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

PROGRAM/DEGREE REQUIREMENT CHANGE (MAJOR/MINOR)

SUBMITTED BY:

<table>
<thead>
<tr>
<th>Department</th>
<th>College/School</th>
<th>CNSM</th>
</tr>
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<tbody>
<tr>
<td>Chemistry &amp; Biochemistry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Keller</td>
<td>474-6042</td>
<td></td>
</tr>
</tbody>
</table>

Email Contact: ffjwk@uaf.edu

See http://www.uaf.edu/ufagov/faculty/cd for a complete description of the rules governing curriculum & course changes.

PROGRAM IDENTIFICATION:

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>Chemistry/Molecular Biology Concentration</th>
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<tbody>
<tr>
<td>Degree Level:</td>
<td>B.S.</td>
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<tr>
<td>(i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)</td>
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A. CHANGE IN DEGREE REQUIREMENTS: (Brief statement of program/degree changes and objectives)

Approved changes last were: Change Chem 212 to a 4-cr lec+lab format, and schedule the removal of Chem 313 after 2009-2010. Changes applied for this year are increasing credits of Chem 331 and 322 (Physical Chemistry) from 3 cr to 4 cr.

B. CURRENT REQUIREMENTS AS IT APPEARS IN THE CATALOG:

Biochemistry/Molecular Biology

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 B.S. degree requirements. (As part of the B.S. degree requirements, complete: MATH F201X. Chemistry foundation courses may be used toward partial fulfillment of the natural science requirement.)

3. Complete the following program (major) requirements:*
   - BIOL F115X—Fundamentals of Biology 1–4 credits
   - BIOL F116X—Fundamentals of Biology II—4 credits
   - BIOL F342—Microbiology (4)
     or BIOL F362—Principles of Genetics (4)
     or BIOL F418W—Developmental Biology (4)—4 credits
   - CHEM F105X—General Chemistry—4 credits
   - CHEM F106X—General Chemistry—4 credits
   - CHEM F212—Chemical Equilibrium and Analysis—3 credits
   - CHEM F313—Chemical Analysis of Dynamic Systems—2 credits
   - CHEM F321—Organic Chemistry—3 credits
   - CHEM F322—Organic Chemistry—3 credits
   - CHEM F324W—Organic Laboratory—4 credits
   - CHEM F331—Physical Chemistry—3 credits
   - CHEM F332—Physical Chemistry—3 credits
   - CHEM F413W—Analytical Instrumental Laboratory** (3)
     or CHEM F434W—Instrumental Methods in Physical Chemistry (3)—3 credits
   - CHEM F450—General Biochemistry Macromolecules (3)
     or CHEM F451—General Biochemistry Metabolism—3 credits
   - CHEM F481—Seminar—1 credit
   - CHEM F482O—Seminar—2 credits
   - CHEM F488—Undergraduate Chemistry and Biochemistry Research (3)—3 credits
Major elective (approved by department head)**—6 credits

4. Complete the following:
   MATH F202X—Calculus—4 credits

5. Minimum credits required—130 credits

* Student must earn a C grade or better in each course.
** Requires CHEM F412 as prerequisite.
*** CHEM F202, F402 required for ACS-accredited degree.

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)

Biochemistry/Molecular Biology

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 B.S. degree requirements. (As part of the B.S. degree requirements, complete: MATH F201X. Chemistry foundation courses may be used toward partial fulfillment of the natural science requirement.)

3. Complete the following program (major) requirements:*
   BIOL F115X—Fundamentals of Biology I—4 credits
   BIOL F116X—Fundamentals of Biology II—4 credits
   BIOL F342—Microbiology (4)
   or BIOL F362—Principles of Genetics (4)
   —or BIOL F418W—Developmental Biology (4)—4 credits
   CHEM F105X—General Chemistry—4 credits
   CHEM F106X—General Chemistry—4 credits
   CHEM F212—Chemical Equilibrium and Analysis—3 4 credits
   CHEM F313—Chemical Analysis of Dynamic Systems—2 credits
   CHEM F321—Organic Chemistry—3 credits
   CHEM F322—Organic Chemistry—3 credits
   CHEM F324W—Organic Laboratory—4 credits
   CHEM F331—Physical Chemistry—3 4 credits
   CHEM F332—Physical Chemistry—3 4 credits
   CHEM F413W—Analytical Instrumental Laboratory** (3)
   or CHEM F434W—Instrumental Methods in Physical Chemistry (3)—3 credits
   CHEM F450—General Biochemistry Macromolecules (3)
   or CHEM F451—General Biochemistry Metabolism—3 credits
   CHEM F481—Seminar—1 credit
   CHEM F482O—Seminar—2 credits
   CHEM F488—Undergraduate Chemistry and Biochemistry Research (3)—3 credits
   Major elective (approved by department head)**—6 credits

4. Complete the following:
   MATH F202X—Calculus—4 credits

5. Minimum credits required—130 credits

* Student must earn a C grade or better in each course.
** Requires CHEM F412 as prerequisite.
*** CHEM F202, F402 required for ACS-accredited degree.
D. ESTIMATED IMPACT
WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

None

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)

Slight change in credit amounts will not affect other programs – the general topics covered remain essentially the same. No other departments have been consulted on these small changes.

F. IF MAJOR CHANGE – ASSESSMENT OF THE PROGRAM:
Description of the student learning outcomes assessment process.)

No assessment is planned.

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.

This change in the program description in the catalog will reflect as accurately as possible the course offerings available to incoming student in the Fall 2009 semester. Chem 313 is removed from the list of course requirements, which has been approved by Faculty Senate. However, it will remain in the course descriptions for one more year.

Biology 418W Developmental Biology is no longer offered – at least it is not in the current catalog.

The net change for the B.S. in chemistry/Biochemistry/Molecular program is +1 credit. The overall reorganization of analytical and physical chemistry courses will benefit students as already outlined in the respective course change forms. This form just summarizes the overall credit situation for this program.

APPROVALS:

[Signature, Chair, Program/Department of: Chem & Bioch] Date 10-16-08

[Signature, Chair, College/School Council for: CNSM] Date 10-16-08

[Signature, Dean, College/School of: CNSM] Date 10/17/08

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

Signature, Chair, UAF Faculty Senate Curriculum Review Committee