PROPOSED CHANGES TO THE BACHELOR OF SCIENCE IN CHEMISTRY IN THE COLLEGE OF
NATURAL SCIENCES SECTION IN THE UNDERGRADUATE CATALOG 2016-2018

Type of Change
☐ Academic Change
☐ Degree Program Change (THECB² form required)

Proposed classification
☐ Exclusive
☐ General
☐ Major

1. IF THE ANSWER TO ANY OF THE FOLLOWING QUESTIONS IS YES, THE COLLEGE MUST CONSULT LINDA DICKENS, DIRECTOR OF ACCREDITATION AND ASSESSMENT, TO DETERMINE IF SACS-COC APPROVAL IS REQUIRED.
   • Is this a new degree program?             Yes ☐ No ☑
   • Does the program offer courses that will be taught off campus? Yes ☐ No ☑
   • Will courses in this program be delivered electronically? Yes ☐ No ☑

2. EXPLAIN CHANGE TO DEGREE PROGRAM AND GIVE A DETAILED RATIONALE FOR EACH INDIVIDUAL CHANGE:

3. THIS PROPOSAL INVOLVES (Please check all that apply)
   ☐ Courses in other colleges
   ☐ Courses in proposer’s college that are frequently taken by students in other colleges
   ☐ Course in the core curriculum
   ☐ Change in course sequencing for an existing program
   ☐ Change in admission requirements (external or internal)
   ☐ Requirements not explicit in the catalog language (e.g., lists of acceptable courses maintained by department office)
   ☐ Courses that have to be added to the inventory
   ☐ X alternative course added to mathematics requirement

4. SCOPE OF PROPOSED CHANGE
   a. Does this proposal impact other colleges/schools? Yes ☐ No ☑
      If yes, then how?
   b. Do you anticipate a net change in the number of students in your college? Yes ☐ No ☑
      If yes, how many more (or fewer) students do you expect?
   c. Do you anticipate a net increase (or decrease) in the number of students from outside of your college taking classes in your college? Yes ☐ No ☑
      If yes, please indicate the number of students and/or class seats involved.
   d. Do you anticipate a net increase (or decrease) in the number of students from your college taking courses in other colleges? Yes ☐ No ☑
      If yes, please indicate the number of students and/or class seats involved.

If 4 a, b, c, or d was answered with yes, please answer the following questions. If the proposal has potential budgetary impacts for another college/school, such as requiring new sections or a non-negligible increase in the number of seats offered, at least one contact must be at the college-level.

   How many students do you expect to be impacted?
   Impacted schools must be contacted and their response(s) included:
   Person communicated with:
   Date of communication:
   Response:
   e. Does this proposal involve changes to the core curriculum or other basic education requirements (42-hour core, signature courses, flags)? No. If yes, explain:
Partial if yes, undergraduate studies must be informed of the proposed changes and their response included:
   Person communicated with:
   Date of communication:
   Response:

f. Will this proposal change the number of hours required for degree completion? No. If yes, explain:

5. COLLEGE/SCHOOL APPROVAL PROCESS
   Department approval date: September 30, 2015
   College approval date: September 30, 2015
   Dean approval date: September 30, 2015; David Vanden Bout, Associate Dean

PROPOSED NEW CATALOG TEXT:

Bachelor of Science in Chemistry
[no changes]

Prescribed Work Common to All Options
[no changes]

Additional Prescribed Work for Each Option

Option I: Chemistry
[no changes]

Option II: Computation
[no changes]

Option III: Teaching

This option is designed to fulfill the course requirements for certification as a middle grade or secondary school science teacher in Texas; the student chooses one of the following areas: composite science certification with chemistry as the primary teaching field; physical sciences certification; or physical science, mathematics, and engineering certification. However, completion of the course requirements does not guarantee the student’s certification. Information about additional teacher certification requirements is available from the UTeach-Natural Sciences academic adviser.

7. Mathematics 408C and 408D, or 408N, 408S, and 408M.
8. History 329U or Philosophy 329U.
9. One of the following sequences:
   a. For students seeking composition science certification: Physics 301, 101L, 316, and 116L; or Physics 303K, 103M, 303L, and 103N; or Physics 317K, 117M, 317L, and 117N. Science 360 (Topic 4: Physics by Inquiry) and Physics 108 (Topic: Physics by Inquiry) may substitute for Physics 316 and 116L, 317L and 117N, or 303L and 103N. Physics 108 is offered on the pass/fail basis.
   b. For students seeking either physical sciences certification or, mathematics, physical science, and engineering certification: Physics 301, 101L, 316, 116L, 315, and 115L; or 303K, 103M, 303L, 103N, 315, and 115L.
10. The requirements of one of the following certification areas:
a. For composite science certification:
   i. Biology 311C and 311D.
   ii. Six hours of coursework in geological sciences; courses intended for non-science majors may not be counted toward this requirement.
   iii. Enough additional approved coursework in biology, geological sciences, or physics to provide the required twelve hours in a second field.
   iv. Chemistry 368 (Topic 1: Research Methods: UTeach) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that includes a substantial research component.
   v. In place of requirements 4c through 4f of the prescribed work above, the following courses, for a total of at least thirty-four semester hours of chemistry: Biochemistry 339F or 369; Chemistry 353; and 455 or 456.

b. For physical sciences certification:
   i. Mathematics 427J or 427K and 427L.
   ii. Chemistry 153K, 354L, and 154K.
   iii. Chemistry 354 and three hours of upper-division coursework in physics.
   iv. Chemistry 368 (Topic 1: Research Methods: UTeach) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that includes a substantial research component.
   v. In place of requirements 4c through 4f of the prescribed work above, the following courses, for a total of at least thirty-four semester hours of chemistry: Biochemistry 339F or 369; Chemistry 353, and 455 or 456.

c. For mathematics, physical science, and engineering certification:
   i. Mathematics 315C, 360M or 375D (Topic: Discovery: Introduction to Advanced Study in Mathematics), 427J or 427K, and 333L.
   iii. Chemistry 368 (Topic 1: Research Methods: UTeach) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that includes a substantial research component.
   iv. In place of requirements 4c through 4f of the prescribed work above, the following courses, for a total of at least thirty semester hours in chemistry: Chemistry 353 and 153K, 455, and Biochemistry 369.

11. Eighteen semester hours of professional development coursework consisting of:
   a. Curriculum and Instruction 650S.
   b. Curriculum and Instruction 365C or UTeach-Natural Sciences 350.
   c. Curriculum and Instruction 365D or UTeach-Natural Sciences 355.
   d. Curriculum and Instruction 365E or UTeach-Natural Sciences 360.
   e. UTeach-Natural Sciences 101, 110, and 170.

12. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: Adolescent Development), or Psychology 301 and 304; and Curriculum and Instruction 339E.
13. Enough additional coursework, if needed, to make a total of 126 semester hours.

**Option IV: Chemistry Honors**
[no changes]

**Special Requirements**
[no changes]

**Order and Choice of Work**
Students are strongly recommended to take the chemistry/biochemistry–major sections of the following courses: Chemistry 301 or 301H (if taken), 302 or 302H, 128K, 128L, 328M, and 328N. Students planning a graduate program are strongly recommended to take Physics 301, 101L, 316, 116L, 315, and 115L.

Students in option II should consult the undergraduate adviser each semester regarding order and choice of work; those in option III should consult the UTeach-Natural Sciences academic adviser.

The following order of work is recommended as a typical minimum program for option I. It assumes that the student has high school credit in trigonometry, college algebra, and the first semester of general chemistry; is able to earn credit by examination for Chemistry 301; and is able to score well enough on the ALEKS placement examination to take Mathematics 408C or 408N in the first semester of the freshman year. Many students meet some of the following course requirements by credit by examination.

First year: Chemistry 302 or 302H, and 317; Mathematics 408C and 408D, or 408N, 408S, and 408M; Physics 301 and 101L, or 303K and 103M, or 317K and 117M (to be taken after Mathematics 408C or 408N); Rhetoric and Writing 306; six semester hours to fulfill core curriculum requirements.

Second year: Chemistry 128K, 128L, 328M, and 328N, or 220C, 320M, and 320N; any coursework needed to meet a core curriculum requirement; three semester hours to be counted toward requirement 4 of the prescribed work; English 316L, 316M, 316N, or 316P; Physics 316 and 116L, or 303L and 103N, or 317L and 117N; an upper-division mathematics course (such as Mathematics 427J or 427K) or an upper-division computer science course.

Third year: Biochemistry 339F or 369, Chemistry 353, 153K, 354L, 456; six semester hours of American and Texas government; six semester hours of American history; three semester hours of electives; a three-semester-hour course to fulfill a core curriculum requirement; three semester hours to be counted toward requirement 4 of the prescribed work.

Fourth year: Chemistry 431, 154K, 376K, and courses to fulfill requirement 3 of the prescribed work. The student must also take enough additional coursework to fulfill requirements 4, 5, 9, and 10 of the prescribed work. It is recommended that the majority of the elective courses taken to fulfill requirements 4 and 9 be chosen from upper-division courses in biology, chemistry, chemical engineering, mathematics, and physics.

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1 See http://www.utexas.edu/provost/planning/cat_change/UnderGrad.html for detailed explanations.
2 Texas Higher Education Coordinating Board.
3 Exclusive: of exclusive application and of primary interest only to a single college or school ("no protest" period is 5 working days); general: of general interest to more than one college or school (but not for submission to the General Faculty) ("no protest" period is 10 working days); major legislation must be submitted to the General Faculty for adoption ("no protest" period is 10 working days).
4 The proposed text should be based on the text of the current catalog available at http://www.utexas.edu/faculty/council/pages/catalog_chgs/catcopy.html.

Strike through and replace (with underlines) only the specific language to be changed. Do NOT use “track changes!” For questions on completing this section, please contact Victoria Cervantes, fc@austin.utexas.edu, 471-5936 or Brenda Schumann, brenda.schumann@austin.utexas.edu, 475-7654.