectus credits, and 30 dissertation credits. Intensive research and dissertation enrollment will immerse students in the

division's high-quality physiological and behavioral research. Certain laboratories may require oncampus presence, while others may permit remote engagement.

D. Plan for Market Analysis, Student Demand, & Enrollment:

Review of *Kinesiology and Health* Gray Data indicates that student demand is strong at the doctoral level. The gap between the percentage of graduates attaining doctoral degrees and the percent of doctoral level employees in the national workforce points to an opportunity for additional doctoral training (Table 1). We will expand our market, student demand, and enrollment analyses in the feasibility study and bolster qualitative evidence that currently shows UW students leaving to peer/competitor institutions for doctoral programs in *Kinesiology and Health*.

Name	CIP Code	Student Demand Percentile WY, Natl.	% of Degree Completions at Doctoral Level	Natl. Workforce Education Attainment	
Kinesiology & Exercise Science	31.0505	93, 90	1%	13%	

Table 1: Concentration demand data Kinesiology from Gray Associates (6/8/2022)

For *Communication Disorders* (CIP Code: 51.0203) Gray Data was not obtained but trends from the American Speech-Language-Hearing Association are reported in Table 2.

Table 2: Concentration trends for Communication Disorders from American Speech-Language-Hearing Association (2023)

Steady Growth: The demand for doctoral-level professionals in Speech-Language Pathology has been steadily increasing due to an aging population and greater recognition of the importance of communication disorders in various age groups.

Faculty Positions: Universities and academic institutions have shown a growing need for PhD-holding experts in Speech-Language Pathology to fill faculty positions. These professors contribute to the education and training of future SLP professionals.

Research and Innovation: As the field of Speech-Language Pathology advances, there is a rising demand for PhDs who can conduct research, contribute to evidence-based practice, and pioneer innovative approaches to therapy and assessment.

Leadership Roles: Doctoral degrees open opportunities for leadership positions in clinical and research settings, allowing PhD holders to influence policy, drive advancements in the field, and promote best practices.

Addressing Specialized Needs: With the increasing complexity of communication disorders, the demand for experts with specialized knowledge and expertise has grown, making PhD holders highly sought after.

E. Preliminary Budget:

We have included a preliminary budget (Appendix A) outlining revenue sources (block tuition & fees) and projected expenses (e.g., personnel, graduate assistantships, marketing, etc.). Overall, the PhD in Health Sciences program becomes revenue-positive in the third year as enrollment grows, with the potential for external grant funding from the requested faculty line (not included in the current revenue projection). Most importantly, the program enhances the external funding potential of existing faculty – doctoral students contributing to faculty teaching loads releasing time for more external funding pursuit/management and having doctoral programs elevating research profile of programs/faculty when applying for external funding.

F. Proposed Timeline (5 years):

2022-25	2026-27	2027-28	2028-29	2029-30
Submit NOI, Self-study	Enrollment goal – 2	Enrollment goal – 1-2	Enrollment goal – 5	Enrollment goal – 7
	(K&H); 2 (ComD)	(K&H 1-2 (ComD)	total	total
NOI review and	Admission to	Admit 1 to	Admit 2 to	Admit in 2
approval by BOT	concentration tracks	concentration tracks	concentration tracks	concentration tracks
Campus Review –	Initiate doctoral program	Develop mentoring	Conduct program	Initiate doctorate
DKH, Faculty Senate,	certification process at	capacity and update	review based on	career path tracking
Grad School, ASUW,	state, regional and	curriculum if necessary	national review and	
Deans, Executive	national levels		identify new goals	
Council				
BOT RFA Review &	Marketing, Recruiting,	Continue marketing,	Continue marketing,	Continue marketing,
Approval	Fundraising, Grant	recruiting, fundraising	recruiting, fundraising	recruiting, fundraising
	applications	and grant application	and grant application	and grant application
Initiate marketing and	Conduct sustainability	National Academy of	First Graduation	Second Graduation
recruiting	research	Kinesiology program		
		review		

G. Information on other Accreditation Bodies (Higher Learning Commission):

We submitted a "New Degree Program Inquiry" to the Higher Learning Commission (HLC) to determine whether further review is needed to proceed with the proposed doctoral program. The HLC responded on July 5th, 2022 informing us that no individual approval is needed for the proposed new PhD program, that our institutional doctoral program count would increase by 1, and that no additional accreditation permissions are needed at this time.

H. Program Alignment with UW Academic Mission:

The proposed doctoral program in *Health Sciences* contributes to multiple elements of the current *Forward Wyoming* strategic plan and academic missions. Contributions, impact, and alignment include: 1) growth, health, and leadership of members of the UW community (values); 2) partnership and engagement with Wyoming communities (values); 3) student catalysts of innovation (values); 4) expansion of intellectual opportunities contributing to well-being (value proposition); 5) transdisciplinary collaboration addressing complex health challenges (value proposition); and 6) investing in resources that enhance health and well-being (execution strategy). The proposed doctoral program bridges disciplines and serves public health and healthcare concerns. Direct benefit of the proposed program to UW priorities is anticipated in (1) personalized and meaningful interdisciplinary student education and research training providing diverse and expansive learning and professional opportunities, (2) transdisciplinary research teams addressing the grandest health and healthcare challenges and training of future experts (workforce) who understand, value, and work effectively as members/leaders of such teams, and (3) betterment and economic prosperity of Wyoming through a healthy workforce. Additionally, the proposed program will contribute to UWs goals of growing research productivity and increasing graduate enrollment.

I. Rationale for need of new Academic Program:

The proposed *Health Sciences* doctoral program <u>fulfills an unmet need</u> at the UW for the multiple health-related disciplines, <u>addresses market demand</u>, and <u>contributes to the status of</u> Carnegie "very high research activity" (R1) classification. The UWs existing and related doctoral programs (e.g., Biomedical Sciences, Neuroscience), do not provide a pathway to facilitate health-related social and behavioral science training at the doctoral level. This is a barrier to (1) research productivity and growth, particularly in the College of Health Sciences where >50% of the college's faculty expertise lies in the social and behavioral sciences (e.g., social work, physical education, communication disorders, many sub-disciplines within kinesiology and communication disorders), and (2) producing a trained and educated workforce in high-demand areas. Within the divisions, a large portion of research lies in the psychosocial/behavioral disciplines and has hit a ceiling that can only be raised with a doctoral program and trainees. Concrete and specific mechanisms have been identified to grow external funding and research outcomes within the health sciences with the addition of the doctoral program., e.g., doctoral program specific training and foundation grants.

Rationale for the concentration in *Kinesiology and Health* is guided, in part, by the spectrum of preventative health competencies including: (a) exercise science perspectives (physiology, motor learning, biomechanics), (b) pedagogical and psychological sciences (pedagogy in kinesiology, physical education teacher education, exercise/physical activity psychology), and (c) structural/environmental/ecological approaches to health. The need for this concentration is driven by student and workforce demand, faculty expertise within the division, and absence of an existing doctoral pathway at UW resulting in graduate students leaving the UW.

Rationale for the concentration in *Communication Sciences and Disorders* is based on the numerous inquiries received, scarcity of doctoral-trained faculty, and rising demand for speech-language pathologists. Employment growth (2021 to 2031) is projected at 21% resulting in ~14,000 job openings annually. The shortage of PhD-level faculty is a barrier to training speech-language pathology students and meeting workforce demands. The concentration in *Communication Sciences and Disorders* provides specializations, in medical speech-language pathology, craniofacial disorders, speech motor control, speech sound disorders, developmental disorders, voice disorders, and other acquired disorders.

Addressing global and Wyoming specific health challenges is going to require interdisciplinary collaboration amongst expert teams. Thus, the proposed program is aligned with UW priorities <u>and</u> enhances external funding potential, research productivity, interdisciplinary research collaboration, and graduate student enrollment. At the macro level this could be viewed as teams comprised of expert social scientists, biological/physiological scientists, liberal artists, and physical scientists with expertise in the needed subdisciplines of these larger categories.

Appendix A

Preliminary Health Sciences Doctoral Program: Projected Revenue & Expenses

Health Sciences Doctoral Program Proposal: Kinesiology & Health & Communication Sciences & Disorders				
	Fiscal Year			
	1	2	3	4
Revenue				
Cumulative Total Laramie campus headcount enrollment (Graduate)	3	5	8	11
Communication Sciences & Disorders headcount per AY	2	1	1	1
Kinesiology & Health doctoral program headcount per AY	1	1	2	2
Total GRAD Residental credit hours generated	54	90	126	180
Total GRAD Non Residental credit hours generated			18	18
Cummulative GRAD credit hours generated	54	90	144	198
Resident Graduate Tuition rate (Block Tuition 18 credits)	\$6,989	\$7,269	\$7,559	\$7,862
Nonresident Graduate Tuition rate (Block Tuition 18 credits)		\$21,761	\$22,631	\$23,537
Total Tuition Revenue Generated per enrollment projection	\$20,967	\$36,343	\$75,547	\$102,153
Resident Graduate Fees rate	\$1,702	\$1,702	\$1,702	\$1,702
Non Resident Graduate Fees rate		\$1,702	\$1,702	\$1,702
Total Fee Revenue Generated per enrollment projection	\$5,106	\$8,510	\$13,616	\$18,722
Total Tuition & Fees from Enrollment	\$26,073	\$44,853	\$89,163	\$120,875
Total Fee Revenue Remaining with College	\$1,458	\$2,430	\$3,888	\$5,346
Total Fee Revenue Remaining with Provost	\$3,648	\$6,080	\$9,728	\$13,376
Total New Revenue Generated	\$26,073	\$44,853	\$89,163	\$120,875
New Program Expense Assumptions				
Faculty	\$98,340	\$0	\$0	\$0
Other administrative staff (0.5 FTE Office Associate)	\$0	\$0	\$0	\$0
Graduate Assistants (1 in year 1; 3 in years 2-4; 1 Com Sci & Dis and 2 Kines)	\$25,230	\$75,690	\$75,690	\$75,690
Supplies (Technology & computers)	\$3,000	\$1,500	\$3,000	\$3,000
Travel	\$0	\$3,000	\$3,000	\$4,500
Marketing	\$2,000	\$2,000	\$1,000	\$500
New course development (2 courses)	\$2,000	\$2,000	\$0	\$0
Capital expense	\$0	\$0	\$0	\$0
Other (specify)	\$0	\$0	\$0	\$0
Projected Financial Results for New Program	FY1	FY2	FY3	FY4
Total Expenses	\$130,570	\$84,190	\$82,690	\$83,690
Total Revenues Generated	\$26,073	\$44,853	\$89,163	\$120,875
New Program's Total Surplus or Deficit	-\$104,497	-\$39,337	\$6,473	\$37,185
Operating margin (surplus or deficit / revenues)	-4.01	-0.88	0.07	0.31

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Notice of Intent: Graduate Certificate in Political Science</u>, Ahern, Freng, Anderson

\boxtimes OPEN SESSION

□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

□ Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The College of Arts & Sciences proposes a new graduate certificate in Political Science. The certificate program will comprise fifteen credit hours and will be delivered online. The certificate will be 'stackable' to the MA in Political Science. Open to all interested, qualified students, the certificate is particularly proposed to serve Wyoming secondary social science teachers by providing the credit hours they need for advancement in their careers. The Political Science certificate will add to the University's portfolio of graduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. A Notice of Intent to the Board will allow the program proposers to complete review internally with the shared-governance bodies (Faculty Senate, ASUW, and Staff Senate), and Deans' Council. Academic Affairs and the School of Graduate Education support the degree proposal. The Request for Authorization will be submitted for the Board's consideration and approval in the 2025-2026 academic year.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Notice of Intent for the Graduate Certificate in Political Science.

PROPOSED MOTION:

"I move to approve the Notice of Intent for the Graduate Certificate in Political Science."

Notice of Intent To Create a "Graduate Certificate in Political Science" At the University of Wyoming Prepared in December 2024

New Certificate Proposal Process: https://www.uwyo.edu/acadaffairs/degrees/index.html

Notice of Intent. A Notice of Intent is a preliminary, conceptual proposal requesting authorization to plan a new Academic Program. The NOI should normally be no longer than three (3) pages in length and shall include the following information:

1. The name of the proposed Academic Program and the mode of delivery;

Name: Graduate Certificate in Political Science; Method of Delivery: Synchronous Online and Asynchronous.

2. A description of the new Academic Program that includes an outline of the anticipated curriculum and learning outcomes;

The proposed Graduate Certificate in Political Science would consist of 15 credit hours of Political Science coursework spread across five classes, each at the 5000 level.

The certificate is open to all interested students, including those from out of state and international students. One purpose of the certificate, however, is to service Wyoming High School and Middle School Social Studies teachers by providing the credit hours they need for advancement in their careers in a method of delivery (synchronous and asynchronous online) that does not conflict with their teaching duties during the Fall and Spring semesters. This 15-credit-hour certificate fulfills the requisite number of credit hours that Middle School and High School Social Studies teachers in Wyoming need for their first advancement, including a raise in salary. We also anticipate servicing teachers and other government workers outside of Wyoming, who can also use this certificate for career advancement.

Anticipated Curriculum and Learning Outcomes:

Learning Outcomes:

Gain graduate-level knowledge and experience about the theories and academic research in Political Science relevant to the student's interests and career goals.

Anticipated Curriculum:

These classes would come from a variety of topics currently offered by the School of Politics, Public Affairs, and International Studies. Below is a partial list of classes that would fulfill the requirements of the Graduate Certificate in Political Science:

POLS 4100 - Constitutional Law: Institutional Powers

POLS 4110 - Constitutional Law: Civil Liberties and Rights

POLS 4430 - US Presidency

POLS 4530 – US Congress

POLS 4520 - Public Opinion

POLS 4710 - Political Polarization in the US

POLS 4052 - Federal Land Politics

POLS 4330 - American Foreign Relations

3. Information about content and how the Academic Program may relate to other offerings;

In addition, this certificate sets up a stackable program where the teachers can get one certification and use it as a step towards a full MA degree. At 15 credit hours, the Graduate Certificate in Political Science represents a halfway point for High School and Middle School Social Studies teachers towards a Master of Arts degree in Political Science. Teachers who complete the certificate and wish to continue taking classes for an additional advancement, in other words, can take another 15 credit hours of coursework and easily earn their Master of Arts degree in Political Science.

4. A plan for obtaining a market analysis of anticipated student demand and enrollment, and a plan for evaluation and analysis of post-graduation employment market demand.

For the past six years, SPPAIS has worked with the Wallop Civic Engagement Program to bring grades 7-12 teachers to campus for summer workshops. In focus groups, we asked whether they would be interested in having SPPAIS offer an online MA in political science. We learned that the teachers are already seeking out alternatives, such as Grand Canyon University, because UW had none. They expressed enthusiasm for an online option from SPPAIS.

We plan to follow through on this entrée to send out surveys to social science teachers statewide to get a better determination of demand.

We already know that these teachers will get an advancement and raises post-graduation from the Wyoming Department of Education (WDE). The Wyoming State Superintendent of Public Instruction, Megan Degenfelder, is one of our graduates. We plan on working with her and the WDE since this program may help with teacher retention.

We also plan to partner with Jayne Pearce to analyze Gray's Data.

5. A preliminary budget, including potential funding sources, projected expenses and revenues, and potential faculty, academic professionals, lecturers, professors of practice, and staff;

The certificate will be supported by faculty with graduate degrees in Political Science and International Studies who are currently offering classes in these areas and online.

Preliminary Budget:

Funding Sources: not applicable – the certificate will require no additional funds.

Potential Faculty (Partial List):

Jason McConnell – Assistant Professor, Political Science (SPPAIS) Ryan Williamson – Assistant Professor, Political Science (SPPAIS) Andrew Garner – Professor, Political Science (SPPAIS) Stephanie Anderson - Professor, Political Science (SPPAIS) Thomas Seitz – Associate Professor, Political Science (SPPAIS) Gregg Cawley - Professor, Political Science (SPPAIS) Jean Garrison - Professor, Political Science (SPPAIS)

Potential Staff:

Seth Holmquist, Business Manager, SPPAIS Kathi Hanson-Boyce, Office Associate Senior, SPPAIS Aaron Sciulli, Office Associate, SPPAIS Regan Walford, Office Associate, SPPAIS

6. Proposed timeline for staged implementation over five years, including campus and Board review;

Approximately one year for campus and Board review. We currently have the resources and capacity to offer this certificate as soon as it is approved.

7. Information on other required approvals, such as accreditation bodies and the Higher Learning Commission;

This certificate will not require approval from accreditation bodies or the Higher Learning Commission.

8. Evidence of how the new Academic Program aligns with the University's mission, strategic plan, and existing academic degree program array; and

This new certificate aligns with multiple parts of UW's mission and strategic plan by: 1) enabling engagement with and serving the state through supporting the High School and Middle School social studies teachers in the state; 2) supporting Wyoming's land grant mission to expand both intellectual and economic opportunities for advancement for communities around the state; 3) enhance UW's connections with and service to the people of Wyoming; and 4) grow educational opportunities for Wyoming.

9. A rationale that clearly defines the need for the new Academic Program. The rationale should include evidence that the Academic Program will not produce unnecessary duplication of existing programs.

The Graduate Certificate in Political Science will provide training and necessary coursework for High School and Middle School social studies teachers to advance professionally by getting advances and promotions. Currently, there is no online graduate program in the state of Wyoming that provides these classes. Therefore, teachers are required to take such courses from online universities and/or online classes from universities in neighboring states, including paying out-of-state tuition. This program will provide them an opportunity to take the coursework necessary to get an advancement and also endorsements for concurrent teaching. Moreover, most of the teachers in Wyoming work outside of Laramie, meaning that this certificate will attract graduate students to the university through online classes who would not otherwise come to the University of Wyoming for graduate study. We also anticipate that the certificate will be helpful for government workers and teachers outside of the state who are unable to attend in-person classes in Laramie to reach career advancements and promotions.

Because this will be the only program offering graduate-level online social studies classes in the state, it will not produce unnecessary duplication of other programs.

□ Additional requirements/information:

1. Materials for the NOI should be submitted for review to the Provost's Office at least three weeks prior to the Board's meeting. The Provost and President must review all materials prior to submission.

2. The Academic and Student Affairs Committee of the Board is the designated committee for this step of review. They will provide a recommendation to the full board.

3. If the new degree/certificate requires any new courses, involve the Faculty Senate Curriculum Review Committee for curriculum review.

4. The new degree proposal must contain the department head and dean's approval. If the new degree or certificate utilizes courses outside of the department,

support must be obtained from those department heads and deans. Please use the signature sheet provided here.

5. Once the NOI is approved, provide the proposal to the Faculty Senate as a courtesy that you are moving forward with the Request for Authorization.

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Notice of Intent: Graduate Certificate in Nonprofit Leadership</u>, Ahern, Freng, Anderson

 \boxtimes OPEN SESSION

 \Box CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

 \Box Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The College of Arts & Sciences proposes a new graduate certificate in Nonprofit Leadership. The certificate program will comprise nine credit hours and will be delivered asynchronously online. The certificate will be 'stackable' to the Master of Public Administration as well as potentially other UW master's programs. The certificate program complements training for students interested in working in a variety of nonprofit and public organizations that rely on fundraising and grant writing. The Nonprofit Leadership certificate will add to the University's portfolio of graduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. A Notice of Intent to the Board will allow the program proposers to complete review internally with the shared-governance bodies (Faculty Senate, ASUW, and Staff Senate), and Deans' Council. Academic Affairs and the School of Graduate Education support the degree proposal. The Request for Authorization will be submitted for the Board's consideration and approval in the 2025-2026 academic year.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Notice of Intent for the Graduate Certificate in Nonprofit Leadership.

PROPOSED MOTION:

"I move to approve the Notice of Intent for the Graduate Certificate in Nonprofit Leadership."

Notice of Intent To Create a "Graduate Certificate in Nonprofit Leadership" At the University of Wyoming Prepared in December 2024

New Certificate Proposal Process: https://www.uwyo.edu/acadaffairs/degrees/index.html

1. The name of the proposed Academic Program and the mode of delivery;

Name: Graduate Certificate in Nonprofit Leadership. Mode of Delivery: Asynchronous Online.

2. A description of the new Academic Program that includes an outline of the anticipated curriculum and learning outcomes;

The proposed Graduate Certificate in Nonprofit Leadership would consist of 9 credit hours spread across 3 classes, each at the 5000 level. Nine credits is useful for several reasons. 1) It is the maximum number of credits that may be applied to another master's program without being formally enrolled. Therefore, the certificate is stackable for a variety of other master's programs at UW. 2) Many MA programs have a maximum number of credits they accept from outside the program. Nine is a doable number for those in other programs. 3) This is a sufficient number of classes to receive the necessary skills and training.

Anticipated Curriculum and Learning Outcomes:

- 1. Survey of the Nonprofit Sector (3 credits)
 - a. Learning Outcomes
 - i. Learn about the origins and contemporary functioning of the nonprofit sector in the US, including its size, diversity, and importance
 - ii. Understand the differences between the public, nonprofit, and business sectors, including what makes nonprofit organizations unique and their role in democracy.
- iii. Explore the legal structure and financial requirements of nonprofit organizations2. Nonprofit Finance, Fundraising, and Grant Writing (3 credits)
 - a. Learning Outcomes
 - i. Understand accounting, budgeting, and reporting issues specific to nonprofits
 - ii. Learn to plan, organize, implement and evaluate fundraising to support nonprofit activities
 - iii. Build skills in grant finding and grant writing
- 3. Nonprofit Management and Governance (3 credits)
 - a. Learning Outcomes
 - i. Learn how to strategically design nonprofit administrative structures, decisionmaking processes, program delivery, and evaluation
 - ii. Examine unique aspects of leading nonprofit organizations, including board and volunteer management
 - iii. Understand methods for strategic planning

3. Information about content and how the Academic Program may relate to other offerings;

The Nonprofit Leadership Certificate will also serve as a track within the Master of Public Administration (MPA) Program and will take the place of the existing Nonprofit Concentration within the MPA program. The certificate is more versatile than the concentration. Unlike the concentration, it is a stand-alone credential and can be taken without being enrolled in the MPA program. This Graduate Nonprofit

Leadership Certificate will also complement many graduate programs across UW whose students seek to work in the nonprofit sector. For example,

- This certificate could fit as a track in the Master of Business Administration where tracks are 9 credits.
- This certificate could fit as a stackable certificate within the Master of Organizational Leadership that is currently in development out of UW Casper.
- This certificate could also fit within many existing Masters and PhD programs where students eventually work or interface with the nonprofit sector. These include: MA in Environment, Natural Resources & Society, MA in International Studies, MA in Political Science, MA in History, MA in Anthropology, MA in American Studies, MA in Communication, MA in English, Master of Social Work, MA in Psychology, PhD in Anthropology, PhD in English (public humanities), PhD in Marketing & Management.

4. A plan for obtaining a market analysis of anticipated student demand and enrollment, and a plan for evaluation and analysis of post-graduation employment market demand;

To understand market demand, we plan to analyze Grey's Data for the following CIP codes: 52.0206 Non-Profit / Public / Organizational Management; 52.0502 Grantsmanship; 52.0704 Social Entrepreneurship; 44.0000 Human Services, General; 44.0201 Community Organization and Advocacy; 44.0702 Youth Services / Administration; and 39.0801 Religious Institution Administration and Management.

In addition, in 2022 the Wyoming Nonprofit Network (WNN) commissioned an economic impact study of the nonprofit sector in Wyoming (<u>link</u>) which we will use to better understand the nonprofit job market in Wyoming. For example, the report found that for the nonprofit sector in Wyoming, 21,500 jobs are supported, it has a total economic impact of \$2.2 billion, and that \$640 million in wages were paid to nonprofit sector employees annually.

We plan to analyze post-graduation employment with surveys of alumni, which we will then compare with existing data on average salaries in the nonprofit sector. For example, the WNN also does a "Salary and Benefits" survey every few years with one being completed at the time of this Notice of Intent (Fall 2024). We also plan to leverage our existing relationships with the WNN (Gabel Taggart is the Board Chair for WNN) and their job board, to connect students with nonprofit job opportunities. As part of the post-graduate alumni survey, we will ask how many go into the nonprofit sector or work on boards.

5. A preliminary budget, including potential funding sources, projected expenses and revenues, and potential faculty, academic professionals, lecturers, professors of practice, and staff;

Preliminary Budget: This certificate would require no new resources.

Potential Faculty: This certificate would be supported by the core faculty in the Master of Public Administration program who have training, expertise, and credentials in nonprofit studies, including: Gabel Taggart, Associate Professor; Maggie Swenson, Assistant Professor; Su Young Choi, Assistant Professor; and Michelle Allgood, Assistant Professor, Master of Public Administration.

Potential Staff: This certificate would be supported by the staff in the School of Politics, Public Affairs, and International Studies: Seth Holmquist, Business Manager; Kathi Hanson-Boyce, Office Associate Senior; Aaron Sciulli, Office Associate; and Regan Walford, Office Associate.

6. Proposed timeline for staged implementation over five years, including campus and Board review;

Given that this certificate is replacing the existing Nonprofit Concentration in the MPA, we have the capacity and resources to begin the certificate as soon as it is approved.

7. Information on other required approvals, such as accreditation bodies and the Higher Learning Commission;

This certificate will not require approval from accreditation bodies or the Higher Learning Commission. Because this certificate will be supported by faculty with PhD's in Public Administration who do research in and participate in the wider academic nonprofit community, other academic programs across UW that add this Nonprofit Leadership Certificate as a track to their graduate degrees may be able to count these PhD's to their ratio of classes taught by PhD's if their accreditation requires such a ratio.

8. Evidence of how the new Academic Program aligns with the University's mission, strategic plan, and existing academic degree program array;

This new certificate aligns with multiple parts of UW's mission and strategic plan by: 1) enabling engagement with and serving the state through supporting the nonprofit's in the state, 2) building innovation and economic diversification by cultivating entrepreneurial social ventures, 3) supporting Wyoming's land grant mission, 4) enabling transdisciplinary collaboration because the of the broad nature of the nonprofit sector (i.e., there is a nonprofit for almost every interest and subsector) bringing students together from all backgrounds

Alignment with Existing Academic Degree Program Array: As listed in section 3, students from many academic disciplines eventually end up working in the nonprofit sector and so virtually any humanities and social science student might be interested in this certificate, as well as students from other areas, will see this certificate as a useful complement to their studies.

9. A rationale that clearly defines the need for the new Academic Program. The rationale should include evidence that the Academic Program will not produce unnecessary duplication of existing programs.

The Nonprofit Leadership Certificate complements education and training for students interested in working in a variety of nonprofit and public organization types that rely on fundraising and grant writing as part of their business plan, including: arts and cultural organizations like museums and orchestras; environment, animal, and natural resource nonprofits; human services nonprofits like soup kitchens, homeless shelters, and sexual abuse prevention orgs; advocacy organizations; education related nonprofits like alumni associations and parent-teacher organizations; adult and child sports leagues; science and science education nonprofits like nonprofit research labs, zoos, and planetariums; health related organizations like hospitals and public health promotion organizations; religion, congregations, and religiously-affiliated organizations, and grant making private foundations.

In addition to the professional opportunities, the nonprofit leadership certificate would build capacity for people to be more effective nonprofit board members and volunteers. Many professions (including law, business, accounting, banking, and medicine) encourage volunteering, pro bono work, and service on nonprofit boards as part of their professional responsibilities and for effective networking in those fields. As a graduate certificate this would be available to these types of professionals and community members who want to enhance their capacity for public service.

This proposed certificate will not produce unnecessary duplication of existing programs as there is no "Nonprofit" specific credential at the University of Wyoming. Nationwide since the 1990's, there has

been a tremendous increase in the number of universities offering nonprofit-specific education (Mirabella & Wish, 2001; Mirabella, 2007; Mirabella et al., 2019) suggesting strong recognition and legitimacy to this field, and offering legitimacy to UW if it were to join the large and growing list of universities that offer nonprofit credentials. Furthermore, anecdotal discussions with many of the graduate programs mentioned in section 3 suggest that these programs would see a Nonprofit Leadership Certificate as a welcome complement to their offerings and a value added for their students.

References

- Mirabella, R., Hoffman, T., Teo, T. K., & McDonald, M. (2019). "The Evolution of Nonprofit Management and Philanthropic Studies in the United States: Are We Now a Disciplinary Field?" *The Journal of Nonprofit Education and Leadership*, 9(1). https://doi.org/10.18666/JNEL-2019-V9-I1-9598
- Mirabella, R. (2007). "University-Based Educational Programs in Nonprofit Management and Philanthropic Studies: A 10-Year Review and Projections of Future Trends." *Nonprofit and Voluntary Sector Quarterly*, 36(4_suppl), 11S-27S. https://doi.org/10.1177/0899764007305051
- Mirabella, R., & Wish, N. B. (2001). "University-Based Educational Programs in the Management of Nonprofit Organizations: An Updated Census of U.S. Programs." *Public Performance & Management Review*, 25(1), 30–41. https://doi.org/10.1080/15309576.2001.11643643

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Notice of Intent: Graduate Certificate in Global Environmental</u> <u>Futures</u>, Ahern, Koprowski, Stoellinger

☑ OPEN SESSION

 \Box CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

□ Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The Haub School of Environment and Natural Resources proposes a new graduate certificate in Global Environmental Futures. The certificate program will comprise nine credit hours and will have a mixed modalities delivery format. Students in the proposed program will develop a global perspective on critical environmental and natural resource issues and apply interdisciplinary tools to analyze and shape future environmental scenarios, and collaborate on policy, research, and resilience strategies. The Global Environmental Futures certificate will add to the University's portfolio of graduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. A Notice of Intent to the Board will allow the program proposers to complete review internally with the shared-governance bodies (Faculty Senate, ASUW, and Staff Senate), and Deans' Council. Academic Affairs and the School of Graduate Education support the degree proposal. The Request for Authorization will be submitted for the Board's consideration and approval in the 2025-2026 academic year.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Notice of Intent for the Graduate Certificate in Global Environmental Futures.

PROPOSED MOTION:

"I move to approve the Notice of Intent for the Graduate Certificate in Global Environmental Futures."

Notice of Intent

Graduate Certificate in Global Environmental Futures (GEF)

University of Wyoming Haub School of Environment and Natural Resources

December 2024

1. Name and Mode of Delivery

Program Name: Graduate certificate in Global Environmental Futures
 Delivery Mode: Mixed modalities, including on-campus, online, hybrid, and optional field or international coursework. By Spring 2026, the certificate will offer two completion pathways, including a fully online option for distance learners.

2. Program Description, Learning Outcomes, and Anticipated Curriculum

Program Description

Global Environmental Futures (GEF) involves the interdisciplinary study of future environmental scenarios and the interactions between human and natural systems. It integrates tools like biodiversity analysis, scenario modeling, and socio-economic evaluations to address emerging global environmental challenges. A key aspect of this field is incorporating diverse cultural perspectives, traditions, and worldviews to inform decision-making and problem-solving in natural resource management. Students in the GEF certificate program will: develop a global perspective on critical issues such as biodiversity conservation, climate change, and sustainable resource use; apply interdisciplinary tools to analyze and shape future environmental scenarios; and collaborate on creative policy, research, and resilience strategies at local, national, and global levels.

Learning Outcomes

Learners who complete the certificate program will:

- **1. Develop systems-level perspectives** on global environmental challenges across ecological, social, economic, and cultural domains.
- **2.** Design transdisciplinary solutions to environmental challenges by integrating diverse methods and cultural insights.
- **3.** Analyze and communicate environmental futures through scenario modeling, strategic thinking, and adaptive decision-making.
- 4. Incorporate diverse cultural perspectives into environmental analysis and sustainable solutions.

Anticipated Curriculum

The certificate is comprised of nine total credits, including one required course and two total courses from the Electives category:

- Essential Course (3 cr)
 - Years 1-2 ORTM 5050 Global Tourism OR ENR 5680 Diversity & Justice in ENR. ORTM 5050 examines global tourism's impact from diverse perspectives, while ENR 5680 explores theories and practices for building inclusive, just, and resilient communities.
 - Years 3 and beyond: ENR 59xx Global Environmental Futures. Foundational knowledge in environmental futures, scenario modeling, and interdisciplinary approaches to addressing complex environmental challenges. (*In development*)

• Elective Courses (6 cr, choose two)

- Field and global courses combine an online asynchronous anchor course (3 credits) with companion field experiences for variable credit (1–3 credits), all under the ENR 4965 course number. Courses are offered predictably with 2–3 options each year. Travel courses include additional fees.
 - ENR 5965A: Queensland, Australia Human & Physical Landscapes: Recreation, conservation, and economic development in Queensland's coastal areas.
 - ENR 5965B: Austrian & Italian Alps Alpine Climate & Culture: Landscapes and cultures of Europe's high alpine communities.
 - ENR 5965C:Patagonia, Chile Conservation & Development: Natural resource conservation and development in Patagonia.
 - ENR 5965D: Coastal Belize Coastal Climate Resilience: Local knowledge and the role of oceans in global sustainability.
 - ENR 5965E: Mongolia Wild & Working Lands: Nomadic cultures, wildlife conservation, and sustainable land use in grassland steppe and desert environments.
 - ENR 5965F: Nepal Wildlife Conservation (In Development): Wildlife, biodiversity and community-based conservation.

3. Relation to Other University of Wyoming Offerings

The Global Environmental Futures certificate complements existing UW programs, including the MS in ENRS, the MA in International Studies, and the MBA in Business Administration. It enhances global perspectives and specialized expertise, adding value to extant degrees without duplication.

As the Haub School expands the fully online MS ENRS, the certificate offers a flexible, accessible option for distance learners to gain advanced skills aligned with academic and professional goals.

4. Plan for Obtaining, Evaluating, & Analyzing Preliminary Market Analysis

While formal programs in environmental futures are well-established globally, they remain nascent in the U.S., presenting a strategic opportunity. This certificate will attract graduate students seeking specialization and working professionals advancing in environmental policy, research, or consulting with a global perspective.

A market analysis will use Gray Associates data and include relevant CIP codes: 1) 03.0101: Natural Resources/Conservation, General, 2) 03.0103: Environmental Studies, 3) 30.3301: Sustainability Studies, 4) 30.0601: Systems Science and Theory. We will also review comparable programs at international institutions such as the University of Wollongong, University of Queensland, Freie Universität, Lancaster University, and University of Leicester.

5. Preliminary Budget

The Graduate Certificate in Global Environmental Futures leverages existing resources at UW and the Haub School for cost-effective implementation, utilizing developed courses and an online course designer to support online conversions as needed. Anticipated funding includes tuition revenue from on-campus and distance learners, online program revenue through UW's education strategy, and grants for global environmental education. Resources will support the development of the EF foundational course, optional online conversion of an elective, and targeted marketing to local, national, and international audiences. Growth opportunities include increased enrollment from graduate students and non-degree professionals, predictable field studies attracting experiential learners, and tuition revenue from online pathways.

Phase	Tasks	Timeline
Phase 1: Planning	Finalize curriculum, course development, faculty assignments.	Spring 25
Phase 2: Approvals	Secure necessary approvals from department, college, university committees, and Board of Trustees.	Fall 25
Phase 3: Marketing	Launch promotional efforts targeting campus and distance learners.	Fall 25
Phase 4: Pilot	Offer the foundational course as a pilot to ensure alignment with learning outcomes and student needs.	Spring 26
Phase 5: Launch	Open enrollment for the full certificate program and begin offering electives and field studies courses.	Spring 26
Phase 6: Evaluation	Collect feedback from the first cohort, assess course delivery, and refine curriculum as needed.	Fall 26
Phase 7: Transition	Convert additional electives to fully online formats.	Spring 27

6. Proposed Timeline for Staged Implementation

7. Other Required Approvals (Not applicable)

8. Alignment with University Mission & Strategic Plan

The certificate aligns with UW's strategic priorities by: 1) Enhancing student success through innovative, interdisciplinary learning, 2) Expanding online and global program offerings, and 3) Addressing the increasing need for expertise in sustainability and future studies.

9. Rationale

Environmental futures (EF) research is gaining global prominence in addressing critical issues like biodiversity loss, climate change, and sustainable development, yet academic opportunities in the U.S. remain limited. This program positions the University of Wyoming at the forefront of this emerging discipline, aligning with global trends in environmental and natural resource studies. Moreover, the Haub School's long-standing commitment to global experiential education and growing faculty expertise in global environmental and natural resource research and teaching provide a strong foundation for this certificate. It will equip students with cutting-edge tools to navigate the complexities of environmental futures and tackle urgent global challenges.

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Notice of Intent: Undergraduate Certificate in Global</u> <u>Environmental Futures</u>, Hilaire, Koprowski, Stoellinger

 \boxtimes OPEN SESSION

□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

□ Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The Haub School of Environment and Natural Resources proposes a new undergraduate certificate in Global Environmental Futures. The certificate program will comprise nine credit hours and will have a mixed modalities delivery format. Students in the proposed program will develop a global perspective on critical environmental and natural resource issues and apply interdisciplinary tools to analyze and shape future environmental scenarios, and collaborate on policy, research, and resilience strategies. The Global Environmental Futures certificate will add to the University's portfolio of undergraduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. A Notice of Intent to the Board will allow the program proposers to complete review internally with the shared-governance bodies (Faculty Senate, ASUW, and Staff Senate), and Deans' Council. Academic Affairs support the certificate proposal. The Request for Authorization will be submitted for the Board's consideration and approval in the 2025-2026 academic year.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Notice of Intent for the Undergraduate Certificate in Global Environmental Futures.

PROPOSED MOTION:

"I move to approve the Notice of Intent for the Undergraduate Certificate in Global Environmental Futures."

Notice of Intent

Undergraduate Certificate in Global Environmental Futures (GEF)

University of Wyoming Haub School of Environment and Natural Resources

December 2024

1. Name and Mode of Delivery

Program Name: Undergraduate certificate in Global Environmental Futures
 Delivery Mode: Mixed modalities, including on-campus, online, hybrid, and optional field or international coursework. By Spring 2026, the certificate will offer two completion pathways, including a fully online option for distance learners.

2. Program Description, Learning Outcomes, and Anticipated Curriculum

Program Description

Global Environmental Futures (GEF) involves the interdisciplinary study of future environmental scenarios and the interactions between human and natural systems. It integrates tools like biodiversity analysis, scenario modeling, and socio-economic evaluations to address emerging global environmental challenges. A key aspect of this field is incorporating diverse cultural perspectives, traditions, and worldviews to inform decision-making and problem-solving in natural resource management. Students in the GEF certificate program will: develop a global perspective on critical issues such as biodiversity conservation, climate change, and sustainable resource use; apply interdisciplinary tools to analyze and shape future environmental scenarios; and collaborate on creative policy, research, and resilience strategies at local, national, and global levels.

Learning Outcomes

Learners who complete the certificate program will:

- **1. Develop systems-level perspectives** on global environmental challenges across ecological, social, economic, and cultural domains.
- **2.** Design transdisciplinary solutions to environmental challenges by integrating diverse methods and cultural insights.
- **3.** Analyze and communicate environmental futures through scenario modeling, strategic thinking, and adaptive decision-making.
- 4. Incorporate diverse cultural perspectives into environmental analysis and sustainable solutions.

Anticipated Curriculum

The certificate is comprised of nine total credits, including one required course and two total courses from the Electives category:

- Essential Course (3 cr)
 - Years 1-2 ORTM 4050 Global Tourism OR ENR 4680 Diversity & Justice in ENR. ORTM 4050 examines global tourism's impact from diverse perspectives, while ENR 4680 explores theories and practices for building inclusive, just, and resilient communities.
 - Years 3 and beyond: ENR 49xx Global Environmental Futures. Foundational knowledge in environmental futures, scenario modeling, and interdisciplinary approaches to addressing complex environmental challenges. (*In development*)

• Elective Courses (6 cr, choose two)

- Field and global courses combine an online asynchronous anchor course (3 credits) with companion field experiences for variable credit (1–3 credits), all under the ENR 5965 Field & International Experience course number. Courses are offered predictably with 2–3 options each year. Travel courses include additional fees.
 - ENR 4960A: Queensland, Australia Human & Physical Landscapes: Recreation, conservation, and economic development in Queensland's coastal areas.
 - ENR 4960B: Austrian & Italian Alps Alpine Climate & Culture: Landscapes and cultures of Europe's high alpine communities.
 - ENR 4960C:Patagonia, Chile Conservation & Development: Natural resource conservation and development in Patagonia.
 - ENR 4960D: Coastal Belize Coastal Climate Resilience: Local knowledge and the role of oceans in global sustainability.
 - ENR 4960E: Mongolia Wild & Working Lands: Nomadic cultures, wildlife conservation, and sustainable land use in grassland steppe and desert environments.
 - ENR 4960F: Nepal Wildlife Conservation (*In Development*): Wildlife, biodiversity and community-based conservation.

3. Relation to Other University of Wyoming Offerings

The Global Environmental Futures certificate complements existing UW programs, including the Haub School's undergraduate degrees, the Honors Interdisciplinary Inquiry Concurrent Major, and BAs in Anthropology, Sociology, and International Studies. It serves as a microcredential to enhance global perspectives and expertise in environmental futures without competing with broader degree offerings. By focusing on a specialized learning framework, the certificate adds value to these degrees, helping students deepen their knowledge and prepare for global professional challenges.

4. Plan for Obtaining, Evaluating, & Analyzing Preliminary Market Analysis

While formal programs in environmental futures are well-established globally, they remain nascent in the U.S., presenting a strategic opportunity. This certificate will attract students seeking specialization in issues of environmental conservation, justice, policy, and governance.

A market analysis will use Gray Associates data and include relevant CIP codes: 1) 03.0101: Natural Resources/Conservation, General, 2) 03.0103: Environmental Studies, 3) 30.3301: Sustainability Studies, 4) 30.0601: Systems Science and Theory. We will also review comparable programs at international institutions such as the University of Wollongong, University of Queensland, Freie Universität, Lancaster University, and University of Leicester.

5. Preliminary Budget

The undergraduate certificate in Global Environmental Futures leverages existing resources at UW and the Haub School for cost-effective implementation, utilizing developed courses and our instructional designer to support online conversions as needed. Anticipated funding includes tuition revenue from on-campus and distance learners, online program revenue through UW's education strategy, and grants for global

environmental education. Resources will support the development of the EF foundational course, optional online conversion of an elective, and targeted marketing to local, national, and international audiences. Growth opportunities include increased enrollment from non-degree professionals, predictable field studies attracting experiential learners, and tuition revenue from online pathways.

Phase	Tasks	Timeline
Phase 1: Planning	Finalize curriculum, course development, faculty assignments.	Spring 25
Phase 2: Approvals	Secure necessary approvals from department, college, university committees, and Board of Trustees.	Fall 25
Phase 3: Marketing	Launch promotional efforts targeting campus and distance learners.	Fall 25
Phase 4: Pilot	Offer the foundational course as a pilot to ensure alignment with learning outcomes and student needs.	Spring 26
Phase 5: Launch	Open enrollment for the full certificate program and begin offering electives and field studies courses.	Spring 26
Phase 6: Evaluation	Collect feedback from the first cohort, assess course delivery, and refine curriculum as needed.	Fall 26
Phase 7: Transition	Convert additional electives to fully online formats.	Spring 27

6. Proposed Timeline for Staged Implementation

7. Other Required Approvals (Not applicable)

8. Alignment with University Mission & Strategic Plan

The certificate aligns with UW's strategic priorities by: 1) Enhancing student success through innovative, interdisciplinary learning, 2) Expanding online and global program offerings, and 3) Addressing the increasing need for expertise in sustainability and future studies.

9. Rationale

Environmental futures (EF) research is gaining global prominence in addressing critical issues like biodiversity loss, climate change, and sustainable development, yet academic opportunities in the U.S. remain limited. This program positions the University of Wyoming at the forefront of this emerging discipline, aligning with global trends in environmental and natural resource studies.

The Haub School's long-standing commitment to global experiential education and growing faculty expertise in global environmental and natural resource research and teaching provide a strong foundation for this certificate. It equips students with cutting-edge tools to navigate the complexities of environmental futures and tackle urgent global challenges.

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Notice of Intent: Undergraduate Certificate in Ranch Management</u> <u>& Agricultural Leadership</u>, Hilaire, Crane, Violett

 \boxtimes OPEN SESSION

□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

□ Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

 \boxtimes Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The College of Agriculture, Life Sciences and Natural Resources proposes a new undergraduate certificate in Ranch Management & Agricultural Leadership. The undergraduate certificate program will comprise twenty-four credit hours that would instill the skills and competencies necessary for being a community leader and apprentice ranch manager. Students in the proposed certificate will have an opportunity to develop an appreciation for the ranching lifestyle and it's important to the state of Wyoming. The Ranch Management and Agricultural Leadership undergraduate certificate will add to the University's portfolio of undergraduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. A Notice of Intent to the Board will allow the program proposers to complete review internally with the shared-governance bodies (Faculty Senate, ASUW, and Staff Senate), and Deans' Council. Academic Affairs support the certificate proposal. The Request for Authorization will be submitted for the Board's consideration and approval in the 2025-2026 academic year.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Notice of Intent for the Undergraduate Certificate in Ranch Management & Agricultural Leadership.

PROPOSED MOTION:

"I move to approve the Notice of Intent for the Undergraduate Certificate in Ranch Management & Agricultural Leadership."

University of Wyoming, College of Agriculture, Life Sciences and Natural Resources Notice of Intent Date: 12/9/2024 Ranch Management & Agricultural Leadership Undergraduate Certificate

Context and Rationale

To allow students an opportunity to develop an appreciation for the ranching lifestyle and its importance to the state of Wyoming, the RMAL program is developing an undergraduate certificate program.

With the recent release of the RMAL BS degree it has been requested by students to offer the RMAL core courses in a certificate program. This would allow students from across campus to take the twenty-four credits that would instill the skills and competencies necessary for being a community leader and apprentice ranch manager.

Two-degree programs (Plant Production and Protection, Energy and Environmental Systems Concentration) have adopted the RMAL courses as part of their curriculum as either electives or core courses. This would allow students an opportunity to earn this certificate while meeting their major degree requirements. Students will become a knowledgeable leader in ranch management as it relates to energy and natural resources with this certificate program. The curriculum offers both a philosophical and functional view that is applicable to a wide range of careers.

Target Audience

Current UW students seeking a degree in any natural resource, agriculture, or land management discipline. Federal and state agencies such as the U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Environmental Protection Agency, and Natural Resources Conservation Service; State trust lands or private consultant contractor firms that work with managing public and private lands.

Relationship to Other Offerings/Demand

The nature of ranch management and agricultural leadership today requires professionals to have an integrated understanding across a broad array of disciplines, while demonstrating exemplary interpersonal skills that allow for effective teamwork, collaboration, and development and retention of talent. Broadly defined, RMAL will be characterized by interdisciplinary intersections of resource utilization, business operations, law and policy, leadership and management, and problem solving.

A recent USDA report noted that available employment opportunities in the food, agriculture, renewable natural resources and the environment sector will remain steady and strong. Between 2020 and 2025, they expect an average of 7,900 annual job openings for new graduates. College graduates with degrees from institutions offering food, agriculture, renewable natural resources, and environmental programs will fill 92% (7,300) of the annual openings, with the other 8% (600) filled by graduates from allied fields of study and certificate programs. The report also points out that employers in this cluster value and seek graduates with practical experience.

Curricular Description

Students in this certificate program could complete the coursework in a one-year cycle. Courses are offered on a set rotation to accommodate completion in one year. Courses can be completed in any order, which allows a student to enter the program at any time and not get 'off cycle.' The goal is to increase the popularity of the RMAL courses so that they will not be in jeopardy of not being offered. All the core courses in this certificate are currently being offered through the new RMAL program, and all the optional coursework is built on existing courses in the 24-25 Catalog. The list of optional coursework is wide-ranging and would accommodate professionals in a variety of careers or students in a variety of majors.

Budget

All the core courses are being offered for the RMAL BS degree so no new faculty will need to be hired. In fact, offering this certificate will better utilize the faculty and increase the enrollment of the RMAL courses. The elective courses are currently offered on a regular basis across campus. The only initial cost for the certificate program will be the addition of a marketing campaign which will be funded using Wyoming Innovation Partnership funds.

Timeline

With all the coursework already in existence at UW the program would be ready to launch in fall of 2025.

Other Necessary Approvals

Beyond UW approvals, there are no additional pieces, such as specialized accreditation or licensure considerations. UW will notify the Higher Learning Commission of this new undergraduate certificate but that is unlikely to prompt any changes or specialized review.

Alignment with University Mission

This proposed certificate aligns with every aspect of the UW Mission, "We honor our heritage as the state's flagship and land-grant university by providing accessible and affordable higher education of the highest quality; rigorous scholarship; the communication and application of knowledge; economic and community development; and responsible stewardship of our cultural, historical and natural resources." This undergraduate certificate focuses on agriculture, natural resources and energy projects which aligns with the mission of UW. This undergraduate certificate is as affordable as any other UW credential and featuring quality faculty in this area of research and practice.

Learning Outcomes

- 1. The ability to synthesize science-based information related to agricultural endeavors.
- 2. The ability to demonstrate a level of self and situational awareness sufficient to collaborate, problem solve, and lead others in organizational and community settings.
- 3. The ability to find and use resources for answering questions or solving problems as they arise in an agriculture-related setting.
- 4. The ability to demonstrate a broader understanding and appreciation of intellectual/cultural activity.
- 5. The desire to seek answers and become lifelong learners.

Proposed Curriculum

Core Courses – 18 credit hours

- RMAL 3000 Beginning Ranch & Rangeland Problem Solving and Planning (3 cr.) Fall
- RMAL 3020 Public Policy & Regulatory Considerations for Ranch & Rangeland Management (3 cr.) Fall
- RMAL 4000 Advanced Ranch & Rangeland Problem Solving & Planning (3 cr.) Spring
- RMAL 4760 Organizational Leadership in Agriculture (3 cr.) Spring
- RMAL 4800 Leadership & Collaboration Strategies to Address Contemporary Challenges in Agriculture (3 cr.) Spring
- RMAL 4990 Ranching in the West Seminar Series (3 cr.) Spring

Elective Courses - Minimum 6 credit hours from 24 identified courses at UW.

Approvals

Felly & Grane

Dean of College of Agriculture, Life Sciences and Natural Resources, Kelly Crane

Aby Alato S

Associate Director of RMAL, Randall Violett

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Notice of Intent: Undergraduate Certificate in Subsurface Energy</u>, Hilaire, Krutka, Dale, Danaei, Rasouli

☑ OPEN SESSION

□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

□ Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
 □ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The School of Energy Resources, College of Engineering and Physical Sciences and the Department of Energy and Petroleum Engineering proposes a new undergraduate certificate in Subsurface Energy. The undergraduate certificate program will comprise eighteen credit hours would provide UW student with a unique, interdisciplinary credential that included the basics of petroleum engineering with other subsurface energy topics. The Subsurface Energy undergraduate certificate will add to the University's portfolio of undergraduate credentials that serve the workforce needs of the state.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. A Notice of Intent to the Board will allow the program proposers to complete review internally with the shared-governance bodies (Faculty Senate, ASUW, and Staff Senate), and Deans' Council. Academic Affairs support the certificate proposal. The Request for Authorization will be submitted for the Board's consideration and approval in the 2025-2026 academic year.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Notice of Intent for the Undergraduate Certificate in Subsurface Energy.

PROPOSED MOTION:

"I move to approve the Notice of Intent for the Undergraduate Certificate in Subsurface Energy."
University of Wyoming, School of Energy Resources; College of Engineering and Physical Sciences, Department of Energy and Petroleum Engineering Notice of Intent Date: December 12, 2024

Subsurface Energy Undergraduate Certificate

Context and Rationale

Across the Nation, petroleum engineering undergraduate enrollment has decreased, even as oil and gas remain a sizeable industry and companies have begun expanding their subsurface energy offerings to include carbon storage, geothermal energy, blockchain and digital innovation and more. While some students have expressed reservations about obtaining a petroleum engineering degree due to its specificity compared to other engineering disciplines, employment opportunities exist for this skillset. To fill the current entry-level skill gap, oil and gas companies have hired engineers from other disciplines and trained them post-employment. This certificate is designed to provide UW students with a unique, interdisciplinary credential that includes the basics of petroleum engineering with other subsurface energy topics.

Target Audience

Students with technical backgrounds and interest in subsurface energy are the target of this certificate, including undergraduate students studying Geology and Geophysics, Mechanical Engineering, Chemical Engineering, Civil Engineering, Energy Systems Engineering, etc.

If this NOI is approved, surveys will be used to quantify student demand.

Relationship to Other Offerings/Demand

The core courses for this certificate are based on the foundational petroleum engineering coursework. The electives are multidisciplinary and grouped into four separate areas (geoenergy engineering, economics, law and communication, digital innovation, emerging subsurface energy technologies); the electives include coursework from departments across UW. In addition, courses based on the Department of Energy and Petroleum Engineering's MS are also included as undergraduate, cross-listed electives. While some of the electives are new, they are being developed for other credentials already approved at UW. No new courses are being developed specifically for this proposed certificate.

Nationally there are several other certificates or undergraduate programs specializing in Subsurface Energy and Technologies. If this NOI is approved, we would explore how many of these other programs exist, if they are in traditional or hybrid formats, what curricular overlaps

exist, etc. After this investigation we would also perform a market analysis related to career outlets for students obtaining this credential at UW.

Curricular Description

The proposed certificate requires 18 credits to be completed.

The curriculum consists of two courses that are foundational for petroleum engineering. All students in the certificate program will take these two courses for a total of six credits. In addition, 12 credits will be required from a grouping of electives into the following interest areas:

- 1. Geoenergy engineering consists of core petroleum engineering coursework and includes all PETE courses
- Economics, law and communication interdisciplinary courses covering economics, law and communication to support students interested in the business and social sciences around subsurface energy
- 3. Digital innovation Leveraging digital technologies for subsurface energy including GIS, blockchain, data mining and visual analysis
- Emerging subsurface energy technologies Focused on subsurface energy technologies, such as carbon capture and storage, geothermal energy storage and the policies and markets that drive these new industries

Budget

As this certificate is designed with existing courses already offered at the University of Wyoming, there are minimal costs associated with creating and executing this credential. The School of Energy Resources will fund \$12,000/yr for advising and marketing of this certificate.

Timeline

This Notice of Intent (NOI) will be reviewed by the Board of Trustees in May 2025. Once approved, the feasibility study would be executed to meet the Academic Affairs deadline of August 15, 2025. This would allow for on campus review and approvals prior to arriving back at the Board of Trustees in November 2025., Existing coursework will continue to be offered, however this credential would not be listed in a UW catalog until the 26-27 Academic Year, officially launching the certificate in Fall 2026. Having approval in Fall 2025 would allow for marketing and recruitment to occur.

Other Necessary Approvals

Several of the PETE courses currently require enrolled students to be in the PETE undergraduate major. These are listed below, and the PETE department plans to add the proposed certificate

students as those allowed to enroll in these courses. Such instances and other necessary approvals are listed below:

- Currently PETE 2070 has a prerequisite of a C or better in PETE 2060, which is important to help PETE major students follow the standard program of study. While this prerequisite is important for the PETE major students, it is intended to keep students on track and is not related to the need for background knowledge (i.e., PETE 2060 is not foundational for PETE 2070). SER and DEPE will apply for the prerequisite to be removed for certificate students.
- PETE 3110 Departmental and UCRC prerequisite addition to include certificate enrollees to be admitted to the course
- PETE 3200– Departmental and UCRC prerequisite addition to include certificate enrollees to be admitted to the course
- PETE 3255 Departmental and UCRC prerequisite addition to include certificate enrollees to be admitted to the course
- PETE 3715 Departmental and UCRC prerequisite addition to include certificate enrollees to be admitted to the course
- PETE 4340 Waive PETE 3715 prerequisite, Departmental and UCRC prerequisite addition to include certificate enrollees to be admitted to the course

Alignment with University Mission

This proposed certificate aligns with every aspect of the UW Mission, "We honor our heritage as the state's flagship and land-grant university by providing accessible and affordable higher education of the highest quality; rigorous scholarship; the communication and application of knowledge; economic and community development; and responsible stewardship of our cultural, historical and natural resources." Some interest areas in this certificate are offered online, but not all. This certificate is as affordable as any other UW credential, featuring the highest quality faculty in this area of research and practice. As a land-grant institution, the University is focused on core industries to the state of Wyoming, including oil and gas and emerging subsurface energy opportunities. This certificate is aimed at providing UW students with an additional credential that will help them be more prepared for employment in the state, region and Nation's oil and gas and subsurface energy sector.

Learning Outcomes

- Demonstrate a fundamental understanding of petroleum engineering concepts, including reservoir properties, phase behavior, drilling methods, and production techniques.
- Apply principles of petroleum engineering to identify, analyze, and solve practical challenges in reservoir management, drilling, and production operations.
- Develop specialized knowledge in areas of interest, such as energy law and economics, digital innovation or energy sustainability, based on elective coursework.

• Apply interdisciplinary knowledge to address complex energy engineering problems in a professional context.

Proposed Curriculum: 18 credits

Core Courses (required)

- o PETE 2050 Fundamentals of Petroleum Engineering (3)
 - Prerequisite: C or better in MATH 2200 or Concurrent in MATH 2200
- PETE 2070 Geology/Geophysics for Petroleum Engineers (3)
 - Prerequisite: C or better in PETE 2050; PETE Major

Students can also select at least twelve (12) credits from electives. These have been grouped into four (4) interest areas.

• Elective Options

- 1. Geoenergy Engineering
 - PETE 3110 Reservoir Petrophysics (3)
 - Prerequisite: C or better in PETE 2050; PETE Major
 - PETE 3200 Reservoir Engineering (3)
 - Prerequisite: PETE 3110; PETE Major
 - PETE 3255 Basic Drilling Engineering (3)
 - Prerequisite: C in ES 2330 and D in PETE 2070.
 - PETE 3715 Production Engineering (3)
 - Prerequisite: C or better in ES 2310, ES 2330, and PETE 2050; PETE Major
 - PETE 4*** Petroleum and Geothermal Engineering
 - To be cross listed with EPE 5020
 - PETE 4*** Subsurface Energy Storage
 - To be cross listed with EPE 5010
- 2. Economics, law, communication
 - ERS 1300 Oil: Business, Culture Power (3)
 - Cross listed with ECON 1300
 - ERS 3000 Energy Project Outreach and Communications (3)
 - Prerequisite: WA/COM1
 - ERS 4130 Oil and Gas and the Law of Subsurface Property
 - Prerequisite: ERS 2010 or PETE 3200 and WB/COM2 OR admission into CCUS Certificate
 - ERS 4135 Advanced Energy Law (3)
 - Prerequisite: ERS 4130
 - PETE 4340 Petroleum Economics and Law (3)
 - Prerequisite: PETE 3715; PETE Major

- 3. Digital Innovation
 - GIST 2310 Introduction to Geographic Information Systems (4)
 - PETE 2060 Computing and Data Mining (3)
 - Prerequisite: C or better in PETE 2050
 - PETE 4820 Blockchain in Energy (3)
 - Prerequisite: Junior status or higher
 - PETE 4990 Data Mining (1-6)
 - Prerequisite: Junior status or higher
 - PETE 4*** Visual Analytics
- 4. Emerging Subsurface Energy Technologies
 - ERS 4480 Carbon Capture and Storage (3)
 - Prerequisite: ES 2310 and CE 3400, waived for non-CE students
 - Cross listed with CE 4480
 - Dual listed with CE 5480
 - ERS 4481 Geological Carbon Sequestration (3)
 - Prerequisite: MATH 2200
 - Cross listed with CHE 4481
 - Dual listed with CHE 5481
 - ERS 4482 Global Climate Governance (3)
 - Prerequisite: Completion of a COM2 class with a grade of C or better
 - PETE 4820 Blockchain in Energy (3)
 - Prerequisite: Junior status or higher
 - PETE 4*** Petroleum and Geothermal Engineering
 - To be cross listed with EPE 5020
 - PETE 4*** Subsurface Energy Storage
 - To be cross listed with EPE 5010

Approvals

Holly Kritka SER Executive Director, Holly Krutka

Kami Danasi

SER Academic Director/Department Head, Kami Danaei

Cam A. L. With

College of Engineering and Physical Sciences Dean, Cameron Wright

DEPE Department Head, Vamegh Rasouli

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Notice of Intent: Bachelor of Arts in Early Childhood/Early Childhood</u> <u>Special Education</u>, Hilaire, Shim, Crane, Chamberlin, Keith

 \boxtimes OPEN SESSION

□ CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

□ Yes

🛛 No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
□ No

 \boxtimes Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: The College of Education (COE) proposes a new Bachelor of Arts degree in Early Childhood Education/Early Childhood Special Education. The undergraduate program will prepare educators for ages birth through 8 (Grade 3), with an emphasis on children with disabilities. This degree will qualify candidates for PTSB licensure in PreK-3 General and Special Education. Currently, the Elementary Education degree in the COE prepares students to teach children from kindergarten to grade 6, but it does not include a birth to age 5 component or significant coursework in child development and family systems. The proposed program would incorporate elements of the existing Professional Child Development degree in the Department of Family and Consumer Sciences within the College of Agriculture and Natural Resources, while phasing out that degree completely.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS: N/A

WHY THIS ITEM IS BEFORE THE COMMITTEE:

University of Wyoming Regulation 2-119 requires that the Board approve all new degree programs and lays out the process for that approval. A Notice of Intent to the Board will allow the program proposers to complete review internally with the shared-governance bodies (Faculty Senate, ASUW, and Staff Senate), and Deans' Council. Academic Affairs support the degree proposal. The Request for Authorization will be submitted for the Board's consideration and approval in the 2025-2026 academic year.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

Consideration for approval of the Notice of Intent for the Bachelor of Arts in Early Childhood Education/Early Childhood Special Education.

PROPOSED MOTION:

"I move to approve the Notice of Intent for the Bachelor of Arts in Early Childhood Education/Early Childhood Special Education."

Notice of Intent BA in Early Childhood/Early Childhood Special Education December 12, 2024

Name of the proposed Academic Program and the mode of delivery: The Bachelor's degree in Early Childhood Education/Early Childhood Special Education will be offered through the College of Education. The degree will be delivered on campus and distance, with both synchronous and asynchronous coursework required.

Description of the new Academic Program including an outline of the anticipated curriculum and learning outcomes: This degree will prepare educators for Birth through age 8 (Grade 3) with an emphasis on children with disabilities. The degree will qualify candidates for PTSB licensure in PreK-3 General and Special Education.

<u>Anticipated Curriculum</u>: Students will only be able to gain this knowledge through an interdisciplinary approach that combines a strong foundation in pedagogy with a strong understanding of child development, family relationships, and community partnerships. Thus, anticipated curriculum will require the following categories of coursework:

- Completion of general university studies
- Early childhood education, curriculum, nutrition, health & wellness, and assessment courses
- Developmental, family, community, and diversity courses
- Clinical experiences in the birth to age 8 range
- Student teaching/residency two placements, one in an early childhood special education setting (birth -5), and another in a Kindergarten through third grade elementary school setting

<u>Student Learning Outcomes</u>: Learning outcomes are based on the National Association of the Education of Young Children's (NAEYC) professional standards and competencies for early childhood educators, which include knowledge of the following:

- 1. Standard 1: Relationships
- 2. Standard 2: Curriculum
- 3. Standard 3: Teaching
- 4. Standard 4: Assessment of Child Progress
- 5. Standard 5: Health
- 6. Standard 6: Staff Competencies, Preparation, and Support
- 7. Standard 7: Families
- 8. Standard 8: Community Relationships
- 9. Standard 9: Physical Environment
- 10. Standard 10: Leadership and Management

<u>Teacher Licensure</u>: Graduates of this program would be eligible to receive a Wyoming Teaching License Birth to Age 8 from the Wyoming Professional Teaching Standards Board (PTSB). This license qualifies graduates to work with young children and families in a variety of inclusive settings. Students would have the opportunity to earn their Early Childhood Special Education initial license within the program.

Information about content and how the Academic Program may relate to other offerings: The existing Elementary Education degree in the College of Education prepares students to teach children from Kindergarten through Grade 6 but does not include a birth to age 5 component, nor significant coursework in child development and family systems. Students graduating from the degree program are licensed elementary teachers but are not endorsed to teach in preschool programs unless they complete the additional Early Childhood Minor.

The existing Early Childhood Minor provides students in the elementary education program and related disciplines with the option to complete a Birth to Age 5 teaching license or a Birth to Age 8 endorsement. This is not a degree program, however. The current post-graduate endorsement in Early Childhood Special Education (ECSE) leads to an additional

endorsement in special education from birth to age 5. The proposed new program would combine early childhood general and special education to create a blended program that prepares educators for the widest possible range of teaching options. The new program would limit ECSE licensing to ages birth-5 and would not duplicate licensing in Special Education K-12.

The proposed program would include elements of the current Professional Child Development degree in the Department of Family and Consumer Sciences in the College of Agriculture and Natural Resources while phasing out that degree completely.

A plan for obtaining a market analysis of anticipated student demand and enrollment, and a plan for evaluation and analysis of post-graduation employment market demand: Market analysis has been completed using Gray Associates' data and suggests a high student demand and positive employment outlook.

Overall Findings:

Nationally, from 2013 to 2023 all bachelor program completions increased by 6%, while bachelor programs in all education fields decreased by 18%. For Early Childhood Education & Teaching (13.1210; ECE) there was a 13% decline in all (on-ground and online) completions with a 13% increase in online program completions. For Education/Teaching of Individuals in Early Childhood Special Education Programs (13.1015; ECSE) there was a 25% decrease in all (on-ground and online) completions and an 79% increase in online completions. The increase in online completions and the domination of online bachelor education programs by strong online delivery higher education institutions suggests an online program design is necessary. Aspects (e.g., tuition, speed to completion, 8-week course design) of successful online delivery will be a factor. Additionally, marketing to states/regions that require Early Childhood Special Education and or Education/Teaching of Individuals in Early Childhood Special Education and or Education Program licensure is recommended.

Regional (CO, ID, MT, ND, NE, SD, UT, & WY) online completions increased by 15.789%, overall a 3.85% decrease. Central Wyoming College (CWC) entered the marketplace with 2 online completions in 2023. A quick review of the Wyoming Professional Teaching Standards Board and the Wyoming Department of Education webpages suggests that the BAS program at CWC does not meet Wyoming licensure requirements. Although, there is a possibility the state website is not up to date, or perhaps CWC is in the approval process, a bachelor of applied science presents concerns, or lacks specific accreditation.

There was a 14% increase in overall completions and a 64% increase in online completions over this three-year span. This strong upward trend may suggest a changing marketplace, perhaps a potential increased licensure requirement nationwide. Of interest is the decline in regional (CO, ID, MT, ND, NE, SD, UT, and WY) completion growth and only Nebraska and Idaho have programs.

Trends in Salary:

Bachelor graduate entry level salary is \$47,846 (ECE) and \$49,610 (ECSE), while post entry median entry level salary is \$73,826 (ECE), and \$74,887 (ECSE). Adding the special education component to the early childhood training at the bachelor level seems to increase salary for graduates with the dual license.

Preliminary budget, including potential funding sources, projected expenses and revenues, and potential faculty, academic professionals, lecturers, professors of practice, and staff: In order to expand the early childhood curriculum to create this degree, additional faculty (tenure track and/or non-tenure track) will be needed.

- Total projected expenses = \$182,818/year
 - 1 faculty positions in Early Childhood Education (\$72,000 in salaries + \$31,464 fringe = \$103,464)
 - 1 staff position for field placement management/advising (\$41,304 salary + \$18,050 fringe = \$59,354)
 - Operating budget = \$20,000. This includes professional travel, intern management travel, professional dues, accreditation fees, office supplies, office equipment.
- Total projected revenue = \$1,038,750/year
 - Estimate: 25 resident students in main campus program X \$173/credit X 30 credits/semester = \$129,750

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- Estimate: 25 non-resident students in main campus program X \$720/credit X 30 credits/semester = \$540,000
- Estimate: 25 resident students in on-line program X \$199/credit X 20 credits/semester = \$99,500
- Estimate: 25 non-resident students in on-line program X \$359/credit X 20 credits/semester = \$179,500
- Estimate: Other state and grant sources: \$90,000

Proposed timeline for staged implementation over five years, including campus and Board review:

- December 15, 2024 Proposal submitted for review to Academic Affairs
- Spring 2025 Proposal presented at Board of Trustees meeting
- August 2025 Feasibility study and pro forma budget submitted to Academic Affairs
- September 2025 Present feasibility study for campus review
- December 2025 Materials for the Request for Authorization and Letter of Commitment submitted for review to the Provost's Office
- March 2026 Request for Authorization and Letter of Commitment submitted for review to the Board of Trustees
- September 2026 CAPs submitted
- Fall 2026 faculty search publicized, Office of Registrar notified to add program to Master List of Degrees, Admissions notified to add program to "Pick List"
- Spring 2027 hiring of new faculty member complete
- Fall 2027 first year of delivery of Early Childhood Education (ECE) bachelor's degree, third faculty search publicized
- Fall 2028 second year of delivery of ECE degree

Information on other required approvals, such as accreditation bodies and the Higher Learning Commission: We are constructing this program based on standards and expectations put forth by NAEYC and Association for Advancing Quality in Educator Preparation (AAQEP). The new Early Childhood Education undergraduate degree program will be included in the accreditation process that will be carried out with our accrediting agency, AAQEP. The new Early Childhood Education degree program will be reviewed and approved by the Wyoming Professional Teaching Standards Board (PTSB) to ensure our students will be able to receive their teaching license.

Evidence of how the new Academic Program aligns with the University's mission, strategic plan, and existing academic degree program array:

<u>Alignment with UW's mission</u>: The proposed degree in Early Childhood Education aligns with UW's mission by preparing individuals to serve young children, families, and communities throughout Wyoming, other states within the US, and throughout the world. In addition, by providing the coursework via a distance delivery option we are increasing access to educational opportunities.

Alignment with UW's strategic plan: We believe this program aligns with all five of the University of Wyoming's goals in the Five Year Strategic Plan (2023+). Here, we will highlight the goals that most closely align to our proposed program. Goal 4 emphasizes "economic and community development using the assets and expertise of all colleges and schools," "grow(ing) health and wellbeing initiatives across the state," and "grow(ing) educational opportunities for Wyoming." As indicated by the Gray Associates' data, there is a clear need for professionals in Wyoming and nationally with an Early Childhood Education degree. The interdisciplinary nature of this program will produce graduates who understand pedagogy as well as child development and family processes, equipping professionals obtaining this degree to understand and support children and families in a holistic way. The degree in Early Childhood Education/Early Childhood Special Education will also provide opportunities for students to engage in internships and practicum placements that both strengthen communities and the preparation of our teachers. By providing multiple and diverse experiences in Wyoming classrooms, we will better prepare students to meet the complexities and diversity of the modern-day school environment. The proposed degree program also supports these efforts through student teaching placement in early childhood facilities and public elementary schools in diverse communities across the state. We plan to partner with

these communities in an effort to better prepare our students to provide instruction to diverse learners, in an effort to create lifelong learners throughout the state.

A rationale that clearly defines the need for the new Academic Program. The rationale should include evidence that the Academic Program will not produce unnecessary duplication of existing programs: The proposed degree in Early Childhood Education would allow students to teach across the birth-8 age range in general education and from birth-8 in special education, and allow students more flexibility in their career options, as many school districts in Wyoming have public preschool options along with Head Start and Child Development Services. Additionally, the interdisciplinary nature of the degree will provide students with the background necessary to be high-quality early childhood educators (as identified by research and accrediting bodies) and serve the needs of children and families across the state and beyond. This program moves UW towards the forefront of early childhood education standards and ensures our graduates will be highly sought after for a variety of career opportunities.

<u>Evidence the Academic Program will not produce unnecessary duplication of existing programs</u>: Currently two programs engage in the area of early childhood education on campus and work cooperatively to serve the needs of students and local families: the School of Teacher Education in the College of Education and the Department of Family and Consumer Sciences (FCS) in the College of Agriculture and Natural Resources. Additionally, in order to meet the needs for early childhood special educators across the state the College of Education provides a post-graduate endorsement in Early childhood special education (ECSE) birth-5. The current options are outlined below.

- B.S.F.C. in Family and Consumer Sciences with a program option in Professional Child Development (Department of FCS)
 - Prepares students to work with children ages birth-5 and their families.
- Minor in Early Childhood Education (School of Teacher Education)
- Endorsements (School of Teacher Education)
 - Early childhood birth-5 (earned with B.S./B.A. in related field)
 - Early childhood birth-8 (earned by minors in Elementary Education)
 - Early childhood special education (post-graduate)
- Certifications
 - o Early Childhood Program Director's Certificate (Department of Family and Consumer Sciences)

In the proposed blended program Students will earn both the Birth-8 teaching license and the early childhood special education endorsement B-5. Some content from the FCS Professional Child Development degree would be rolled into the Bachelor's in Early Childhood Education and that degree concentration would no longer be offered at UW. The Early Childhood Program Director's Certificate offered through Family and Consumer Sciences would also sunset.

The resulting new program will streamline and simplify the early childhood offerings at UW while providing a new pathway to dual licensure in general and special education. This addresses a significant need in small Wyoming communities for early childhood professionals who can serve in both a general and special education role. Two post graduate certificates will exist for individuals with education degrees already working in the field who are seeking additional licensing in either early childhood general or special education. The Minor in Early Childhood Education will also remain, providing an opportunity for UW students in related fields such as Psychology, Sociology, or Speech, Language and Hearing Sciences to add essential knowledge in early childhood education to their undergraduate degree.

The new program offerings, all through the College of Education, would be as follows.

- Bachelor of Early Childhood Education Birth-8 leading to initial PTSB licensure Birth-8
- Endorsement in Early Childhood Special Education Birth-5 leading to PTSB licensure in Special Education Birth-5
- Minor in Early Childhood Education Birth-5
- Post graduate certificate in Early Childhood Education Birth-5 Leading to a PTSB endorsement in Early Childhood Education Birth-5

• Post graduate certificate in Early Childhood Special Education Birth-5 – Leading to a PTSB endorsement in Early Childhood Special Education Birth-5



College of Agriculture, Life Sciences and Natural Resources Dept. 3354 • 1000 E. University Avenue • Laramie, WY 82071

January 29, 2025

Dear Dr. Buss,

This letter is to verify that the Department of Family and Consumer Sciences and the College of Agriculture, Life Sciences, and Natural Resources have been involved in the development of the BA in Early Childhood/Early Childhood Special Education Notice of Intent.

We concur that if this new degree is approved, the current Family and Consumer Science's bachelor's degree in Human Development and Family Sciences (HDFS) with a concentration in Professional Child Development will be duplicative. Therefore, we propose that the HDFS degree concentration in Professional Child Development be discontinued at the same time the new Early Childhood/Early Childhood Special Education degree launches.

We will provide the College of Education with a teach-out plan for Professional Child Development students who wish to complete their current degree. As there are only two courses required for the Professional Child Development concentration that are not required for all other Human Development and Family Sciences majors, we feel accomplishing this will be feasible.

Thank you for continuing to involve the FCS department and our College in your discussions. We look forward to continued collaboration between our programs.

Sincerely,

Kelly Crane Dean

All T. Kich

Jill Keith Department Head Family & Consumer Sciences

Cliste Wad

Christine Wade Associate Dean Academic & Student Programs

ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Test Optional Admissions</u> Turpen/Moore

 \boxtimes OPEN SESSION

 \Box CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

🛛 Yes

□ No

FOR FULL BOARD CONSIDERATION:

☑ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.]
□ No

□ *Attachments/materials are provided in advance of the meeting.*

EXECUTIVE SUMMARY:

With support from the University's Faculty Senate, the UW Administration requests approval from the UW Board of Trustees to extend the test-optional pilot period through the 2028/29 recruitment cycles. During this time, the UW administration will partner with faculty to assess the various factors and industry responses regarding student learning assessment. This additional time will better position UW to recommend whether any permanent policy change is warranted or if a new standard for assessing preparedness may emerge.

Background: In Fall 2020, the University began admitting students on a test-optional basis under a five-year pilot program approved by the Board of Trustees. This initiative was intended to evaluate the impact of test-optional admissions on student recruitment and retention. Over the past five years, UW has observed the following trends:

Increased Application Volume

- From 2020 to 2025, the total number of undergraduate applications increased by 12%, with significant growth among first-generation and rural students.
- Applications from non-resident students grew by 18%, contributing to 45% of UW's incoming class.

Retention and Academic Performance

- Retention of students admitted under the test-optional policy has increased from 76.5-78% since 2020
- High school GPA alone proved to be a stronger predictor of first-year retention and success, being 98.5% as predictive as GPA combined with standardized test scores.

Student Engagement

- COVID-19 disruptions to student learning; engagement, interactions, preparedness are evident in the university classroom.
- Higher education institutions are still assessing the best mechanisms to identify and support learning readiness, creating a need to identify mechanism to measure preparedness

NOTE: The State of Wyoming's Hathaway scholarship continues to require an ACT score for a student to be awarded. Over the past five years, UW's Office of Admissions and Scholarship and Financial Aid Offices have incorporated several communications to ensure every Wyoming High School student is aware of this requirement. These communications occur prior to a student's admission to UW and after, and include phone calls, emails, text messages and inclusion in print material provided to each Wyoming high school student, informing them of the need for an ACT to receive Hathaway funds. These communications also are designed to encourage students to complete the exam (provided free of charge for every Wyoming High School student during their junior year) and submit their scores. These efforts would continue and include any adjustments necessary to further promote the use of Hathaway awards.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS:

At the March 2025 Academic and Student Affairs Committee, UW Administration provided an update to the AA/SA Committee regarding the recruitment and retention impacts of a Test Optional Admissions pilot. This report was an update, with no action requested. It was reported to the members of the committee that UW administration would return in May with a recommendation that included UW Faculty Senate involvement.

In the spring of 2020, the BOT supported a pilot (5-year length) test-optional admissions policy to begin for students entering fall 2021. In response to the national shift in universities adopting test-optional admissions, the University of Wyoming needed to stay competitive in the recruitment of non-resident students. Extending the current test-optional admissions process allowed for the recruitment of students and an opportunity for the assessment of student outcomes before recommending a permanent change to UW regulation 2-201. The pilot timeframe for the test-optional admissions policy also paralleled the University's test-optional awarding option for scholarships.

WHY THIS ITEM IS BEFORE THE COMMITTEE:

Request that the Academic and Student Affairs Committee recommend to the full board the extension of the Test Optional Pilot period for an additional three years, to include the 2028/29 recruitment cycle.

ACTION REQUIRED AT THIS COMMITTEE MEETING: Yes

PROPOSED MOTION:

"I move to recommend the UW Board of Trustees approve extending the test optional admissions pilot period for an additional three years, to include the 2028/2029 recruitment cycle.

Academic Affairs and Student Affairs COMMITTEE MEETING MATERIALS

AGENDA ITEM TITLE: <u>Annual Student Success Data Follow-up</u>, Turpen/Courtney

 \boxtimes OPEN SESSION

 \Box CLOSED SESSION

PREVIOUSLY DISCUSSED BY COMMITTEE:

🛛 Yes

🗆 No

FOR FULL BOARD CONSIDERATION:

□ Yes [Note: If yes, materials will also be included in the full UW Board of Trustee report.] ⊠ No

Attachments/materials are provided in advance of the meeting.

EXECUTIVE SUMMARY: After the Board of Trustees meeting in February, there was a desire to learn more about the past five years before implementing Saddle-Up. We have gathered the data for the last ten years as a follow-up. We want to cover a few trends we are seeing, including pre-COVID, post-COVID, and efforts related explicitly to student success. We want to highlight a slight blimp in the data during COVID, which helps us better understand the probation and suspension opportunities that the University of Wyoming plans to address in the given year. Given the data in this presentation, we can hypothesize the need to help struggling students. This data also showcases the productivity we are seeing with the assistance of Saddle-Up and many other dedicated efforts around student success.

PRIOR RELATED COMMITTEE DISCUSSIONS/ACTIONS:

Initial discussion on the annual committee topic of Student Success during the January 2025 committee meeting.

WHY THIS ITEM IS BEFORE THE COMMITTEE:

The Academic and Student Affairs Committee requested additional data collection and discussion.

ACTION REQUIRED AT THIS COMMITTEE MEETING:

PROPOSED MOTION:

Spring 2025

Historical Retention Data-Pre Saddle-Up

UNIVERSITY STUDENT Student Success and Graduation

196

First-time, Full-time Student Retention:



New Full-time, Transfer Retention

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