

85-UNC

FEB 0 6 2017

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
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SUBMITTED BY:

Department	Veterinary Medicine	College/School	CNSM
Prepared by	Aaron Kallas	Phone	474-1928
Email Contact	ajkallas@alaska.edu	Faculty Contact	Arleigh Reynolds

1. ACTION DESIRED

(CHECK ONE):

Trial Course	<input type="checkbox"/>	New Course	<input checked="" type="checkbox"/>
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2. COURSE IDENTIFICATION:

Dept	BMSC	Course #	314	No. of Credits	2

Justify upper/lower division status & number of credits:

The BLaST Skills Seminar Workshops will serve several roles in fostering BLaST supported individual and group research endeavors. The primary focus is to link academic "big Idea" scientific concepts and processes presented in coursework to contemporary research approaches. Secondly, the seminars will support the various aspects and progress of research projects, which include; common tools and techniques of research, project management, scientific writing, communication strategies and career exploration.

BLaST Skills Seminar I, presents students with schedule of topics relative to mentoring, project development, project management, and foundational skills that are most common in biomedical and biological research. Topics will be presented in a lecture style format accompanied by a hands-on participatory activity that will reinforce the application of the topic in research. Guest lecturers from the UAF research community will present the material and communicate their own experience and background with students. The course will conclude with student inspired presentations on a research topic of choice.

3. PROPOSED COURSE TITLE:

BLaST Skills Seminar I

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?:

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:	Fall each year
	Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (AY2013-14 if approved by 3/1/2013; otherwise AY2014-15)	AY2017-2018
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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)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 6 weeks to full semester
OTHER FORMAT (specify)						
Mode of delivery (specify lecture, field trips, labs, etc)	Lecture					

9. CONTACT HOURS PER WEEK:	2	LECTURE hours/weeks	0	LAB hours /week	0	PRACTICUM hours /week
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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)	
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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)

<p>BMSC 314 BLaST Skills Seminar I 2 Credits Offered Fall Required course for BLaST Scholars. Open to all UAF students; providing the opportunity to learn about, experience and discuss research and research methods. This course links academic “Big Idea” scientific concepts and processes presented in coursework to contemporary research approaches. Course supports the progress of student research projects, including; Mentoring relationships, common tools and techniques of research, project management and scientific writing, communication strategies in the sciences. Prerequisites: BMSC 214: BMSC 224 or permission of instructor. 2+0+0</p>
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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?	<input type="text"/>	TIMES
If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?	<input type="text"/>	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?	<input type="text"/>	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:

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES BMSC 214, BMSC 224

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 No

17. PREVIOUS HISTORY

Has the course been offered as special topics or trial course previously? Yes/No Yes

If yes, give semester, year, course #, etc.: Fall 2016 BMSC 393 (CRN #78840) & Spring 2017 BMSC 393 (CRN #38245)

18. ESTIMATED IMPACT

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

None

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	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	
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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)

There should be no impact on other departments.

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 other departments.

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.

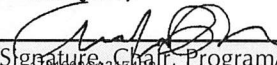
BLaST Skills Seminar I, will be the third course in a sequence of courses (BMSC 214, BMSC 224, BMSC 314, BMSC 324) designed to support students during mentored independent research projects. This course is for all students who are interested in understanding biomedical research methodology or are interested in understanding how to develop a scientific research project. Students who are considering applying for BLaST funding in the future may be encouraged to attend but this is not a mandatory condition for applying for funding and will not be a factor into the evaluation for funding. The course will be open to any UAF undergraduate student who may be interested. BLaST Undergraduate Scholarship recipients (Scholars) are required to attend and participate. It is recommended, but not mandatory, that participants in this course are currently involved in research activities.

Impacts:

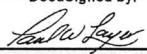
This course has run twice (Fall'16 and Spring '17) as a special topics course, BMSC 393, with total enrollment between the two sections has been 22 BLaST Scholars. It has gone extremely well from both the instructor and student perspectives and has greatly helped in developing our student's ability to manage ongoing mentored projects and enhance their research skills. Many of the guest lecturers are current researchers or graduate students sponsored by BLaST and come from a myriad of background experiences and subject matter. Students have gained new perspective about the importance of interdisciplinary science and the need to broaden knowledge beyond their discipline and seek multiple mentors with various areas of expertise.

Guest lecturers related well to the undergraduate students as a peer, this is an important element that we need within the BLaST program with regard to foster a mentored research program. Students are more connected to the research community and aware of opportunities in research they had not previously known to exist.

APPROVALS: Add additional signature lines as needed.

DocuSigned by: 	Date	February 6, 2017
Signature, Chair, Program/Department of:	<u>Veterinary Medicine</u>	

DocuSigned by: <u>Patricia Doak</u>	Date	February 6, 2017
Signature, Chair, College/School Curriculum Council for:	<u>CNSM</u>	

DocuSigned by: 	Date	February 6, 2017
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: 		

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.

Fall 2017
**BLaST Skills Seminar I: Project Management
and Foundational Skills**

1. Course Information

Title: BLaST Research Skills Seminar
Number: BMSC 314 (CRN _____)
Credit: 2
Prerequisites: BMSC 214, BMSC 224 or permission of instructor
Location: AHRB 186
Meeting Time: Tuesday 3:30 – 5:30

2. Course Director Contact:

Co-Instructor: Arleigh Reynolds E-mail: ajreynolds@alaska.edu Phone: 474-1928 Office: 182 AHRB Hours: By appointment	Co-Instructor: Aaron Kallas E-mail: ajkallas@alaska.edu Phone: 907-903-3360 Office: Murie 130 Hours: By appointment
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3. Reading Materials:

Any session specific readings will be provided in class or via email or Blackboard.

4. Course Description:

BMSC F314 BLaST Skills Seminar I: Project Management and Foundational Skills

2 Credits Offered Fall

Required course for BLaST Scholars. Open to all UAF students; providing the opportunity to learn about, experience and discuss research and research methods. This course links academic “Big Idea” scientific concepts and processes presented in coursework to contemporary research approaches. Course supports the progress of student research projects, including; Mentoring relationships, common tools and techniques of research, project management and scientific writing, communication strategies in the sciences. Prerequisites: BMSC 214: BMSC 224 or permission of instructor. 2+0+0

BLaST Skills Seminar I, presents students with schedule of topics relative to mentoring, project development, project management, and foundational skills that

are most common in biomedical and biological research. Topics will be presented in a lecture style format accompanied by a hands-on participatory activity that will reinforce the application of the topic in research. Guest lecturers from the UAF research community will present the material and communicate their own experience and background with students. The course will conclude with student inspired presentations on a research topic of choice.

5. Course Objectives:

- a. Foster healthy mentoring relationships
- b. Connect academic topics to applications in research
- c. Highlight strategies for project management
- d. Present laboratory lab management strategies
- e. Support project proposal creation and submission
- f. Present skills, techniques and equipment used in biomedical research
- g. Provide an open forum for sharing of ideas

6. Student Learning Outcomes:

- a. Appreciate contemporary research approaches
- b. Gain an understanding of the use of foundational research tools and techniques in biomedical research
- c. Learn strategies to assess and support research activities and projects
- d. Define, understand, and demystify terminology used when discussing research and research methods
- e. Learn cooperation and communication strategies
- f. Feel confident in their ability to pursue further research training and experiences
- g. Learn to troubleshoot problems and issues in the research process.

7. Instructional Methods:

Group discussions, activities, speakers, readings, videos, lectures, and assignments will comprise the course.

8. Course Calendar:

Week	Topics	Targeted Skills
1	Mentor/Mentee Relations	Setting expectations, Collaborations, Conflict Resolution Strategies.

2	Project Management Strategies	Developing a timeline, Realistic Goal setting, Needs assessments, networking.
3	Proposal and Grant Writing Essentials	Manuscripts, Abstracts, Grant fundamentals.
4	Data Management Strategies	Record keeping, collection methods, analytical models, data storage
5	Laboratory Management	Note booking, Record keeping, Equipment maintenance, quality control, General safety, Lab Layouts.
6	Essential Chemistry and Lab Math	Solutions, Dilutions, Concentrations, pH, Buffers, Etc
7	Microscopy	Microscopy, Slide Preparation, Light Microscopy, confocal/immuno-fluorescent, TEM, SEM.
8	Sampling Techniques	Field Sampling, Tissue Sampling, Storage and cataloging, Labeling.
9	Proteomics	Protein synthesis, Protein structure and functions, Immunological applications.
10	Prokaryotic Cell Culturing	Differential Media, Selective Media, Prokaryotic, Aseptic technique, incubation
11	Cell Assays	Staining, Cell Plating, Live/Dead Assays, CFA,
12	Spectrophotometry	Plate Readers, Spectrophotometers (Visible/UV), Fluorometry,
13	PCR and Electrophoresis	Methods of PCR, Primer development, PCR Optimization, Reagents and solutions, Validation through Electrophoresis
14	Student Topic Presentations	TBD
15	Student Topic Presentations	TBD

9. Course Policies:

Participation:

Participation during class is important. Please feel free to ask questions as they occur to you and to offer your opinions during discussions. We are here to help!

Attendance:

You are expected to attend all classes. If you miss a class, you are responsible for obtaining the information covered from another student. It is strongly recommended that you do not miss any days, as it will be extremely difficult if not impossible to recreate activities for makeup.

Technology in the Classroom:

Please quiet your cell phones during class and refrain from text messaging and chatting with your classmates during lectures (see Technology in the Classroom). Please use your laptops, notebooks, and electronic tablets for class purposes only.

Ethics:

Academic integrity is vitally important to the mission of the university. If you are caught cheating or plagiarizing in any way, you will receive a failing score on that assignment. There will be no exceptions. If you are unsure about what constitutes plagiarism, students are encouraged to contact the instructor(s) for assistance.

10. Evaluation:

Participation and Attendance (10pts/session = 150 points total):

Course content is condensed with a great deal of information delivered daily. Many aspects of this course will focus on using scientific tools, techniques and skills in the application of the research activities. It is essential that students are present, on time, and cooperative.

Reflective Free-Writes (20pts/ea. = 300 points total):

For each session, students will access reflective writing prompts on Blackboard and will be expected to upload responses to those prompts within one week from the session date into Blackboard for scoring. The format, questions and content will vary depending on the material and concepts presented in each session. Each free write is rubric scored. No late submissions will be accepted.

Topic Proposal and Presentation (120 points total):

Each student will select a topic of their choice and develop a small 10-15 minute presentation to share with the class at the conclusion of the semester. Students are encouraged to select topics that are relative to the theme of project management or foundational skills not directly addressed during the seminars. A written rationale will be submitted and topic approved by the instructor. Presentation will be rubric scored with a large emphasis on professional disposition and delivery.

<u>Graded Item</u>	<u>Points per each</u>	<u>Total Points Possible</u>	<u>Sessions with Due Dates</u>
• Attendance and Participation	10	150	Each Session
• Reflective Free-Writes	20	300	Each Session
• Topic Proposal	20	20	Week 12
• Topic Presentation	100	100	Week 14 & 15
Total = 570 Possible Points			

The grading for the course will be based on the components outlined above. Final letter grades will be assigned as follows:

$\geq 90\%$ = A	70-79% = C
80-89% = B	60-69% = D
	< 60% = F

11. Student Resources and Support Services

We are here to help you enjoy and succeed in this class. Take advantage of our office hours or make an appointment if you have concerns or questions.

Disability Services provided through The Office of Disability Services at UAF (203 Whitaker/Fire Station, 474-7043) implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. Your instructor(s) will work with the Office of Disabilities Services to provide reasonable accommodations to students with documented disabilities. If applicable, please make arrangements with your instructor(s) within the first few weeks of classes. If you have not already done so, you will also need to contact UAF's Office of Disability Services by email at uaf-disabilityservices@alaska.edu, by phone at (907)474-5655, or by TTY at (907)474-1827.

The Writing Center (Gruening 8th floor, 474-5314) will help you prepare and print your papers.

Student Support Services (<http://www.uaf.edu/sssp/>) (Gruening 5th floor, 474-6844) are available to students who meet federal TRIO guidelines: low-income OR first-generation college OR have a documented disability. Services include: 1) free tutorial services; 2) small study groups; 3) academic advising, mentoring, and personal support; 4) direct financial assistance to qualified Pell Grant recipients; 5) use of laptop computers, labs, and other technology resources; and 6) cultural and social engagement.

The Student Health and Counseling Center (2nd floor of the Whitiker Building/Fire Station, 474-7043, open Monday – Friday 8 am – 5 pm). Students enrolled for at least nine credits can receive up to six free counseling sessions.

Veterans Services/Veterans Resource Center (111 Eielson, 474-2475). VA certifying officials in Financial Aid, as well as military and veteran points of contact in the offices of Admissions and the Registrar and Career Services. These services are here to foster a smooth transition from military to civilian life. pchokenson@alaska.edu or visit Veterans Services on the web <http://www.uaf.edu/veterans/> or <http://www.facebook.com/UAFVA>

Speaking Center (email fyspeak@gmail.com or call 907-474-5470) offers students help in conceiving, organizing, writing, delivering, and refining an individual or group presentation. Student may have their presentations digitally recorded for their own viewing.

University of Alaska Board of Regents have clearly stated in BOR Policy that discrimination, harassment and violence will not be tolerated on any campus of the University of Alaska. If you believe you are experiencing discrimination or any form of harassment including sexual harassment/ misconduct/assault, you are encouraged to report that behavior. If you report to a faculty member or any university employee, they must notify the UAF Title IX Coordinator about the basic facts of the incident. Your choices for reporting include:

1. You may access confidential counseling by contacting the UAF Health & Counseling Center at 474-7043;
2. You may access support and file a Title IX report by contacting the UAF Title IX Coordinator at 474-6600;
3. You may file a criminal complaint by contacting the University Police Department at 474-7721.

BLaST Skills Seminar Reflection Essays

The purpose of the skills seminars are to link the big ideas of science to the tools and methods of research. It's important to reflect on new learning and consider the personal impacts. The questions below are meant to stimulate reflection on what was presented and allow you an opportunity to make connections to your own personal growth as a researcher. Each response, of up to 200 words, needs to show **reference to specific examples** presented in the seminar and be rich, thoughtful, and in-depth. Every prompt must have a response for credit.

Please utilize this word document to construct your essays and edit for spelling and grammar. When finished, keep the word document as evidence of completion and upload your responses to BlackBoard using the assignment upload link. Each submission is worth a total of 20 possible points. This assignment is due no later than one week from the date of the seminar it covers; late assignments will receive a score of zero. Refer to the scoring rubric for how the responses will be evaluated.

Name:

Seminar topic:

Seminar date:

Questions:

1. *Explain the impacts this topic has on research? Why is it important?*
2. *Describe **three** ideas or facts that you found most interesting from today's presentation and how each changed your perspective, practice, or understanding.*
3. *What questions do you still have about this topic? What was most difficult to understand?*
4. *Describe specifically how the tools/resources presented today could help **you** in your future as a researcher.*

BLaST Seminar Reflective Writing Rubric

Skills	5pts	4pts	3pts	2pts	1pt
Depth of Reflection	<i>Demonstrate a conscious and thorough understanding of the writing prompt and the subject matter. This reflection can be used as an example for other students.</i>	<i>Demonstrate a thoughtful understanding of the writing prompt and the subject matter.</i>	<i>Demonstrate a basic understanding of the writing prompt and the subject matter.</i>	<i>Demonstrate a limited understanding of the writing prompt and subject matter. This reflection needs revision.</i>	<i>Demonstrate little or no understanding of the writing prompt and subject matter. This reflection needs revision.</i>
Use of Evidence and Personal Context	<i>Use specific and convincing examples from the seminar to support claims in your own writing, making insightful and applicable connections between the topic and personal experience(s) or applications.</i>	<i>Use relevant examples from the seminar to support claims in your own writing, making connections between the topic and personal experience(s) or applications.</i>	<i>Use examples from the seminar to support most claims in your writing with some connections between the topic and personal experience(s) or applications.</i>	<i>Use incomplete or vaguely developed examples to only partially support claims with no connections made between the topic and personal experience(s) or applications.</i>	<i>No examples from the text are used and claims made in your own writing are unsupported and irrelevant to the topic at hand.</i>
Language	<i>Use stylistically sophisticated science language that is precise and engaging, with notable sense of voice, awareness of audience and purpose, and varied sentence structure.</i>	<i>Use language that is fluent, scientific and original, with evident a sense of voice, awareness of audience and purpose, and the ability to vary sentence structure.</i>	<i>Use basic but appropriate language, with a basic sense of voice, some awareness of audience and purpose and some attempt to vary sentence structure.</i>	<i>Use language that is vague or imprecise for the audience or purpose, with little sense of voice, and a limited awareness of how to vary sentence structure.</i>	<i>Use language that is unsuitable for the audience and purpose, with little or no awareness of sentence structure.</i>
Conventions	<i>Demonstrate control of the conventions with essentially no errors, even with sophisticated language.</i>	<i>Demonstrate control of the conventions, exhibiting occasional errors only when using sophisticated language.</i>	<i>Demonstrate partial control of the conventions, exhibiting occasional errors that do not hinder comprehension.</i>	<i>Demonstrate limited control of the conventions, exhibiting frequent errors that make comprehension difficult.</i>	<i>Demonstrate little or no control of the conventions, making comprehension almost impossible.</i>

