

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Office of the Provost and Vice Chancellor
for Academic Affairs

Swanlund Administration Building
601 East John Street
Champaign, IL 61820



April 24, 2000

Raymond M. Leuthold, Chair
Senate Committee on Educational Policy
Office of the Senate
228 English Building, MC-461

Dear Professor Leuthold:

Enclosed are copies of a proposal from the College of Liberal Arts and Sciences to revise the Chemistry Teaching Option.

This proposal has been approved by the college Courses and Curricula and Executive Committees, and by the Council on Teacher Education; it now requires Senate review.

Sincerely

A handwritten signature in cursive script that reads "Karen M. Carney".

Karen M. Carney
Assistant Provost

KMC/cd

Enclosures

C: D. Brown
E. Brown
R. Clift
S. Gonzo
A. Mester
T. Rauchfuss
S. Zumdahl
C. Zych

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Council on Teacher Education

130 Education Building, MC-708
1310 South Sixth Street
Champaign, IL 61820-6990

February 21, 2000

Dr. Susan Gonzo
Associate Provost
Swanlund Administrative Bldg.
MC-304


Dear Dr. Gonzo:

Enclosed is a package of proposed revisions to the Chemistry Teaching Option in the College of Liberal Arts and Sciences. The proposals have received all of the necessary approvals and are now ready for Senate review.

The proposals clarify existing requirements without changing the total hours required in the program. Students in the program are advised by Don Secrest, Professor of Chemistry, and Phyllis Vanlandingham, Academic Advisor for Secondary Teacher Preparation.

Please contact Professor Zumdahl or me if you have any questions pertaining to these proposals.

Sincerely,


Chet Zych
Associate Director

Encl.

C: Steve Zumdahl
Tom Rauchfuss
David Brown
Ed Brown
Ann Mester
Renee Clift

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Office of the Dean

College of Liberal Arts and Sciences
294 Lincoln Hall
702 South Wright Street
Urbana, IL 61801-3631



FEB - 3 2000

February 1, 2000

Chet Zych
Council on Teacher Education
130 Education, MC 708

Dear Chet:

Enclosed please find for proposals for changes in the Teacher Education program in the Department of Chemistry. These proposals have been approved by the LAS Courses and Curricula and Executive Committees and are now ready for review by the Council on Teacher Education.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Ann M. Mester'.

Ann M. Mester
Assistant Dean

Encl.

SPONSOR:

Steven Zumdahl, Associate Head and Professor of Chemistry; Director, General Chemistry

BRIEF DESCRIPTION:

Chemistry Teaching Option: We wish to change the physics requirement. The current requirement is: at least 10 hours of general physics including Physics 112. The proposed requirement is: Physics 111 – General Physics (mechanics), Physics 112 – General Physics (electricity and magnetism) and Physics 114 – General Physics (waves and quantum physics).

JUSTIFICATION:

This change specifies the physics requirements more clearly and brings the physics requirement for the teaching option in line with that of the specialized curriculum in chemistry. The physics courses in the new requirement are also consistent with those in the physics as a second teaching field (which is also being updated).

BUDGETARY AND STAFF IMPLICATIONS:**a. Additional staff and dollars needed.**

none.

b. Internal reallocations (changes in class size, teaching loads, student-faculty ratio, etc.)

none.

c. Effect on course enrollments in other departments and explanations of discussions with representatives of those departments.

none. All students in this program already take these courses.

d. Impact on library, computer use, laboratory use, equipment, etc.

none.

GUIDELINES FOR UNDERGRADUATE EDUCATION:

The general physics courses help students to develop the ability to read and listen intelligently, reason clearly and creatively and think quantitatively and qualitatively. The physics courses required provide Chemistry Teaching Option students with opportunities to develop these skills.

CLEARANCES:

Paul W. Sol 7/20/99
Department/Unit Head Date

Tom Rauchfus 7/28/99
School Approval (if applicable) Date

John Edward Brown 11/9/99
Council on Teacher Education Science Area Committee Date

Ann M. Meester 2/1/00
Asst. Dean, College of Liberal Arts and Sciences Date

R. T. Cliff 2-10-00
Council on Teacher Education Date

Assoc. Dean, Graduate College Date

Assoc. Provost Date

STATEMENT FOR THE BULLETIN:

Old version
10 At least 10 hours of general physics including PHYCS 112

New version:
10 Physics 111 - General Physics (mechanics)
Physics 112 - General Physics (electricity and magnetism)
Physics 114 - General Physics (waves and quantum physics)

EFFECTIVE DATE:

Fall, 1999

SPONSOR:

Steven Zumdahl, Associate Head and Professor of Chemistry; Director, General Chemistry

BRIEF DESCRIPTION:

The suggested change will allow 300 level Biochemistry courses to be taken in addition to 300 level Chemistry courses to satisfy the 8 additional hours of 300 level Chemistry required for the Chemistry Teaching Option.

The current requirement is: at least eight additional hours of 300 level Chemistry coursework. At least one 300 level course must be outside of Physical Chemistry.

The proposed requirement is: at least eight additional hours of 300 level Chemistry and/or Biochemistry coursework. At least one 300 level course must be outside Physical Chemistry.

JUSTIFICATION:

In all other chemistry programs, biochemistry is treated the same as chemistry for the 300 level requirements. This change makes the Chemistry Teaching Option consistent with the others.

BUDGETARY AND STAFF IMPLICATIONS:**a. Additional staff and dollars needed.**

none.

b. Internal reallocations (changes in class size, teaching loads, student-faculty ratio, etc.)

none.

c. Effect on course enrollments in other departments and explanations of discussions with representatives of those departments.

This is such a small program that no significant changes in class enrollments will occur.

d. Impact on library, computer use, laboratory use, equipment, etc.

none.

GUIDELINES FOR UNDERGRADUATE EDUCATION:

Students in 300 level biochemistry courses develop the ability to think clearly, critically and creatively in the same way 300 level chemistry courses promote these abilities. Students entering the field of chemistry teaching should meet these guidelines in 300 level courses in either chemistry or biochemistry.

CLEARANCES:

Paul W. BJC 7/20/99
Department/Unit Head Date

Tom Rauchfus/hcs 7/20/99
School Approval (if applicable) Date

Edward A. B... 11/19/99
Council on Teacher Education Science Area Committee Date

Ann M. Mast 2/1/00
Asst. Dean, College of Liberal Arts and Sciences Date

R. T. ... 2-10-00
Council on Teacher Education Date

Assoc. Dean, Graduate College Date

Assoc. Provost Date

STATEMENT FOR THE BULLETIN:

Old version:

- 8 At least eight additional hours of 300 level Chemistry coursework. At least one 300 level course must be outside of Physical Chemistry.

New version:

- 8 At least eight additional hours of 300 level Chemistry/Biochemistry coursework. At least one 300 level course must be outside Physical Chemistry.

EFFECTIVE DATE:

Fall, 1999

SPONSOR:

Steven Zumdahl, Associate Head and Professor of Chemistry; Director, General Chemistry

BRIEF DESCRIPTION:

To change requirements for the Chemistry Teaching Option to include Math 242 – Calculus of Several Variables, or Math 243 – Multivariable Calculus and Vector Analysis, or equivalent, and increase the hours required for math from 8 to 11.

JUSTIFICATION:

Math 242 (or Math 243 or equivalent) is a prerequisite for both Chem 340 and 342, one of which is required for this program, thus in effect Math 242, Math 243, or equivalent, is now informally required. This change makes the program clearer for students.

BUDGETARY AND STAFF IMPLICATIONS:**a. Addition staff and dollars needed.**

No effect.

b. Internal reallocations (changes in class size, teaching loads, student-faculty ratio, etc.)

None.

c. Effect on course enrollments in other departments and explanations of discussions with representatives of those departments.

None. All students in this program currently take this course

d. Impact on library, computer use, laboratory use, equipment, etc.

None.

GUIDELINES FOR UNDERGRADUATE EDUCATION:

Students in Math 242 or Math 243 or equivalent learn to think clearly, critically and creatively and to reason quantitatively and qualitatively. These qualities are goals for all undergraduate education.

CLEARANCES:

Paul W. Bol 7/20/99
Department/Unit Head Date

Tom Ruchfus / hrg 7/20/99
School Approval (if applicable) Date

[Signature] Shawn A. Brown 11/19/99
Council on Teacher Education Science Area Committee Date

Ann M. Meier 2/1/00
Asst. Dean, College of Liberal Arts and Sciences Date

[Signature] 2-10-00
Council on Teacher Education Date

Assoc. Dean, Graduate College Date

Assoc. Provost Date

STATEMENT FOR THE BULLETIN:

Old version:

- 8 Math 120 – Calculus and Analytic Geometry I
- Math 130 – Calculus and Analytic Geometry II

New version:

- 11 Math 120 – Calculus and Analytic Geometry I
- Math 130 – Calculus and Analytic Geometry II
- Math 242 – Calculus of Several Variables, or
- Math 243–Multivariable Calculus or equivalent

EFFECTIVE DATE:

Fall, 1999

SPONSOR:

Steven Zumdahl, Associate Head and Professor of Chemistry; Director, General Chemistry

BRIEF DESCRIPTION:

In light of the changes suggested in the math and physics requirements for the Chemistry Teaching Option the additional hours for mathematics and physics to complete a second teaching field need to be changed. Currently the requirement reads 6-17 hours of additional math and physics. It should be changed to 8-14 hours.

Also we wish to delete the statement: "Minimum required courses normally equate to 50-64 hours" on p. 131 of the 1999-2001 Programs of Study Catalog.

JUSTIFICATION:

To complete a second teaching field in physics, 18 hours of physics is required (Teaching Minor in Physics). Since 10 hours of physics is required in the Chemistry Teaching Option, an additional 8 hours of physics is required to complete the 18 needed for physics second teaching field.

To complete a second teaching field in mathematics, 25 hours of mathematics is required. The Chemistry Teaching Option requires Math 120, 130, 242 or equivalent (11 hours total). This leaves 14 hours to be completed beyond those required for the Chemistry Teaching Option. Additional hours required should now read: 8 (physics second teaching field) to 14 (math second teaching field).

We feel the statement "Minimum required courses normally equate to 50-64 hours" is not helpful to the students and is confusing because it does not include the required hours in education.

BUDGETARY AND STAFF IMPLICATIONS:**a. Additional staff and dollars needed**

none.

b. Internal reallocations (changes in class size, teaching loads, student-faculty ratio, etc.)

none.

c. Effect on course enrollments in other departments and explanations of discussions with representatives of those departments.

none. Students already take these courses.

d. Impact on library, computer use, laboratory use, equipment, etc.

GUIDELINES FOR UNDERGRADUATE EDUCATION:

This change simply reflects changes in hours which have been made in other areas. Since it does not require changes in courses and is not an increase in total hours there are no statements for the guidelines.

CLEARANCES:

Paul W. Bol 7/20/99
Department/Unit Head Date

Tom Rauch 7/20/99
School Approval (if applicable) Date

[Signature] 11/19/99
Council on Teacher Education Science Area Committee Date

Ann M. Meste 2/1/00
Asst Dean, College of Liberal Arts and Sciences Date

[Signature] 2-16-00
Council on Teacher Education Date

Assoc. Dean, Graduate College Date

Assoc. Provost Date

STATEMENT FOR THE BULLETIN:

Old version:

6-17 Additional mathematics or physics to complete a second teaching field

New version:

8-14 Additional mathematics or physics to complete a second teaching field

EFFECTIVE DATE:

Fall, 1999