

CNS BACHELOR OF SCIENCE AND ARTS

PROPOSED CHANGES TO THE BACHELOR OF SCIENCE AND ARTS IN THE COLLEGE OF
NATURAL SCIENCES SECTION IN THE *UNDERGRADUATE CATALOG 2018-2020*

Type of Change¹ Academic Change
 Degree Program Change (THECB2 form required)

Proposed classification³ 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 SACSCOC APPROVAL IS REQUIRED.

- Is this a new degree program? Yes No
- Is this program being deleted? 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:

Astronomy Major

1. Req 1b: Add M 427J.

Reason: M 427J is Differential Equations with Linear Algebra. This course was added to the BA, with a major in Astronomy, and the BS in Astronomy degree options for the 2016-18 catalog. The department forgot to add it to the BSA, with a major in Astronomy.

Biochemistry Major

1. Add M 408R as an alternative to M 408C or 408N and 408S

Reason: M 408R was developed by the Department of Mathematics for majors in which students needed minimal exposure to calculus.

2. Add BIO 344

Reason: The BS in Biochemistry eliminated a concentration in molecular biology when it was restructured in the 2016-18 catalog. Rather than create a new biochemistry course to address this, BIO 344 is added to the BS in Biochemistry fulfill this gap in knowledge. BIO 344 is added to the BSA to make the BS and BSA degrees in biochemistry more similar.

Biology Major

1. Addition of BIO 226L as alternative to BIO 206L or 208L.

Reason: All other Biology degrees offer BIO 226L as an option instead of BIO 206L or 208L.

2. Remove BIO 323L and BIO 128L from list of approved labs.

Reason: Department of Molecular Biosciences is unsure when course will be offered again. Students who might have taken BIO 323L or 128L will be absorbed into the other lab course options.

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Human Development and Family Sciences Major

1. Drop 9 hours of upper-division HDFS courses. Add HDF 340 and 6 hours of a required research and/or field practicum requirement (chosen from HDF 352, 652F, 352L, 652P, and 355R).

Reason:

a. The College of Natural Sciences 21st Century Undergraduate Education Working Group has recommended that a strong component experiential learning be included in all CNS undergraduate degree programs. The BS in Human Development and Family Sciences (HDFS) requires 6 credits (20 hours) of practicum experience consisting of either research experience, or field practicums that involve working directly with children and families in educational or community settings, or a combination of both.

The BSA HDFS major does not require any practicum experience, and although BSA students could choose this option from among their required 18 hours of upper-division coursework, most do not and therefore have minimal exposure to experiential learning.

b. Many BSA students plan to go into the health professions or other types of graduate or professional schools. When looking into applying for these programs during their senior year, students discover too late that most of these schools require students to have research experience and/or experience in applied settings. They then ask to volunteer in our practicum settings or research labs, but are often unable to do this because the faculty have not planned for their involvement and it is too late to accommodate them. Moreover, they do not get the same degree of supervision, oversight, and accountability as volunteers that they would if they had registered for the research or field practicum.

c. HDF 340 (Ethical, Philosophical, and Professional Development Issues) was added because it is prerequisite for Human Development and Family Sciences 352, 652F, 352L, 652P. HDF 340 is also required in the BS HDFS degree. In addition, it carries the Ethics and Leadership flag, which is now required for all students in the College of Natural Sciences.

2. Add M 408R as a choice for one semester of calculus.

Reason: M 408R was developed by the Department of Mathematics for majors in which students needed minimal exposure to calculus.

3. Add in a statement excluding PSY 304 (Introduction to Child Psychology), 333D (Introduction to Developmental Psychology), and 339 (Behavior Problems of Children) from counting as elective hours on the BSA when a student seeks the Human Development and Family Sciences major.

Reason: PSY 304 and PSY 333D include concepts that are also contained in HDF 313 (Child Development). PSY 339 and HDF 342 (Development of Psychopathology from Infancy through Adolescence) are in a duplicate relationship. HDF majors interested in psychopathology manifesting during childhood and adolescence are better served taking HDF 342. This statement is included in the BS in Human Development and Family Sciences. It was not included in error when the BSA degree was created in the 2014-16 catalog.

Human Ecology Major

1. Add M 408R as a choice for one semester of calculus.

Reason: M 408R was developed by the Department of Mathematics for majors in which students needed minimal exposure to calculus.

2. Add "one of the following" to the requirement of BIO 311D, CH 302, or 302H.

Reason: Students in the Human Ecology major take the first majors-level course in biology and chemistry. They are then asked to take the second majors-level course in biology or chemistry. The current wording is confusing.

3. Add PBH 317 as a requirement to the 27 hours from the School of Human Ecology.

Reason: The public health field of study moved to the School of Human Ecology. PBH 317, Introduction to Public Health, would be a beneficial course for students who are seeking this generalized major.

4. Clarify that the 15 hours of upper-division coursework can be a combination of coursework from the HDFS, HE, NTR, PBH, and TXA fields of study.

Reason: As this is a generalized major, the School of Human Ecology is not prescriptive as to which fields of study

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a student chooses for coursework to fulfill the requirement. Students may choose a single field of study or take coursework across all of the School of Human Ecology fields of study.

Neuroscience Major

1. Add NEU 371M, Comparative Neuroscience, to list of acceptable courses.

Reason: To make the list of approved neuroscience consistent with the BS in Neuroscience options.

Nutrition Major

1. Add NTR 315 to both sequences in 2a.

2. Add completion of NTR 307 and 107L, or 218 and 118L, for all BSA NTR majors.

Reason: The addition of NTR 315 and the choice between 218+118L or 307+107L ensures that students will:

- acquire knowledge of the role of nutrition in the human lifecycle (NTR 315) and
- receive a foundation of either nutrition assessment (NTR 218 or 118L) or food science (NTR 307 and 107L). The course additions will enhance employment opportunities for graduates with facilities such as hospitals, schools, and long-term care homes where these skills are desired.

3. Reduce overall additional hours of nutrition, from 16 to 12 hours. Reduce upper-division hours of nutrition within additional hours from 12 to 9 hours.

Reason: The department is reducing the overall amount of nutrition by 4 hours in order to add 5 hours composed of NTR 315; and NTR 307 and 107L, or NTR 218 and 118L.

Physics major

1. Add M 427J as an alternative to M 427K.

Reason: The Dept. of Mathematics now teaches M 427J, a course in differential equations that contains some linear algebra concepts. M 427J was added to the BS in Physics for the 2016-18 catalog. This corrects the omission.

3. THIS PROPOSAL INVOLVES (Please check all that apply)

- | | | |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <input type="checkbox"/> Courses in other colleges | <input type="checkbox"/> Courses in proposer's college that are frequently taken by students in other colleges | <input type="checkbox"/> Flags |
| <input type="checkbox"/> Course in the core curriculum | <input checked="" type="checkbox"/> Change in course sequencing for an existing program | <input type="checkbox"/> Courses that have to be added to the inventory |
| <input type="checkbox"/> Change in admission requirements (external or internal) | <input type="checkbox"/> Requirements not explicit in the catalog language (e.g., lists of acceptable courses maintained by department office) | |

4. SCOPE OF PROPOSED CHANGE

- a. Does this proposal impact other colleges/schools? Yes No

If yes, then how would you do so?

The Human Development and Family Sciences (HDFS) major will restrict PSY 304 (Intro to Child Psychology), 333D (Intro to Developmental Psychology), and 339 (Behavior Problems of Children) from counting toward the BSA, with a major in HDFS, due to overlap with existing HDFS coursework.

The Human Ecology Advising Center has already been telling their BSA HDFS students that these courses cannot count, not realizing there was not a restriction in the legislation analogous to the restriction on the BS in HDFS degree. The Department of Psychology might see a drop of a seat or two per year in each course as a result of publishing the restriction, not significant enough to impact the department or to seek permission.

- 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?

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- 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. 1 seat per year in PSY 304, 333D, and 339.

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)? If yes, explain: No.

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.

Note: THECB Semester Credit Hour Change Form required, download from URL:

<http://www.thecb.state.tx.us/reports/DocFetch.cfm?DocID=2419&format=doc>

If yes, explain:

5. COLLEGE/SCHOOL APPROVAL PROCESS

Astronomy major

Department approval date: September 5, 2017 Approved by whom: Astronomy Executive Undergraduate Studies Committee

College approval date: September 6, 2017 Approved by whom: Course and Curriculum Committee

Biochemistry major

Department approval date: October 8, 2017 Approved by whom: Karen Browning, Associate Chair for Education, Department of Molecular Biosciences

Department approval date: October 8, 2017 Approved by whom: Biology Curriculum Committee

College approval date: October 11, 2017 Approved by whom: Course and Curriculum Committee

Biology major

Department approval date: February 10, 2017 Approved by whom: Janice Fischer, Biology Instructional Office, Director

Department approval date: February 20, 2017 Approved by whom: Biology Curriculum Committee

College approval date: May 4, 2017 Approved by whom: Course and Curriculum Committee

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Human Development and Family Sciences major

Department approval date: April 24, 2017 Approved by whom:
September 11, 2017 HDFS Curriculum Committee
Stephen Russell, Chair, Department of HDFS
Deborah Jacobvitz, Director, School of Human Ecology

College approval date: May 4 & Sept 13, Approved by whom: Course and Curriculum Committee
2017

Human Ecology major

Department approval date: September 5, 2017 Approved by whom: Nancy Hazen-Swann, SoHe
September 11, 2017 representative to Course and Curriculum Committee

College approval date: Sept 6 & 13, 2017 Approved by whom: Course and Curriculum Committee

Neuroscience major

Department approval date: October 18, 2016 Approved by whom: Michael Mauk, Chair

College approval date: March 9, 2017 Approved by whom: Course and Curriculum Committee

Nutrition major

Department approval date: October 15, 2016 Approved by whom: Deborah Jacobvitz, Chair

College approval date: May 4, 2017 Approved by whom: Course and Curriculum Committee

Physics major

Department approval date: September 5, 2017 Approved by whom: Greg Sitz, Physics representative to
Course and Curriculum

College approval date: September 6, 2017 Approved by whom: Course and Curriculum

All BSA Major Changes

Dean approval date: October 11, 2017 Approved by whom: David Vanden Bout, Associate Dean for
Undergraduate Education

PROPOSED NEW CATALOG TEXT:

Astronomy Major

1. Mathematics:
 - a. Mathematics 408C and 408D
 - b. Mathematics 427K or 427J
2. Primary science:
 - a. Physics 301, 101L, 315, 115L, 316, and 116L
 - b. Two courses chosen from the following: Astronomy 352K, 353, and 358
 - c. Six additional upper-division semester hours in astronomy and physics
3. Secondary science:

12 additional semester hours of majors-level coursework from one or more of the following areas. It is recommended that students select three of the 12 hours to also fulfill the Natural Science and Technology Part II core curriculum requirement

 - a. Biology
 - b. Chemistry
 - c. Computer Science
 - d. Geological Sciences
 - e. Mathematics
 - f. Statistics and Data Sciences

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Biochemistry

Major

1. Mathematics:
 - a. Mathematics 408C, ~~408R~~, or 408N and 408S
 - b. Statistics and Data Sciences 328M
2. Primary science:
 - a. Chemistry 301 or 301H, 302 or 302H, and 204
 - b. Chemistry 320M, and 353M or 455
 - c. Biochemistry 339F and 369L
 - d. Two courses chosen from the following: Biochemistry 339J, 339M, 339N, and 370
3. Secondary science:
 - a. Biology 311C, 311D and 325, or Biology 315H and 325H
 - b. Biology 344
 - ~~b.~~ c. One of the following physics sequences:
 - i. Physics 317K, 117M, 317L, and 117N (recommended)
 - ii. Physics 301, 101L, 316, and 116L
 - iii. Physics 303K, 103M, 303L, and 103N

Biology

Major

1. Mathematics:
 - a. Mathematics 408C, 408R, or 408N and 408S. Students who intend to take additional calculus coursework should begin the sequence with 408C or 408N
 - b. Statistics and Data Sciences 328M
2. Primary science:
 - a. Biology 206L, ~~or 208L~~, or 226L; 311C, 311D, and 325, or 315H and 325H
 - b. One of the following: Biology 320 or 344
 - c. Biology 370
 - d. Complete one course from each of the following:
 1. Cellular, developmental, and molecular biology: Biochemistry 369 or 339F, 339M, 339J, 364F; Biology 320, 326R, 330, 335, 336, 339, 339M, 344, 347 or 360K, 349, 350M, 360M, 361
 2. Genetics, genomics, and computational biology: Biochemistry 339N; Biology 321G, 325T, 327E, 327G, 354C, 336, 366R, 471; Statistics and Data Sciences 348
 3. Physiology, neuroscience, and behavior: Biology 328, 438L, 359K, 359R, 361T, 365S, 367C, 374, Marine Science 355C
 4. Ecology, evolution, and biodiversity: Biology 322, 324, 346, 351, 357, 364, 373, 375; Marine Science 320, 352C, 352D, 352E, 353, 354, 354C, 354E, 354Q, 356, 357
 - e. Complete one laboratory course from the following list: Biology 320L, 122L, ~~323L~~, 124L, 226L, ~~428L~~, 129L, 325L, 230L, 331L, 328D, 340L, 446L, 448L, 349L, 353F, 453L, 354L, 455L, 456L, 160L, 361L, 463L, 165U, 369F, 369L, 371L, 373L, 174L, 478L
3. Secondary science:
 - a. Chemistry 301 or 301H, 302 or 302H, and 204
 - b. Complete one of the following:
 1. Physics 302K and 102M (recommended)
 2. Physics 317K and 117M
 3. Physics 303K and 103M
 4. Physics 301 and 101L

Chemistry

Major [no change]

Computer Science

Major [no change]

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Human Development and Family Sciences

Major

1. Mathematics:

- a. Statistics and Data Sciences 302
- b. Mathematics 408C, ~~408N~~, 408R, or Statistics and Data Sciences 332

2. Primary science:

- a. Human Development and Family Sciences 304, 313, ~~and 113L, and 315L~~, and 340
- b. ~~48~~ Nine semester hours of upper-division human development and family sciences
- c. Six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355R. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355R is restricted to students whose practicum applications have been approved. Students who want to participate in an early childhood field experience/field practicum (HDF 352L or 652P) must also complete HDF 338 and 466 with grades of at least C-. Practicum applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester. If either May 1 or December 1 falls on a weekend or an official University holiday, the application is due the next business day.

3. Secondary science:

- a. Chemistry 301 or 301H
- b. Biology 311C
- c. One of the following courses: Biology 311D, Chemistry 302, or 302H

Psychology 304, 333D, and 339 may not count toward the Bachelor of Science and Arts, with a major in Human Development and Family Sciences.

Human Ecology

Major

1. Mathematics:

- a. Statistics and Data Sciences 302
- b. Mathematics 408C, 408N, 408R, or Statistics and Data Sciences 332

2. Primary science: School of Human Ecology coursework, including:

- a. Public Health 317 ~~27 semester hours from the School of Human Ecology, including the following:~~
- b. One of the following: Human Development and Family Sciences 304, 304H, 313 and 113L, or 313H and 113L
- c. Nutrition 306, 312, or 312H
- d. Textiles and Apparel 303 or 205 and 105L
- e. 15 semester hours of upper-division coursework chosen from Human Development and Family Sciences, Human Ecology, Nutrition, Public Health, and Textiles and Apparel

3. Secondary science:

- a. Chemistry 301 or 301H
- b. Biology 311C
- c. One of the following: Biology 311D, Chemistry 302, or 302H

Mathematics

Major [no change]

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Neuroscience

Major

1. Mathematics:
 - a. Mathematics 408C, or 408N and 408S
 - b. Statistics and Data Sciences 328M
2. Primary science:
 - a. Biology 206L and one of the following sequences:
 1. 311C, 311D, 325
 2. 315H and 325H
 - b. Neuroscience 330
 - c. Neuroscience 335
 - d. 12 additional semester hours of neuroscience, chosen from: Biology 359K, 367C, Neuroscience 337, 365D, 365L, 365T, 365W, 366C, 366D, 366E, 366L, 366N, 366P, 366S, 367F, 367V, 367W, 466G, ~~and 466M,~~ and 371M. Biology 377 may count with prior approval of the faculty adviser
3. Secondary science:
 - a. Chemistry 301 or 301H, 302 or 302H, and 204
 - b. One of the following physics sequences:
 - i. Physics 317K, 117M, 317L, 117N
 - ii. Physics 303K, 103M, 303L, 103N
 - iii. Physics 301, 101L, 316, 116L

Nutrition

Major

1. Mathematics:
 - a. Statistics and Data Sciences 302, 304, 306, 325H, or 328M
 - b. Mathematics 408C or 408N or Statistics and Data Sciences 332
2. Primary science:
 - a. One of the following sequences:
 - i. Nutrition 312, ~~and~~ 112L, 315, ~~326,~~ and 126L
 - ii. Nutrition 312H and 312R, 315
 - b. One of the following sequences:
 - i. Nutrition 307 and 107L
 - ii. Nutrition 218 and 118L
 - ~~b. c.~~ 12 additional semester hours of nutrition, including 12 semester hours of upper-division coursework.
3. Secondary science:
 - a. Chemistry 301 or 301H, 302 or 302H, and 204
 - b. Chemistry 320M
 - c. Biology 311C

Physics

Major

1. Mathematics:
 - a. Mathematics 408C, 408D, 427K or 427J, and 427L
2. Primary science:
 - a. Physics 301, 101L, 315, 115L, 316, and 116L
 - b. Physics 336K, 352K, 355, 369, and 373
 - c. One course chosen from the following: Mathematics 340L; and Physics 329, 333, 345, 353L, 362K, 362L, 474, 375S, 375R, or 375P
3. Secondary science:
 - a. Three semester hours of majors-level coursework chosen from: astronomy, biology, chemistry, computer science, and geological sciences. It is recommended that students select a course that will also fulfill the Natural Science and Technology Part II core curriculum requirement.

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- 1 See <https://facultycouncil.utexas.edu/degree-program-changes> for detailed explanations.
 - 2 Submit required Texas Higher Education Coordinating Board forms to the provost's office.
 - 3 **EXCLUSIVE:** of *exclusive* application and of primary interest only to a single college or school ("no protest" period is *seven calendar days*); **GENERAL:** of *general* interest to more than one college or school (but not for submission to the General Faculty) ("no protest" period is *fourteen calendar days*); **MAJOR:** *major* legislation must be submitted to the General Faculty for adoption ("no protest" period is *fourteen calendar days*).