

Submit original with signatures + 1 copy + electronic copy to Faculty Senate (Box 7500).
See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

TRIAL COURSE OR NEW COURSE PROPOSAL
(Attach copy of syllabus)

SUBMITTED BY:

Department	Biology & Wildlife	College/School	CNSM
Prepared by	Diane Wagner	Phone	474-5493
Email Contact	Diane.wagner@alaska.edu	Faculty Contact	

1. ACTION DESIRED
(CHECK ONE): Trial Course ☐ New Course ☒

2. COURSE IDENTIFICATION: Dept **BIOL** Course # **4XX** No. of Credits **0**

Justify upper/lower division status & number of credits:

As the name suggests, the capstone project in biology should be completed toward the end of a student's degree program, and therefore this is an upper-division course. The course provides no credit because it does not function as a traditional class, but rather as a tool to track students pursuing capstone projects through diverse means.

3. PROPOSED COURSE TITLE: Capstone Project

4. To be CROSS LISTED? YES/NO **NO** If yes, Dept: Course #

NOTE: Cross-listing requires approval of both departments and deans involved. Add lines at end of form for additional required signatures.

5. To be STACKED?* YES/NO **NO** If yes, Dept. Course #

How will the two course levels differ from each other? How will each be taught at the appropriate level?:

* Use only one Format 1 form for the stacked course (not one for each level of the course!) and attach syllabi. Stacked course applications are reviewed by the (Undergraduate) Curricular Review Committee and by the Graduate Academic and Advising Committee. Creating two different syllabi (undergraduate and graduate versions) will help emphasize the different qualities of what are supposed to be two different courses. The committees will determine: 1) whether the two versions are sufficiently different (i.e. is there undergraduate and graduate level content being offered); 2) are undergraduates being overtaxed?; 3) are graduate students being undertaxed? In this context, the committees are looking out for the interests of the students taking the course. Typically, if either committee has qualms, they both do. More info online – see URL at top of this page.

6. FREQUENCY OF OFFERING: Every semester
Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (Effective AY2015-16 if approved by 3/31/2015; otherwise AY2016-17) **Fall 2015**

8. COURSE FORMAT:

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the Core Review Committee.

COURSE FORMAT: (check all that apply) ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 weeks to full semester

OTHER FORMAT (specify) No class meetings

Mode of delivery (specify lecture, field trips, labs, etc) None

RECEIVED

OCT 30 2014

Dean's Office
College of Natural Science & Mathematics

Governance
11/14/14
TRP

9. CONTACT HOURS PER WEEK:LECTURE
hours/weeksLAB
hours /weekPRACTICUM
hours /week

Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/guidelines-for-computing/> for more information on number of credits.

OTHER HOURS (specify type) **10. COMPLETE CATALOG DESCRIPTION** including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

Example of a complete description:

FISH F487 W, O Fisheries Management

3 Credits Offered Spring

Theory and practice of fisheries management, with an emphasis on strategies utilized for the management of freshwater and marine fisheries. *Prerequisites:* COMM F131X or COMM F141X; ENGL F111X; ENGL F211X or ENGL F213X; ENGL F414; FISH F425; or permission of instructor. Cross-listed with NRM F487. (3+0)

BIOL 4XX Capstone Project**0 Credits** Offered Fall and Spring

This course should be taken by students during the semester they initiate a capstone research project. The capstone project may be completed within a designated course or by working individually with a faculty mentor; see the Biological Sciences program description for more information. The duration of the capstone project may exceed one semester. *Prerequisites: Junior or senior standing.* (0+0)

11. COURSE CLASSIFICATIONS: Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.H = Humanities S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? If YES, attach form.

YES: NO:

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, Format 6 W = Writing Intensive, Format 7 X = Baccalaureate Core **11.A Is course content related to northern, arctic or circumpolar studies? If yes, a****"snowflake" symbol will be added in the printed Catalog, and flagged in Banner.**YES NO **12. COURSE REPEATABILITY:**

Is this course repeatable for credit?

YES NO

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).

How many times may the course be repeated for credit?

 TIMES

If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?

 CREDITS

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?

 CREDITS**13. GRADING SYSTEM:** Specify only one. Note: Changing the grading system for a course later on constitutes a Major Course Change – Format 2 form.LETTER: PASS/FAIL:

*Note that students who do not complete or pass the capstone project in a given semester will receive a deferred grade "DF".

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES

Junior or senior standing

These will be required before the student is allowed to enroll in the course.

15. SPECIAL RESTRICTIONS, CONDITIONS

none

16. PROPOSED COURSE FEES

\$0

Has a memo been submitted through your dean to the Provost for fee approval?

Yes/No

17. PREVIOUS HISTORY

Has the course been offered as special topics or trial course previously?

Yes/No

NO

If yes, give semester, year, course #, etc.:

18. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

The inclusion of this course in the curriculum will have little impact because the capstone project requirement already exists. The capstone project itself will have impacts, and these were described in detail and approved at all levels for the 2013-14 catalog.

19. LIBRARY COLLECTIONS

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No

Yes

n/a

20. IMPACTS ON PROGRAMS/DEPTS

What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)

Only the Biological Sciences program will be affected by this change.

21. POSITIVE AND NEGATIVE IMPACTS

Please specify **positive and negative** impacts on other courses, programs and departments resulting from the proposed action.


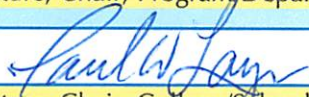
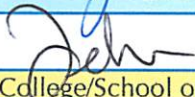
There should be no impact on courses, programs, or departments resulting from this new course.

JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

The Biological Sciences program adopted a capstone research requirement for the BA and BS degree programs in Fall 2013. Throughout 2013-14 and 2014-15, the rule was: pass a designated capstone class and the capstone requirement is automatically satisfied. Beginning in Fall 2015, however, this rule will change. By a vote of the faculty, the capstone research project will be assessed using a standard evaluation rubric regardless of whether the project is completed in a designated course or individually with a faculty mentor. This will allow faculty to assess the intended outcomes of the capstone project in a consistent way. It will also complicate the department's ability to track which students are pursuing their capstone projects and to report grades to the UAF Registrar. This new, zero-credit course is intended to help us track students and report grades to registrar.

APPROVALS: Add additional signature lines as needed.

	Date	10/29/14
Signature, Chair, Program/Department of: <u>Biology + Wildlife</u>		
	Date	11/13/14
Signature, Chair, College/School Curriculum Council for: <u>CNSM</u>		
	Date	11-13-14
Signature, Dean, College/School of: <u>CNSM</u>		

Offerings above the level of approved programs must be approved in advance by the Provost.

	Date	
Signature of Provost (if above level of approved programs)		

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair		
Faculty Senate Review Committee: <input type="checkbox"/> Curriculum Review <input type="checkbox"/> GAAC		
<input type="checkbox"/> Core Review <input type="checkbox"/> SADAC		

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

	Date	
Signature, Chair, Program/Department of:		
	Date	
Signature, Chair, College/School Curriculum Council for:		
	Date	
Signature, Dean, College/School of:		

BIOL 4XX
Capstone Project
Fall 2015, 0 credits, CRN XXXXX
Prerequisites: Junior or Senior Standing

Overview

All undergraduate students in the Biological Sciences major are required to complete a capstone project prior to graduation. The capstone project is a mentored research project on a biological topic to be completed in the junior or senior year. The capstone project must be designed or chosen by the student in consultation with a faculty mentor. The faculty mentor must approve the project before work begins. The project must include evaluation of data and communication of the study intent, methods, results, interpretation, and conclusion in the context of existing literature and knowledge. The capstone project may be conducted within a designated biology or wildlife course (see the catalog for a listing) or through more individualized study with a faculty mentor, either for credit (e.g. BIOL 490, BIOL 397 or 497, URSA 388 or 488) or not for credit.

BIOL 4XX is not a traditional course. There are no class meetings or assignments, and no credit will be provided upon its completion. Rather, think of this course as an accounting tool. Enrolling in BIOL 4XX signals to the Department of Biology & Wildlife and the UAF Registrar that you are planning to undertake a capstone project in the current semester. It is a way for us to track which students are in the process of completing their capstone projects, and which have successfully completed a project and therefore have satisfied the capstone requirement for graduation. Such a tracking system is necessary because the capstone can be completed in such a variety of ways.

A capstone project might extend across several semesters, or an initial project may be abandoned in favor of a new one. In these cases, there is no need to register for this class repeatedly. If the capstone project is not completed, or not completed satisfactorily, within a semester, the BIOL 4XX grade will be deferred until a later semester (see Assessment).

Course Coordinator

Diane Wagner, Biology and Wildlife Department Chair
Office hours XXX in 101D Murie Bldg
diane.wagner@alaska.edu

Catalog Course Description

This course should be taken by students during the semester they initiate a capstone project. The capstone project may be completed within a designated course or by conducting a mentored research project with a member of the faculty; see the Biological Sciences program description for more information. The duration of the capstone project may exceed one semester.

Prerequisites

Junior or senior standing

Goals and Learning Objectives

The broad goal of the capstone project is to integrate knowledge and skills learned in previous courses, including scientific knowledge, quantitative literacy, and communication skills, and to apply these products of the university education to a creative activity. For a biologist, a fundamental expression of applied knowledge, creativity, and critical reasoning is to engage in scientific inquiry.

The learning objectives of the capstone project are as follows:

1. Learn through experience to pose and test biological hypotheses.
2. Employ critical thinking by evaluating the scientific literature in the subject area.
3. Reinforce and enhance quantitative knowledge by analyzing and interpreting data.
4. Reinforce and enhance writing skills by communicating science.

Pathways to a Capstone Project

There are two main ways to complete a capstone project, detailed below.

1. Complete a project within a designated capstone course

A student may perform a capstone project within a designated capstone course in Biological Sciences or Wildlife Biology & Conservation. Capstone courses are offered across a range of sub-disciplines within biology. A list of capstone courses in Biological Sciences can be found in the UAF catalog.

All designated capstone courses include as part of their expectations that the student will complete a biological research project suitable to meet the expectations of the capstone requirement. Typically, the capstone course instructor will introduce one or several model study systems and methodologies that will form the basis for the student's project. The course instructor will assist the student to design a study and analyze the results. The capstone project will include a major written assignment, which may be fulfilled as a research proposal and/or a final report formatted as a scientific paper. It is recommended that written assignments have a minimum length of 8 double-spaced pages (excluding figures and references) with at least 10 references. If a research proposal is used as the written assignment, students will also be required to communicate their research findings through an oral presentation, poster presentation, or final written report. If a final report is used as the written assignment, additional means of communication such as oral presentation or a poster may be required by the instructor as well, at the instructor's discretion.

The instructional methods and policies employed in designated capstone courses will vary; please refer to individual course syllabi.

2. Complete a project by working individually with a faculty mentor

Alternatively, a student may satisfy the capstone requirement by conducting a research project with a faculty mentor, typically a member of the UAF Biology & Wildlife Department. A student may receive course credits for the research project by enrolling in independent study (BIOL F397 or F497) or undergraduate biology research (BIOL F490 or URSAF 388 or F488); however, course credits are not necessary for completion of the capstone project requirements. A more informal arrangement, in which the student performs and communicates a project under the supervision of a member of the Biology & Wildlife faculty or completes research in the context of an internship, may satisfy the capstone requirements as well. The capstone project will culminate in a written report, formatted as a scientific paper. It is recommended that the report have a minimum length of 8

double-spaced pages with at least 10 references. Reports must be assessed by the research mentor using the standard assessment rubric, and must be evaluated as adequate or better in all criteria. To satisfy the capstone requirement using a research project conducted outside a designated capstone course, the student must submit to the Biology & Wildlife department chair a copy of the final paper and a copy of the Final Evaluation of the Capstone Project form, signed by the research mentor.

Assessment of the Capstone Project

The expectations and assessment of the capstone project are the same regardless of whether the capstone is completed within a designated course or by working individually with a faculty mentor. All capstone projects are assessed using a standard evaluation rubric, which is reproduced at the end of this syllabus. A student must score "adequate" or above on all aspects of the evaluation in order to earn a passing grade on the capstone project.

The grade earned for the capstone project within a capstone course will *contribute* to the grade in that course, but will not *determine* the grade, because other assessments such as homework, quizzes, and tests may be included in the course grade. It is therefore possible to pass the capstone project and fail the designated capstone course within which the project was completed, or vice versa. Departmental policy on project versus course assessment has changed in recent years, so it is important to take note of this point.

Assessment of the BIOL 4XX course

At the end of each semester, the department chair will query the instructors of designated capstone courses and faculty mentors to determine whether students enrolled in BIOL 4XX passed the capstone project, and will post grades for BIOL 4XX accordingly. There are three possible grades for the BIOL 4XX course, explained in the table below.

Grade	Interpretation
P	Pass - Indicates that the student earned a score of "adequate" or above on all points detailed on the capstone project evaluation rubric
DF	Deferred – Indicates that the student did not complete or pass a capstone project in the current semester. For example, the DF grade would be given if the project spanned more than one semester, or if the student did not receive "adequate" or above scores on the capstone evaluation form. When the student does pass a capstone project, the DF grade will convert to a P.
F	Fail – Under ordinary circumstances, a DF grade will convert to an F only if it remains on the record for more than 3 years. This conversion can be prevented by request if the student can demonstrate she or he is actively working to complete the project.

Academic Dishonesty

All students are expected to be familiar with the UAF Student Code of Conduct (available online and in the UAF Catalog) and to follow it at all times. Academic dishonesty will not be tolerated. Acts of academic dishonesty will result in at least a failing grade for the current capstone project but may also result in more severe consequences, including expulsion from the University. Violations of the Code of Conduct will be reported to the UAF Dean of Students. Acts of academic dishonesty include, but are not limited to, the following.

- Plagiarism (see below)
- Cheating
- Obtaining an extension on an assignment or permission to miss a class through false pretenses
- Turning in an assignment that was prepared for a different class, unless you have received permission to do so
- Falsifying grade records

Plagiarism is the use of someone else's ideas, text, or graphics without acknowledging the source. Plagiarism is a serious form of academic dishonesty. Examples include the following.

- Copying text verbatim from a print source, including websites, books, reports, or articles, whether published or unpublished, without quotation marks and attribution
- Changing a few words within a copied block of text to obscure its resemblance to the original
- Presenting a graph or table created by someone else in a written document without attribution
- Presenting someone else's data without attribution
- Presenting someone else's ideas as your own without attribution

Support Services

Computer software - The UAF Office of Information Technology provides access to computer programs that may be useful for analyzing and graphing data (JMP, Microsoft Excel).

Writing Center - The Writing Center can provide critical feedback on student writing: 801 Gruening, 474-5314.

Disabilities - The Office of Disability Services implements the Americans with Disabilities Act (ADA) and ensures that UAF students have equal access to the campus and course materials. The instructor will work with the Office of Disability Services (208 Whitaker, 474-5655) to provide reasonable accommodation to students with disabilities.

Final Evaluation of Capstone Project by Research Supervisor

Student's name _____ Date _____ Capstone Project Title _____ _____ Research Supervisor _____ _____

	Yes (excellent)	Somewhat (adequate)	No (inadequate)
1. Is the capstone project the product of data collection and/or analysis by the student?			
2. Does the capstone paper make a compelling argument for the significance of the student's research within the context of the current literature?			
3. Does the capstone paper clearly articulate the student's research goals?			
4. Are the methods appropriate given the student's research agenda?			
5. Is the data analysis appropriate and accurate?			
6. Does the author interpret the results skillfully and accurately?			
7. Are the tables and figures clear, effective and informative?			
8. Is there a compelling discussion of the implications of findings?			
9. Is the literature review appropriate and complete?			
10. Are the citations presented consistently and professionally throughout the text and in the list of works cited?			
11. Is the writing appropriate for the target audience?			
12. Is the paper clearly communicated and free of language errors?			

Research Supervisor's Signature _____