Submit original with signatures + 1 copy + electronic copy to UAF Governance. See http://www.uaf.edu/uafgov/faculty/cd for a complete description of the rules governing curriculum & course changes.

TRIAL COURSE OR NEW COURSE PROPOSAL

| SUBMITTED BY: | |
| Department | Chemistry and Biochemistry | College/School | CNSM |
| Prepared by | Kelly Drew | Phone | 474-7190 |
| Email | fkdld@uaf.edu | Faculty Contact | Kelly Drew |

1. ACTION DESIRED (CHECK ONE):
   - Trial Course
   - New Course [x]

2. COURSE IDENTIFICATION:
   - Dept: Chem
   - Course # 474
   - No. of Credits 3
   - Instruction will be through lecture format and discussion of current literature such that students will be asked to apply basic chemistry concepts to interpret peer-reviewed research articles. Course content and learning objectives are consistent with senior level standing.

3. PROPOSED COURSE TITLE:
   - Neurochemistry

4. CROSS LISTED?
   - YES/NO
   - (Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)
   - If yes, Dept.
   - Course #

5. STACKED?
   - YES/NO
   - If yes, Dept.
   - Course #

6. FREQUENCY OF OFFERING:
   - Alternate spring
   - (Every or Alternate) Fall, Spring, Summer – or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (if approved)
   - Spring 2010

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 one)
     - x 6 weeks to full semester
   - OTHER FORMAT
     - (specify)
     - Lecture, discussion, student presentations

9. CONTACT HOURS PER WEEK:
   - LECTURE
     - 3 hours/weeks
   - LAB
     - hours /week
   - 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/cd/credits.html for more information on number of credits.
   - OTHER HOURS (specify type)

10. COMPLETE CATALOG DESCRIPTION including dept., number, title and credits (50 words or less, if possible):
   - Chem F474 Neurochemistry, 3cr

Received
FEB 16 2009
Dean's Office
College of Natural Science & Mathematics
Course will cover basic and applied aspects of interneuronal signaling of specific neurotransmitter systems. Lectures will be based on chapters from assigned text as well as recent and historical literature relevant to these topics. Basic concepts introduced in lectures will be applied through guided discussion of original research papers. Students will learn to prepare "peer reviews" of selected papers and critically discuss original research.

Prerequisites: Psych 335 or Bio 417 or Chem 470; and Chem 322 and Bio 115. Include: Biol F115X and Chem F322; and PSY F335 or Biol F4170 or Chem F470.

11. COURSE CLASSIFICATIONS: (undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)

H = Humanities  N = Natural Science  S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core?  YES  NO

If YES, check which core requirements it could be used to fulfill:
O = Oral Intensive, Format 6  W = Writing Intensive, Format 7  Natural Science, Format 8

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

13. GRADING SYSTEM:

LETTER:  X  PASS/FAIL:  

14. PREREQUISITES

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

Recommended:
Classes, etc. that student is strongly encouraged to complete prior to this course.

15. SPECIAL RESTRICTIONS, CONDITIONS

16. PROPOSED COURSE FEES

Has a memo been submitted through your dean to the Provost & VCAS for fee approval?  Yes/No

17. PREVIOUS HISTORY

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

If yes, give semester, year, course #, etc.:  Chem 493/693 Spring 2006  Chem 693 Spring 2008
18. **ESTIMATED IMPACT**
WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

A projector is required. Students will use library resources especially online access to biomedical literature such as Elsevier titles currently available.

19. **LIBRARY COLLECTIONS**
Have you contacted the library collection development officer (ffkj@gmail.com, 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.

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

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)

Chemistry (biochemistry and molecular biology), biology, undergraduate neuroscience curriculum for chemistry, biology and psychology majors

21. **POSITIVE AND NEGATIVE IMPACTS**
Please specify *positive and negative* impacts on other courses, programs and departments resulting from the proposed action.

The biochemistry and molecular biology option for chemistry majors will benefit from a bridge course where students can integrate concepts of organic chemistry of neurotransmitters (small molecule structure and function) with large molecule structure and function (membrane bound receptors and transporters) within the frame work of how chemistry drives brain function.

**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.

This course will enhance the undergraduate curriculum in chemistry and biology by providing an opportunity for students to apply basic concepts to current advances in chemical and biological aspects of nervous system function. The course will also bring the undergraduate curriculum in line with UAF's strong neuroscience research program.
**APPROVALS:**

<table>
<thead>
<tr>
<th>Signature, Chair, Program/Department of:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-16-09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature, Chair, College/School Curriculum Council for:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12/19/09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature, Dean, College/School of:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2/19/09</td>
</tr>
</tbody>
</table>

Signature of Provost (if applicable)

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

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

<table>
<thead>
<tr>
<th>Signature, Chair, UAF Faculty Senate Curriculum Review Committee</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ADDITIONAL SIGNATURES: (If required)**

<table>
<thead>
<tr>
<th>Signature, Chair, Program/Department of:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature, Chair, College/School Curriculum Council for:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature, Dean, College/School of:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>