FORMAT 5

Submit originals and one copy and electronic copy to Governance/Faculty Senate Office (email electronic copy to jbharvie@alaska.edu)

PROGRAM/DEGREE REQUIREMENT CHANGE (MAJOR)

SUBMITTED BY:

Department	Chemistry & Biochemistry	College/School	CNSM
Prepared by	Tom Green	Phone	474-1559
Email Contact	tkgreen@alaska.edu	Faculty Contact	Tom Green

See http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/ for a complete description of the rules governing curriculum & course changes.

PROGRAM IDENTIFICATION:

DEGREE PROGRAM	Major – BS Degree, Optional Concentration Environmental Chemistry
Degree Level: (i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)	B.S.

A. CHANGE IN DEGREE REQUIREMENTS: (Brief statement of program/degree changes and objectives)

We have eliminated Chem 324W Advanced Organic Chemistry Laboratory and also incorporated Chem F323 Organic Chemistry Laboratory, 1 credit, into Chem F322 Organic Chemistry II, which becomes 4 credits.

B. CURRENT REQUIREMENTS AS IT APPEARS IN THE CATALOG:

Environmental Chemistry

1. Complete the general university requirements. (As part of the core curriculum requirements, complete: MATH F200X; PHYS F103X and PHYS F104X, or PHYS F211X and PHYS F212X.)
2. Complete the BS degree requirements. (As part of the BS degree, complete: MATH F201X. Chemistry foundation courses may be used toward partial fulfillment of the natural science requirement.)
3. Complete the following program (major) requirements:*
   CHEM F105X--General Chemistry I--4 credits
   CHEM F106X--General Chemistry II--4 credits
   CHEM F202--Basic Inorganic Chemistry--3 credits
   CHEM F212--Chemical Equilibrium and Analysis--4 credits
   CHEM F314W--Analytical Instrumental Laboratory--3 credits
   CHEM F321--Organic Chemistry I--4 credits
   CHEM F322--Organic Chemistry II--3 credits
   CHEM F324W--Advanced Organic Chemistry Laboratory--3 credits
   CHEM F331--Physical Chemistry I--4 credits
   CHEM F332--Physical Chemistry II--4 credits
   CHEM F434W--Chemistry Capstone Laboratory--3 credits
   CHEM F481--Seminar--1 credit
   CHEM F482O--Seminar--2 credits
   CHEM F488--Undergraduate Chemistry and Biochemistry Research--3 credits
   MATH F202X--Calculus III--3 credits
4. Complete two of the following:*
   ATM F101X--Weather and Climate of Alaska--4 credits
   BIOL F115X--Fundamentals of Biology I--4 credits
   BIOL F116X--Fundamentals of Biology II--4 credits
   GEOS F101X--The Dynamic Earth--4 credits
   GEOS F262--Rocks and Minerals--3 credits
5. Complete two of the following:*
   ATM F401--Introduction to Atmospheric Science--3 credits
   BIOL F342--Microbiology--4 credits

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CHEM F406--Atmospheric Chemistry --3 credits
CHEM F455W,O--Environmental Toxicology--3 credits
GEOS F417--Introduction to Geochemistry --3 credits
NRM F380W--Soils and the Environment--3 credits

6. Minimum credits required--120 credits

** Students must earn a C- grade or better in each course.*

C. PROPOSED REQUIREMENTS AS IT WILL APPEAR IN THE CATALOG WITH THESE CHANGES:
(Underline new wording ~~strike through old wording~~ and use complete catalog format)

Environmental Chemistry

1. Complete the general university requirements. (As part of the core curriculum requirements, complete: MATH F200X; PHYS F103X and PHYS F104X, or PHYS F211X and PHYS F212X.)
2. Complete the BS degree requirements. (As part of the BS degree, complete: MATH F201X. Chemistry foundation courses may be used toward partial fulfillment of the natural science requirement.)
3. Complete the following program (major) requirements:*
   CHEM F105X--General Chemistry I--4 credits
   CHEM F106X--General Chemistry II--4 credits
   CHEM F202--Basic Inorganic Chemistry--3 credits
   CHEM F212--Chemical Equilibrium and Analysis--4 credits
   CHEM F314W--Analytical Instrumental Laboratory--3 credits
   CHEM F321--Organic Chemistry I--4 credits
   CHEM F322--Organic Chemistry II--~~3~~4 credits
   ~~CHEM F324W--Advanced Organic Chemistry Laboratory--3 credits~~
   CHEM F331--Physical Chemistry I--4 credits
   CHEM F332--Physical Chemistry II--4 credits
   CHEM F434W--Chemistry Capstone Laboratory--3 credits
   CHEM F481--Seminar--1 credit
   CHEM F482O--Seminar--2 credits
   CHEM F488--Undergraduate Chemistry and Biochemistry Research--3 credits
   MATH F202X--Calculus III--3 credits
4. Complete two of the following:*
   ATM F101X--Weather and Climate of Alaska--4 credits
   BIOL F115X--Fundamentals of Biology I--4 credits
   BIOL F116X--Fundamentals of Biology II--4 credits
   GEOS F101X--The Dynamic Earth--4 credits
   GEOS F262--Rocks and Minerals--3 credits
5. Complete two of the following:*
   ATM F401--Introduction to Atmospheric Science--3 credits
   BIOL F342--Microbiology--4 credits
   CHEM F406--Atmospheric Chemistry --3 credits
   CHEM F455W,O--Environmental Toxicology--3 credits
   GEOS F417--Introduction to Geochemistry --3 credits
   NRM F380W--Soils and the Environment--3 credits
6. Minimum credits required--120 credits

** Students must earn a C- grade or better in each course.*

D. ESTIMATED IMPACT

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

No major impact. Chem 324W is being eliminated from Category 3 so it should free organic chemistry faculty to teach other courses at either the undergraduate or graduate level. Chem F323 (1 credit) is simply rolled into Chem F322, which becomes 4 credits. There are now 2 credits of organic lab included in the required courses in Category 3 in the form of Chem F321 and Chem F322.

E. 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)

The change decreases the organic lab credit of our BS, Option in Environmental Chemistry by 2 credits, since Chem 324W is eliminated (minus 3 credits) but Chem F322 is now includes a lab (+1 credit). A writing intensive course is eliminated as a required course, but there are two other W courses (Chem F314W and Chem F434W).

F. IF MAJOR CHANGE - ASSESSMENT OF THE PROGRAM:

Description of the student learning outcomes assessment process.)

Students will still be able to gain the necessary synthetic organic lab skills through the Chem F321 and Chem F322, which are both 4 credits and include a lab.

JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize program/degree change 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. If you drop a course, is it because the material is covered elsewhere? Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the program is not compromised as a result.

The Advanced Organic Chemistry Laboratory (Chem 324W, 3 credits) is no longer needed to meet the needs of our students. We are adopting a more standard organic chemistry curriculum, where both Chem 321 (Organic Chem I) and Chem 322 (Organic Chem II) are both 4 credits and include 3-hr labs. The proposed change will be able to meet the needs of organic chemistry lab requirements of all of our chemistry majors within the Environmental Chemistry option, as well as pre-professional students and/or biology majors.

***APPROVALS:** SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE*

Thomas K. Lee	Date	9-18-14
Signature, Chair, Program/Department of:	Chem + Biochem	
	Date	9-25-14
Signature, Chair, College/School Curriculum Council for:	CNSM	
	Date	9/26/14
Signature, Dean, College/School of:	CNSM	

CHAIR SIGNATURE OBTAINED FOLLOWING APPROVAL BY FACULTY SENATE COMMITTEE

	Date	

Signature, Chair, UAF Faculty Senate
___Curriculum Review Committee

___Graduate Academic and Advisory Committee