PROPOSED CHANGES TO THE FRONT CHAPTER OF THE COLLEGE OF NATURAL SCIENCES  
SECTION IN THE UNDERGRADUATE CATALOG 2016-2018

Type of Change: ☑ Academic Change  
☐ Degree Program Change (THECB 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:

Update of Dean’s Office leadership
Rationale: Additions, removals, and changes are made to reflect the current leadership in the Dean’s Office.

Freshman Research Initiative
Indicate that the Freshman Research Initiative is now part of the Texas Institute for Discovery Education in Science (TIDES).
Rationale: This reflects a change in where the program is housed in the college.

Departmental Honors
Under Biochemistry Departmental Honors, delete Chemistry 379H and replace with Biochemistry 379H.
Rationale: A few years ago, the Department of Chemistry and Biochemistry split. This is a cleanup that was missed.

Add Public Health Departmental Honors.
Rationale: The BS in Public Health was established in the 2010-12 catalog and was housed in the School of Biological Sciences. Public Health is moving to the School of Human Ecology. Up this date, public health majors seeking honors enrolled in Biology 379H and earned Biology Departmental Honors. However, some public health projects were not sufficiently biology research oriented to be approved for Biology Departmental Honors. Establishing Public Health Departmental Honors will resolve this issue.

Special Requirements of the College
Delete the statement that students must complete in residence at least twenty four of the last thirty semester hours counted toward the degree.
Rationale: The University has deleted this residency requirement.

Degrees and Programs
Under Bachelor of Arts, Plan I, delete the majors of biochemistry, biology, and human ecology.
Rationale: Retirement of these majors is presented in a separate impact statement; these majors need to be deleted here as well.

Update a general description of the Bachelor of Science and Arts to include the addition of the transcript-recognized minor outside of science that may be used to fulfill the additional requirement for the degree.
**Rationale:** This is specifically addressed in a separate impact statement for the Bachelor of Science and Arts but needs to be added here if approved.

**Retirement of the Bachelor of Science in Interdisciplinary Science**

Rationale: The degree was replaced by the Bachelor of Science in Computer Science, Teaching Option (Senior Grades), effective with the 2012-14 catalog. The BS in Computer Science, Teaching Option, better matches current teaching requirements in the state of Texas and is more versatile for graduates seeking teaching positions. There has been a retirement plan in place for many years. No students have been permitted to enroll in the major code. The last B.S. in Interdisciplinary Science was conferred in Spring 2010.

### 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 departmental honors
- X retire BS degree
- X relocate field of study
- X miscellaneous

### 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:

   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
GENERAL INFORMATION

Arts and Sciences Education
Financial Assistance Available through the College
Student Services
Study Abroad
[no changes]

Student Programs

Biology Scholars Program
Emerging Scholars Program
[no changes]

Freshman Research Initiative

The Freshman Research Initiative in the Texas Institute for Discovery Education in Science (TIDES) introduces undergraduate students to the world of scientific research at the beginning of their academic careers by integrating a three-semester research experience into coursework required for the degree. All students begin with an introductory research methods course in the first semester, followed by two semesters of work on real, cutting-edge research projects in fields like biology, biochemistry, nanotechnology, molecular biology, astronomy, physics, mathematics, and computer science. After finishing the course sequence, interested students are assisted in joining faculty or other research laboratories for further work.

Texas Interdisciplinary Plan
Undergraduate Research
UTeach-Natural Sciences
Women in Natural Sciences
[no changes]

ADMISSION AND REGISTRATION
[changes addressed in a separate impact statement]

ACADEMIC POLICIES AND PROCEDURES

Academic Standards
Mathematics Placement
Repetition of a Course
Concurrent Enrollment
Undergraduates in a Graduate Course
Petitions for Degree Requirements
[no changes]

Honors
[no changes]

University Honors
Graduation with University Honors
Dean’s Scholars Honors Programs
Health Science Scholars Program
Polymathic Scholars Program
Turing Scholars in Computer Science
Honors in Advanced Human Development and Family Sciences Program
Honors in Advanced Nutritional Sciences Program
[no changes]

College Honors

Departmental Honors
Astronomy Departmental Honors
[no changes]

Biochemistry Departmental Honors
Majors who plan to seek special departmental honors in biochemistry should apply to the honors adviser for admission to the honors program no later than the beginning of the senior year. A University grade point average of at least 3.00 and a grade point average in biochemistry and chemistry of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Biochemistry; (2) two semesters of Chemistry Biochemistry 379H, Chemistry Biochemistry Honors Tutorial Course; (3) a thesis and a presentation based on research; the research topic and the thesis must be approved by the supervising faculty member and the undergraduate faculty adviser; (4) a University grade point average of at least 3.00 and a grade point average in biochemistry and chemistry of at least 3.50; (5) completion at the University of at least sixty semester hours of coursework counted toward the degree; and (6) approval of the honors adviser.

Biology Departmental Honors
Chemistry Departmental Honors
Computer Science Departmental Honors
Public Health Departmental Honors

Majors who plan to seek departmental honors in public health should apply to the honors adviser for admission to the honors program no later than the beginning of the senior year. Students are encouraged to apply as early as the beginning of their junior year. A University grade point average of at least 3.0 and a grade point average in public health of at least 3.5 are required for admission.

The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Public Health; (2) two semesters of Public Health 379H, *Honors Tutorial Course*; (3) a thesis and presentation based on research and approved by the research supervisor and the honors adviser; (4) a University grade point average of at least 3.0, a grade point average in public health of at least 3.5, and grades of at least a B in Public Health 379H; and (5) completion at the University of at least sixty semester hours of coursework counted toward the degree.

Textiles and Apparel Departmental Honors
[no changes]

GRADUATION

Special Requirements of the College

All students must fulfill the General Requirements for graduation. Students in the College of Natural Sciences must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. For the Bachelor of Arts, Plan I, these sixty hours must include at least eighteen hours in the major.

2. All University students must complete in residence at least twenty-four of the last thirty semester hours counted toward the degree. For students seeking the Bachelor of Science in Medical Laboratory Science, this rule applies to the academic work completed at the University.

3. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. Additional hours in the professional or major sequence in many cases are required by individual natural sciences degree programs.

4. A candidate for a degree must be registered in the College of Natural Sciences either in residence or in absentia the semester or summer session the degree is to be awarded. Graduation applications must be submitted no later than the date given in the academic calendar. The application and supplemental in absentia instructions are available via the College of Natural Sciences Web Site.

Applying for Graduation
[no changes]

DEGREES AND PROGRAMS

The College of Natural Sciences offers the following undergraduate degrees:
1. Bachelor of Science and Arts, with majors in astronomy, biochemistry, biology, chemistry, computer science, human development and family sciences, human ecology, nutrition, mathematics, neuroscience, and physics.

2. Bachelor of Science degrees in astronomy, biochemistry, biology, chemistry, computer science, environmental science, human development and family sciences, mathematics, medical laboratory science, neuroscience, nutrition, physics, public health, and textiles and apparel.

3. Bachelor of Arts, Plan I, with majors in astronomy, biochemistry, biology, chemistry, computer science, human ecology, mathematics, and physics.

The Bachelor of Science and Arts degree offers a cross-disciplinary experience for students who want to combine a strong core science experience with coursework in areas such as business, communications, fine arts, and the liberal arts. Students choose a major comprised of forty-eight hours of science and mathematics. Students choose either a transcript-recognized minor outside of sciences, fifteen-hour minor in a field of study outside of sciences, or an eighteen to twenty-four hour transcript-recognized certificate such as business foundations, core texts and ideas (studying books that shaped western civilization and thought), food and society, forensic science, pre-health professions, teaching, and textile conservation, among others.

The Bachelor of Science degrees provide deep exploration of science fields for students preparing for graduate science programs and careers as specialized scientists. The degrees contain between eighty to ninety hours of science and mathematics, and typically have multiple specialized options that reflect niche areas of study.

The Bachelor of Arts, Plan I, is shared with the College of Liberal Arts.

A student may not earn more than one Bachelor of Arts, Bachelor of Science and Arts, or Bachelor of Science in Environmental Science degree from the University. A student may earn only one undergraduate degree in a particular field of study from the College of Natural Sciences. A student who holds a Bachelor of Arts or a Bachelor of Science and Arts degree from the University may earn a second major designation in another field of study that will appear on the University transcript.

The title of a graduate's degree appears on his or her diploma, but the major does not. The degree, the major, and the transcript-recognized certificate appear on the graduate's University transcript.

A natural sciences student who wishes to add another major in the college must meet the criterion described in the Admission and Registration section.

Applicability of Certain Courses

Physical Activity Courses

ROTC Courses

Courses Taken on the Pass/Fail Basis

Courses in a Single Field

College Algebra

[no changes]

Transcript-Recognized Certificate Programs

[no changes]

Certificate in Computational Science and Engineering

[no changes]

Forensic Science Certificate

[changes addressed in a separate impact statement]

Certificate in Scientific Computation
Evidence and Inquiry Certificate  
[no changes]

Food and Society Certificate  
[changes addressed in a separate impact statement]

Pre-Health Professions Certificate  
[changes addressed in a separate impact statement]

Certificate in Textile Conservation and Museum Studies  
[no changes]

UTeach Natural Sciences Secondary Teaching Option Certificate  
[no changes]

UTeach Teacher Certification  
[no changes]

Related Fields of Study  
Bachelor of Arts, Plan I  
Bachelor of Science and Arts  
Bachelor of Science in Astronomy  
Bachelor of Science in Biochemistry  
Bachelor of Science in Biology  
Bachelor of Science in Chemistry  
Bachelor of Science in Environmental Science  
Bachelor of Science in Human Development and Family Sciences  
[changes addressed in separate impact statements]

Bachelor of Science in Interdisciplinary Science

Prescribed Work  
All students pursuing an undergraduate degree must complete the University's Core Curriculum. In addition, students seeking the Bachelor of Science in Interdisciplinary Science must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core. This degree is designed to fulfill the course requirements for certification in Texas as a middle grades teacher in the composite teaching field of mathematics/science. However, completion of the course requirements does not guarantee the student's certification. For information about additional certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

1. Two courses with a writing flag. One of these courses must be upper-division.
2. One course with the following flag: quantitative reasoning.

Courses with flags are identified in the Course Schedule. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

3. History 329U or Philosophy 329U.
4. 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.

**Major Requirements**

**Middle Grades Teaching in Mathematics and Science**

5. Curriculum and Instruction 339E.
6. Educational Psychology 363M (Topic 3: Adolescent Development), or Psychology 301 and 304.
7. The following foundation courses:
   a. Mathematics 408C and 408D, or 408N, 408S, and 408M; and Mathematics 315C, 427K, 333L, and 362K; students who plan to take physics courses to fulfill requirement 8 must also complete Mathematics 340L or 341.
   b. Chemistry 301 or 301H, 302 or 302H, and 204.
   c. Students who plan to use biology or geological sciences courses to fulfill requirement 7 must complete Physics 302K, 102M, 302L, and 102N or an equivalent sequence; those who plan to use chemistry or physics must complete Physics 301, 101L, 316, and 116L.
   d. Computer Science 303E or the equivalent.
   e. Biology 311C and Biology 311D and 206L or 208L.
   f. Three semester hours of coursework in geological sciences.
   g. Three semester hours of coursework in astronomy or marine science.
   h. Biology 337 (Topic 2: Research Methods: UTeach), Chemistry 368 (Topic 1: Research Methods: UTeach), or Physics 341 (Topic 7 Research Methods: UTeach).

8. One of the following concentrations:
   a. Mathematics: Twelve semester hours of coursework chosen from Mathematics 325K or Mathematics 328K; 341 or 340L; 358K; and either 360M or 375D (Topic: Discovery: Introduction to Advanced Study in Mathematics).
   b. Biology: Twelve hours of coursework chosen from Biology 320, 325, 226L, Biology 326R, 370, 373, either 324 and 124L, or 322 and 122L, and Neuroscience 365R.
   d. Geological sciences: Twelve hours of coursework chosen from Geological Sciences 404C or 405, 416K, 416M, 420K or 320L, and 335.

9. Enough additional coursework to make a total of at least 126 semester hours.

**Special Requirements**

Students must fulfill both the University’s General Requirements for graduation and the college requirements. They must also earn a grade of at least C in the supporting course in requirement 2 and in each of the professional development courses listed in requirement 3, 4, and 5. More information about grades and the grade point average is given in General Information.

To graduate and be recommended for certification, students must have a University grade point average of at least 2.50 and must pass the final teaching portfolio review. Information about the portfolio review and additional teacher certification requirements is available from the UTeach Natural Sciences academic adviser.

Bachelor of Science in Mathematics
Bachelor of Science in Medical Laboratory Science
Bachelor of Science in Neuroscience
Bachelor of Science in Nutrition
Bachelor of Science in Physics
Bachelor of Science in Public Health
Bachelor of Science in Textiles and Apparel
[changes addressed in separate impact statements]

COURSES (PAGES IN THIS SECTION)

Change in location of Public Health Course Inventory, see below.

School of Human Ecology

Human Development and Family Sciences:  HDF
[no changes, other than those made through course inventory]

Human Ecology :  H E
[no changes, other than those made through course inventory]

[no changes, other than those made through course inventory]
Nutrition:  NTR

Public Health:  PBH

Textiles and Apparel:  TXA
[no changes, other than those made through course inventory]

Department of Molecular Biosciences

Biochemistry:  BCH
[no changes, other than those made through course inventory]

Public Health:  PBH

COLLEGE OF NATURAL SCIENCES FACULTY

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.