FORMAT 1

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	**GPMSL**	**College/School**	**SFOS**
Prepared by	**Brenda Konar**	**Phone**	**X5028**
Email Contact	**bhkonar@alaska.edu**	**Faculty Contact**	**Brenda Konar**

1. ACTION DESIRED (CHECK ONE):	Trial Course		New Course	x	
2. COURSE IDENTIFICATION:	Dept	**MSL**	Course #	**499**	No. of Credits **3**
Justify upper/lower division status & number of credits:	**This course is a self-designed scholarly project that is the capstone of a student's Bachelor of Science in Fisheries and Ocean Sciences with an Ocean Sciences concentration. Three credits are required for this course as the student is expected to successfully complete 126 hours of supervised scholarly activity in completing a senior thesis.**				
3. PROPOSED COURSE TITLE:	**Senior Thesis**				
4. To be CROSS LISTED? *YES/NO*	**N**	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*	**N**	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 Fall, Spring, Summer**
	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 2016**

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*	x *6 weeks to full semester*
OTHER FORMAT (specify)											
Mode of delivery (specify lecture, field trips, labs, etc)	**Mode of delivery will include discussions about the project between the student and the mentor. It may include field and/or lab work.**										

9. CONTACT HOURS PER WEEK:		LECTURE hours/weeks		LAB hours /week	**9** PRACTICUM 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)

MSL F499 Senior Thesis
3 Credits Every Fall, Spring, Summer
Under the supervision and mentorship of a Fisheries and Ocean Sciences faculty member, students will complete a self-designed scholarly project that is the capstone of a student's exemplary academic performance. The student will complete a senior thesis based on field and/or laboratory data collected during a field course or work that was completed with the faculty mentor within the context of the existing literature relevant to the study topic. Students are required to present their study results as an oral or poster presentation at a UAF seminar or symposium, or at a state or national scientific conference. In addition, students are encouraged to work with their mentor to submit their thesis for publication in a peer-reviewed scientific journal.
Prerequisites: Permission of a Fisheries and Ocean Sciences faculty mentor. (0 + 0 + 9)

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:**	x

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**	x

12. COURSE REPEATABILITY:

Is this course repeatable for credit?	**YES**	x	**NO**	

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).	**This course requires, data collection, analysis, and writing for the senior thesis, and may need to occur over multiple semesters, e.g. if student conducts field work**

How many times may the course be repeated for credit?	2	**TIMES**
If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?	6	**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:	x	**PASS/FAIL:**	

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES	Permission of a Fisheries and Ocean Sciences faculty mentor.

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

15. SPECIAL RESTRICTIONS, CONDITIONS	

16. PROPOSED COURSE FEES	**none**

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 addition of MSL 499 will have no impact on budgets, facilities/space, or faculty. The course content will be offered as part of normal faculty teaching workloads.

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	x	Yes		**Collections will not be needed. Peer-reviewed publications are on-line.**

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)

No other programs or departments at UAF will be impacted by this addition.

21. POSITIVE AND NEGATIVE IMPACTS

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

The positive impacts of this course are that students will better understand the scientific process by completing a senior thesis. They will work with a faculty mentor on the development and completion of a science project that will results in a manuscript that can be submitted to a scientific journal. This skill will provide much needed practical experience that will be useful in furthering the student's career or graduate school potential. This will be their capstone course. There are no perceived negative impacts.

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 change of the BS in Fisheries to a BS in Fisheries and Ocean Sciences will result in a new concentration (Ocean Sciences). A new capstone course is needed for this concentration that is appropriate for students in this concentration area, because the existing capstone course for the Fisheries Science concentration has a fisheries focus (FISH 487 Fisheries Management). The proposed course will require students to demonstrate skills in communication and quantitative analysis by completing a research project under the guidance of a faculty mentor, and preparing results for written and oral presentation. Material from the major required courses will be integrated into completion of the project such that students can demonstrate intellectual and practical capabilities in the field of Ocean Sciences.

APPROVALS: Add additional signature lines as needed.

Signature, Chair, Program/Department of: Sarah Hardy, GPMSL Chair	Date	3/2/16
Signature, Chair, College/School Curriculum Council for:	Date	3/3/16
Signature, Dean, College/School of: Brad Moran, Dean SFOS	Date	3/3/16

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

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

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

Signature, Chair Faculty Senate Review Committee: ___Curriculum Review ___GAAC ___Core Review ___SADAC	Date	

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

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

ATTACH COMPLETE SYLLABUS (as part of this application). This list is online at: http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/uaf-syllabus-requirements/
The Faculty Senate curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course (or changes to it) may be denied.

SYLLABUS CHECKLIST FOR ALL UAF COURSES

During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

1. Course information:

❑Title, ❑ number, ❑credits, ❑prerequisites, ❑ location, ❑ meeting time (make sure that contact hours are in line with credits).

2. Instructor (and if applicable, Teaching Assistant) information:

❑ Name, ❑ office location, ❑ office hours, ❑ telephone, ❑ email address.

3. Course readings/materials:

❑ Course textbook title, ❑ author, ❑ edition/publisher.

❑ Supplementary readings (indicate whether ❑ required or ❑ recommended) and ❑ any supplies required.

4. Course description:

❑ Content of the course and how it fits into the broader curriculum;

❑ Expected proficiencies required to undertake the course, if applicable.

❑ Inclusion of catalog description is *strongly* recommended, and

❑ Description in syllabus must be consistent with catalog course description.

5. ❑ Course Goals (general), and (see #6)

6. ❑ Student Learning Outcomes (more specific)

7. Instructional methods:

❑ Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

8. Course calendar:

❑ A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.

9. Course policies:

❑ Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.

10. Evaluation:

❑ Specify how students will be evaluated, ❑ what factors will be included, ❑ their relative value, and ❑ how they will be tabulated into grades (on a curve, absolute scores, etc.) ❑ Publicize UAF regulations with regard to the grades of "C" and below as applicable to this course. (Not required in the syllabus, but is a convenient way to publicize this.) Link to PDF summary of grading policy for "C":
http://www.uaf.edu/files/uafgov/Info-to-Publicize-C_Grading-Policy-UPDATED-May-2013.pdf

11. Support Services:

❑ Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

12. Disabilities Services: Note that the phone# and location have been **updated.**
http://www.uaf.edu/disability/ 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.

❑ State that you will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655)to provide reasonable accommodation to students with disabilities.

MSL F499 SENIOR THESIS
FALL, SPRING, AND SUMMER SEMESTER 2016-2017

Instructor/Office Hours
Faculty/TBA

Meeting Location and Time
N/A

Course Credits
3 credits (for letter grade)

Contact Hours
Time spent with the faculty mentor in individual instruction will vary depending on the student's progress on the thesis proposal; however, at least 126 hours of supervised scholarly activity must occur during the semester to complete a senior thesis.

Course Prerequisites
Permission of a Fisheries and Ocean Sciences faculty mentor.

Course Description
Under the supervision and mentorship of a Fisheries and Ocean Sciences faculty member, students will complete a self-designed scholarly project that is the capstone of a student's exemplary academic performance. The student will complete a senior thesis based on field and/or laboratory data collected during a field course or work that was completed with the faculty mentor within the context of the existing literature relevant to the study topic. Students are required to present their study results as an oral or poster presentation at a UAF seminar or symposium, or at a state or national scientific conference. In addition, students are encouraged to work with their mentor to submit their thesis for publication in a peer-reviewed scientific journal.

Course Goal and Student Learning Objectives
Hands-on research provides undergraduate students with an opportunity to enrich their educational experience, accelerate their development as young professionals, and hone skills that are needed to complete graduate- and career-level research. To become familiar with the process of scientific inquiry, including research goal definition, the scientific method, technical write-up, oral presentation of results, and publication of a manuscript, a senior thesis is an irreplaceable experience. As such, MSL 499 will focus on data analysis, synthesis, and written and oral presentation of results. Data may be obtained prior to enrollment in MSL 499, e.g., during a field course or through other laboratory or field research experience. Alternatively, MSL 499 may include the data collection portion of the research project. A written thesis will be produced, with the goal of submission to a scientific journal. Students will also be required to present their senior thesis as an oral or poster presentation at one of several different symposia held on the UAF campus (e.g., UAF Research Day), or at a state or national scientific conference.

The senior thesis will improve the ability of students to find employment and additional educational opportunity after their Fisheries and Ocean Sciences B.S. degree has been completed. Employers and prospective graduate schools value research experience because it demonstrates the ability of a student to successfully complete a large-scale project that requires analytical, critical thinking, and oral and written communication skills. Undergraduate students

frequently develop close and long-term professional relationships with their research mentors, and the example that mentors provide can be a lasting inspiration for students to become life-long learners in their field of choice. Specific student learning objectives associated with this course include the following:

a. Develop ability to critically analyze data and synthesize results, placing them within the context of the peer-reviewed scientific literature;
b. Present scientific research results effectively in written, visual, and oral formats;
c. Sharpen critical thinking, written communication, data collection, and analysis skills.

Instructional Methods

Students will learn from individual instruction from their faculty mentor. In general, this course will require a significant degree of self-directed study.

Reading Assignments

There is no required text for this course; however, students will be required to conduct an extensive literature survey to develop their senior thesis proposal, and integrate relevant literature into the final written thesis.

Course Calendar

The scheduling and timeline for writing and presentation of the thesis should be agreed upon between the student and faculty mentor within the first week of the semester of enrollment in the course. Below is an example of a general timeline that can be used as a template for a more detailed, specific timeline to be revised by the student and his/her senior thesis mentor.

Month 1: Completion of data analysis and summary of results;
Month 2: Completion of the interpretation of study results;
Month 3: Completion of the written senior thesis, including project title, abstract, introduction, methods, results, discussion, and literature cited;
Month 4: Oral or Poster presentation of research at a UAF research symposium or a state or national scientific conference.

Course Assignments

1. Written Senior Thesis: Theses can vary between 20 to 50 pages in length, and can take the form of one or more manuscripts to be submitted for peer-reviewed publication. A basic thesis outline is provided below:

    Introduction
        Background/justification
        Study objectives
        Expectations/hypotheses
    Methods
        Study site description
        Data collection methods
        Data analyses
    Results

Clear description of results
Figures and data tables

Discussion/Conclusions

Summary of results and interpretation
Implications for the field of study, with context provided from the published scientific literature

Literature Cited

All literature cited completely, minimal use of web resources, peer-reviewed literature (journal articles) or management agency reports

2. Oral or Poster Presentation: Students are required to give a presentation at a UAF research symposium or seminar (e.g., UAF Research Day), which takes place in late April, and/or at a state or national scientific conference.

Grading

Failure to turn in any of the required assignments is grounds for a failing grade. Because the senior thesis is based on the individual experience, a grading curve does not apply. All letter grades will be based on an absolute 90-80-70-60 scale (e.g., ≥ 90% = A, and so on). Grades will be awarded based on performance for (1) the Senior Thesis (80%); and (2) the Oral or Poster Presentation (20%).

Criteria	**For maximum credit:**	
Timeline	• Reasonable timeline for completion of thesis and oral presentation tasks, submitted on time	**5 %**
Thesis Outline	• Well-organized, thorough, and submitted on time, including list of at least 10 references to be used.	**5%**
Thesis: Overall organization and presentation	• Paper is free of editorial mistakes (grammar/spelling errors, typos, etc.) • Material is placed in the proper sections • Ideas are presented in a clear, organized manner	**15%**
Thesis: Results	• Figures and tables are orderly and effective • Methodology is clearly explained and appropriate to the hypotheses tested • Statistical analyses are appropriate and clearly described • Clear text descriptions are provided for key results	**15%**
Thesis: Interpretation and Discussion	• Results are summarized clearly with reference to originally stated objectives/hypotheses • Results are discussed in the context of other current research in the field of study, with appropriate citations • Caveats and/or potential criticisms of the research are anticipated and addressed • Topic is thoroughly researched and information presented is accurate	**20%**
Literature Review	• Thesis demonstrates familiarity with key literature relevant to the thesis topic • Thorough review and citation of relevant literature is provided in the form of background information in the Introduction of the thesis • In-text citations are provided where appropriate	**20%**

	throughout the document, and reference list is complete, with consistent formatting throughout	
Oral or Poster Presentation	• Well-organized presentation of background/context for the study, methodology, key results, and interpretation • Presentation conforms to required format for the venue (e.g. length or presentation; poster formatting guidelines) • Presentation is understandable to a scientifically literate but general audience (i.e., outside the students' specific area of research)	**20%**

Course Policies

1. Late Assignments: All assignments are due to the faculty mentor by the dates indicated on the senior thesis timeline, to be agreed upon by the student and faculty mentor at the start of the course as described above. If a student cannot turn in an assignment on time for a legitimate reason, it is the responsibility of the student to contact the faculty mentor prior to the due date to avoid a penalty.

2. Academic Honesty: All assignments are to be entirely the student's own work, unless the student receives specific instructions to the contrary. All aspects of this course are covered by the UAF Honor system. Any suspected violations will be promptly reported and appropriate action(s) will be taken. Honesty in your academic work will develop into professional integrity. The faculty, staff, and students of the UAF will not tolerate any form of academic dishonesty, including plagiarism.

Support/ Disabilities Services

If students need accommodation because of a disability, please contact the faculty mentor and SFOS internship coordinator as soon as possible to make the necessary arrangements with the Office of Disabilities Services (203 WHIT, 474-7043).