# OFFICE OF THE FACULTY COUNCIL



### THE UNIVERSITY OF TEXAS AT AUSTIN

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January 19, 2018

Provost Maurie McInnis The University of Texas at Austin MAI 201

Campus Mail Code: G1000

Approved by Executive Vice President and Provost Maurie McInnis on January 29, 2018

Dear Provost McInnis,

Enclosed for your consideration and action are proposals to change the College of Natural Sciences chapter of the *Undergraduate Catalog*, 2018-2020. The items are classified as being of *exclusive* interest to one college or school and were approved by the Faculty Council on a no-protest basis on January 15, 2018. The authority to grant final approval on of this legislation resides with your office on behalf of President Fenves.

- Proposed Changes to the Academic Policies and Procedures (D 15816-15824)
- Proposed Changes to the Courses Section (D 15825-15827)
- Proposed Changes to the Degrees Program Section (D 15828-15831)
- Proposed Changes to the General Information Section (D 15832-15836)
- Proposed Changes to the Graduation Section (D 15837-15840)
- Proposed Changes to the Applied Statistical Modeling Certificate (D 15841-15845)
- Proposed Changes to the Bachelor of Science and Arts (D 15846-15850)

Please let me know if you have questions or if I can provide other information concerning these items.

Sincerely,

Alan W. Friedman, Secretary

General Faculty and Faculty Council

The University of Texas at Austin

Clay W. Driekwan

Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

AWF:dlr Enclosures

ec: Lydia A. Cornell, Administrative Program Coordinator, Provost's Office Michelle K. George, Administrative Manager for Faculty Affairs, Provost's Office David Vanden Bout, Associate Dean for Undergraduate Education, College of Natural Sciences

Judith M. Quinney, Manager for College of Natural Sciences Records Office

# PROPOSED CHANGES TO THE ACADEMIC POLICIES AND PROCEDURES SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Dean Linda A. Hicke in the College of Natural Sciences has filed with the Secretary of the Faculty Council the following proposal to change the Academic Policies and Procedures section in the College of Natural Sciences chapter in the *Undergraduate Catalog*, 2018-2020. On September 20, 2017, the Course and Curriculum Committee and Associate Dean David Vanden Bout, on behalf of Dean Hicke, approved the proposal. The Secretary has classified this proposal as legislation of exclusive interest to one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the proposal on September 14, 2017, and forwarded it to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with the Provost on behalf of the President.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by January 15, 2018.

Alan W. Friedman, Secretary of the General Faculty and Faculty Council

The University of Texas at Austin

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# PROPOSED CHANGES TO THE ACADEMIC POLICIES AND PROCECUURES SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Тур	e of Change  Academic Change  Degree Program Change (THECB form required)	
Proj	posed classification	
	IF THE ANSWER TO ANY OF THE FOLLOWING QUESTIONS CONSULT LINDA DICKENS, DIRECTOR OF ACCREDITATION DETERMINE IF SACSCOC APPROVAL IS REQUIRED.	
	• Is this a new degree program?	Yes ☐ No ☒ Yes ☐ No ☒
	<ul><li> Is this program being deleted?</li><li> Does the program offer courses that will be taught off campus?</li></ul>	Yes ∐ No ⊠ Yes □ No ⊠
	<ul> <li>Will courses in this program be delivered electronically?</li> </ul>	Yes No No

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

# Academic Policies and Procedures

**Removal from the Major:** Add a policy to remove students who are unable to pass courses required for the degree.

**Reason:** If a student is unable to pass a course required for the degree and does not have non-academic circumstances that warrant a 3rd repetition of the course, the student may be removed from the major and placed in the Natural Sciences undeclared major as he or she explores options for completing a degree. If students are languishing in majors without hope of completion, the college wants a mechanism to require the students to address their issues with academic advisors.

In addition, the college makes internal admission decisions based partially on major enrollments. If the number of majors is artificially inflated with students who cannot pass the major classes, the college cannot make accurate internal admission decisions.

Honors: Updated information by the College of Natural Sciences Honors Center director.

Reason: Description out of date.

University Honors: Updated information by the College of Natural Sciences Honors Center director.

**Reason:** Removed duplicate information.

Dean's Scholars Program: Updated information by the College of Natural Sciences Honors Center director.

Reason: Description out of date.

Health Science Scholars Program: Updated information by the College of Natural Sciences Honors Center director

**Reason:** This is a relatively new honors program. The description has evolved as it becomes more firmly established.

Polymathic Scholars Program: Updated information by the College of Natural Sciences Honors Center director.

**Reason:** This is a relatively new honors program. The description has evolved as it becomes more firmly established.

Departmental Honors: Updates to the departmental honors programs in Biochemistry and Computer Science, and addition of the Neuroscience Departmental Honors.

**Reason:** These requirements were established several years ago and have not been reviewed recently. Upon a college-wide review, Biochemistry and Computer Science made minor updates to their

departmental honors programs. The Department of Neuroscience split off from Biology and needs to establish its own honors program.

	3.	THIS PROPOSAL INVOLV	ES (Please check all that apply)	
		☐ Courses in other colleges	Courses in proposer's college	☐ Flags
			that are frequently taken by	
			students in other colleges	
		Course in the core	Change in course sequencing for	
		curriculum	an existing program	be added to the
		Change in admission	Dequirements not explicit in the	inventory
		Change in admission requirements (external or	Requirements not explicit in the catalog language (e.g., lists of	e
		internal)	acceptable courses maintained	
		memar)	by department office)	
			by department office)	
1.	SC	OPE OF PROPOSED CHANG	E	
	a.	Does this proposal impact other	colleges/schools?	Yes 🗌 No 🔀
		If yes, then how would you do	so?	
	b.		in the number of students in your coll	ege? Yes 🗌 No 🔀
		If yes, how many more (or few		
	c.		e (or decrease) in the number of stude	
		taking <u>classes in your college</u> ?	6 . 1 . 1/ 1	Yes 🗌 No 🖂
			er of students and/or class seats invol	
	d.		e (or decrease) in the number of stude	
		courses in other colleges?	er of students and/or class seats invol	Yes ☐ No ⊠
		if yes, preuse indicate the nume	or or students und/or cluss seats invol	ved.
	If 4	4 a, b, c, or d was answered wit	h yes, please answer the following q	uestions. If the proposal has
	po	tential budgetary impacts for a	nother college/school, such as requi	ring new sections or a non-
	ne		of seats offered, at least one contact	must be at the college-level.
		How many students do you exp		
		*	acted and their response(s) included:	
		Person communicated with	:	
		Date of communication:		
		Response:	and to the some examinations on other be	asia advantian magninamanta (42
	e.	hour core, signature courses, fla	nges to the core curriculum or other ba	asic education requirements (42-
			must be informed of the proposed of	changes and their resnonse
		included:	must be informed of the proposed of	changes and then response
		Person communicated with	:	
		Date of communication:		
		Response:		
	f.	Will this proposal change the n	umber of hours required for degree co	mpletion?
			Hour Change Form required, download	
		·	orts/DocFetch.cfm?DocID=2419&fo	<u>rmat=doc</u>
		If yes, explain:		
_	C C	N I ECE/COHOOL APPROVE	I DDOCEGG	
5.		DLLEGE/SCHOOL APPROVA llege approval date: September 2		Committee
			ar zarz – a comse and a urricillium	

David Vanden Bout, Associate Dean for

Undergraduate Education

Dean approval date:

September 20, 2017

### PROPOSED NEW CATALOG TEXT:

#### ACADEMIC POLICIES AND PROCEDURES

#### **Academic Standards**

### **Mathematics Placement**

{no change to this section}

# Repetition of a Course

{No changes but relevant to new policy that follows it}

No student may enroll in any course in the College of Natural Sciences more than twice, even if the course is needed to meet degree requirements, without first obtaining the written consent of his or her major adviser and of the department that offers the course; students in colleges other than the College of Natural Sciences need only departmental approval. A symbol of Q or W counts as an enrollment unless it has been approved by the dean's office for nonacademic reasons.

A student may not repeat any course in which he or she has earned a grade of C- or better.

Departments in the college may have additional requirements for students who repeat courses.

### Removal from the Major

A Natural Sciences student whose appeal to take a course in the College of Natural Sciences for a third time and is denied may be removed from the major if the course is required by the degree.

A student who is removed from the major will be placed in the undeclared major while the student examines options to pursue another major in the College of Natural Sciences or in another college. An academic adviser will work with the student to explore opportunities for academic success and graduation.

A student who transfers the course for which a repeat appeal was denied may appeal to re-enter the major from which the student was removed. Appeals to re-enter the major are reviewed by the Associate Dean for Undergraduate Education.

### **Concurrent Enrollment**

{no change to this section}

# **Undergraduates in a Graduate Course**

{no change to this section}

# **Petitions for Degree Requirements**

{no change to this section}

#### Honors

There are several avenues available for undergraduates to achieve honors recognition for exemplary academic ability and performance. They include: University—wide] Honors, graduation with University Honors, college-wide honors programs, departmental honors degree options, and completion of departmental honors.

[University-wide Honors consists of recognition each fall and spring for students who meet the university eriteria for University Honors. Graduation with University Honors consists of recognition at the time of

graduation to a percentage of the college's graduates for students who meet the University criteria for graduating with University Honors.

The College of Natural Sciences offers Bachelor of Science and Arts and Bachelor of Science honors degree options in three programs that serve majors in the College of Natural Sciences: Dean's Scholars, Health Science Scholars, and Polymathic Scholars. [These honors degrees are available to students in the Dean's Scholars Program, the Health Science Scholars Program, and the Polymathic Scholars Program. Each program has its own admission process and requirements for participants to remain in good standing. The College of Natural Sciences Honors Center is available for inquiries about admission and requirements.] Information about admission and requirements for each is available at the CNS Honors & Scholarships website. [https://cns.utexas.edu/honors]

Honors degree options that are sponsored by departments include: Turing Scholars in Computer Science; Honors in Advanced Human Development and Family Sciences Program; and the Honors in Advanced Nutritional Sciences Program.

Lastly, students may earn departmental honors upon graduation through completion and approval of an undergraduate thesis.

# **University Honors**

<u>University</u> honors are earned on a semester by semester basis. Information relating to University Honors can be found in the *General Information Catalog*. [In addition, the College of Natural Sciences encourages academic excellence through programs such as the Dean's Scholars Honors Program and Turing Scholars in Computer Science. Students may also graduate with departmental honors as described below and may earn membership in one or more of the honorary scholastic societies open to undergraduates.]

# **Graduation with University Honors**

{no change to this section}

### Dean's Scholars Honors Program

[The Dean's Scholars Honors Program is a comprehensive honors degree program for highly motivated and talented students. The key features of the program are a first semester research methods course; a breadth requirement, usually completed during the first four semesters, that exposes students to various forms of scientific inquiry; and at least two semesters of supervised research and writing that culminate in an honors thesis. Students in good standing in the Dean's Scholars Honors Program may follow the honors option for the appropriate bachelor of science degree. The honors degree option is available in most fields in the college.]

Dean's Scholars is a four-year honors degree program for highly motivated and talented students with a demonstrated interest in mathematics and/or scientific research. Students earn a Bachelor of Science degree with an honors option. This option is available in all majors offered by the College of Natural Sciences.

The key features of the program are a first-semester research methods course; a breadth requirement, usually completed during the first four semesters, that exposes students to various forms of scientific inquiry; and at least two semesters of supervised research and writing that culminate in an honors thesis.

Application to the Dean's Scholars Honors Program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available in the program office and on the Dean's Scholars website. Students may enter the program as freshmen[, as transfer students,] or as college transfers prior to their fourth long semester of enrollment at the University [after they have enrolled at the University. In general, students who have completed more than 50 semester hours of college coursework are not considered for admission.]

Factors in the admission decision are the student's high school and/or University grades, class rank, the rigor of the courses the student has taken, the quality of the required application essays, a strong recommendation from a mathematics or science instructor, and the student's interest in mathematics and/or scientific research as demonstrated by extracurricular activities. [faculty recommendations, and the student's interest and aptitude in math and science as demonstrated by relevant extracurricular activities.]

To remain in good standing in the <u>program</u> [Dean's Scholars Honors Program], students <u>are expected to maintain a minimum grade point average of 3.50. Students who do not may be dismissed from the program by the faculty director.</u> [must maintain an in residence grade point average of at least 3.25 after 30 hours in residence, of at least 3.40 after 60 hours in residence, and of at least 3.50 after 90 hours in residence. Students who fail to maintain the required grade point average will usually be dismissed from the program. Under special circumstances and at the discretion of the departmental honors adviser, a student may be allowed to continue under academic review.]

#### **Health Science Scholars Program**

[The Health Science Scholars Program is intended for students whose interest in science is focused on clinical careers and healthcare practice or policy. Health Science Scholars pursue a Bachelor of Science and Arts honors degree and complete a major in a field of study within the College of Natural Sciences, as well as an interdisciplinary minor which complements their scientific interest and prepares them for health professions, policy, or business. Students complete a departmental honors thesis, or a health-related internship/practicum and a thesis that synthesizes and analyzes scholarly literature related to the internship/practicum.]

Health Science Scholars is a four-year honors degree program for exceptional students who are interested in the health professions and committed to community service. Students earn a Bachelor of Science and Arts degree with an honors major. An honors option is available in all majors offered under this degree by the College of Natural Sciences.

The key features of the program are a first-semester research methods course; a six-credit-hour requirement in honors-level coursework in one or more science; a substantive health or service-related learning experience or laboratory research, undertaken in the third year; and an honors thesis based on their third-year project, written in the final year.

Application to the Health Science Scholars Program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available on the Health Science Scholars website. Students may enter the program as freshmen or as college transfers prior to their fourth long semester of enrollment at the University.

Factors in the admission decision are the student's high school and/or college grades, class rank, the rigor of the courses the student has taken, the quality of the required application essays, a strong recommendation from a mathematics or science instructor, and the student's interest in science, health and service as demonstrated by extracurricular activities.

To remain in good standing in the program, students are expected to maintain a minimum grade point average of 3.50. Students who do not may be dismissed from the program by the faculty director.

# **Polymathic Scholars Program**

[The Polymathic Scholars Program is designed for students with a strong interest in the sciences, but who also have strong scholarly interests beyond their major. Polymathic Scholars design an interdisciplinary minor field of study—a field defined by the students' interests and limited only by their ability to engage them as a scholar. The interdisciplinary minor is an opportunity for the student to explore the impacts of their field of study or a completely different field of interest. Polymathic Scholars pursue a Bachelor of Science and Arts honors degree and complete a thesis that synthesizes and analyzes scholarly literature within their field of study.]

Polymathic Scholars is a four-year honors degree program for exceptional science majors who have compelling interests or talents beyond the natural sciences and wish to make them part of their undergraduate degree. Students earn a Bachelor of Science and Arts degree with an honors major. An honors option is available in all majors offered under this degree by the College of Natural Sciences.

The key features of the program are a first-semester research methods course; a six-credit-hour requirement in honors-level coursework in one or more science; a multidisciplinary field of study outside the student's major, conceived and designed by the student and including no fewer than four courses; and an honors thesis on a question within that field, written in the final year.

Application to the Polymathic Scholars Program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available on the Polymathic Scholars website. Students may enter the program as freshmen or as college transfers prior to their fourth long semester of enrollment at the University.

Factors in the admission decision are the student's high school and/or college grades, class rank, the rigor of the courses the student has taken, the quality of the required application essays, a strong recommendation from a mathematics or science instructor, and the student's investment in science as well as in one or more areas beyond science, as demonstrated by extracurricular activities.

To remain in good standing in the program, students are expected to maintain a minimum grade point average of 3.50. Students who do not may be dismissed from the program by the faculty director.

# **Turing Scholars in Computer Science**

{no change to this section}

### Honors In Advanced Human Development and Family Sciences Program

{no change to this section}

# **Honors In Advanced Nutritional Sciences Program**

{no change to this section}

### College Honors

# **Departmental Honors**

{no change to this section}

#### **Astronomy Departmental Honors**

{no change to this section}

#### **Biochemistry Departmental Honors**

Majors who plan to seek special departmental honors in biochemistry should apply to the <u>departmental</u> 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 Biochemistry 379H, *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] departmental honors 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  $\underline{\text{sixty}}$  [60] semester hours of coursework counted toward the degree; and (6) approval of the honors adviser.

# **Biology Departmental Honors**

{no change to this section}

### **Chemistry Departmental Honors**

{no change to this section}

### **Computer Science Departmental Honors**

Students seeking special departmental honors must meet with a faculty adviser at least two semesters before they plan to graduate to discuss potential research topics and the requirements for receiving special departmental honors.

The requirements for graduation with special departmental honors are (1) Computer Science 379H, Computer Science Honors Thesis, with a grade of at least B-; (2) a University grade point average of at least 3.00 and a grade point average in computer science of at least 3.50; (3) a thesis and presentation based on research [ $\tau$  written on the subject of the student's research] and approved [in comprehensive examination] by [a committee consisting of at least]three faculty members, including the honors adviser; and (4) completion at the University of at least [ $\tau$  sixty semester hours of coursework counted toward the degree.

# **Human Development and Family Sciences Departmental Honors**

{no change to this section}

### **Human Ecology Departmental Honors**

{no change to this section}

# **Mathematics Departmental Honors**

{no change to this section}

# **Neuroscience Departmental Honors**

<u>Majors</u> who plan to seek special departmental honors in neuroscience 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 neuroscience of at least 3.50 are required for admission.

The requirements for graduation with special departmental honors are (1) two semesters of neuroscience research coursework, including Neuroscience 379H, *Honors Tutorial Course*; (2) a thesis based on original research and approved by the supervising faculty member and the honors adviser; (3) a University grade point average of at least 3.00 and a grade point average in neuroscience of at least 3.50; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

# **Nutrition Departmental Honors**

{no change to this section}

## **Physics Departmental Honors**

{no change to this section}

# **Public Health Departmental Honors**

{no change to this section}

# **Textiles and Apparel Departmental Honors**

{no change to this section}

# PROPOSED CHANGES TO THE COURSES SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Dean Linda A. Hicke in the College of Natural Sciences has filed with the Secretary of the Faculty Council the following proposal to change the Courses section in the College of Natural Sciences chapter in the *Undergraduate Catalog*, 2018-2020. On September 25, 2017, the Course and Curriculum Committee and Associate Dean David Vanden Bout, on behalf of Dean Hicke, approved the proposal. The Secretary has classified this proposal as legislation of exclusive interest to one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the proposal on September 14, 2017, and forwarded it to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with the Provost on behalf of the President.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a <u>protest</u> must be received in the Office of the General Faculty by January 15, 2018.

Alan W. Friedman, Secretary of the General Faculty and Faculty Council

The University of Texas at Austin

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Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

# PROPOSED CHANGES TO THE COURSES SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE *UNDERGRADUATE CATALOG 2018-2020*

Type of Change		□ Academic Cha     □ Degree Program	nge n Change (THECF	3 form required)	
Pro	pposed classificat	ion 🛭 Exclusive	☐ General	☐ Major	
1.	CONSULT LINDETERMINE DETERMINE Determine Is this a new Is this programmer. Does the programmer.		RECTOR OF ACROVAL IS REQUESTION  that will be taught	CCREDITATION AN UIRED.  off campus?	Yes No No Yes No
2.		ANGE TO DEGRE DUAL CHANGE:	E PROGRAM A	ND GIVE A DETAII	LED RATIONALE FOR
3.	study.  Reason: The So Department of Integrative Bi responsibility fo Biology fiel study, much like  THIS PROPOS  Courses  Course i curricult	chool of Biological S s ology, Molecular Bi r the Biology field o d of the Natural Science AL INVOLVES (F in other colleges	osciences was dissolved osciences, and the f study. It is more as field of study.  Please check all the Courses in puthat are frequents in our Change in course an existing puthat	Biology Instructional accurate to use Biolog  at apply) roposer's college lently taken by ther colleges ourse sequencing for	ored under the Biology field of partments and offices. The  Office share administrative by as the header for the  Flags  Courses that have to be added to the inventory
		nents (external or	catalog langi	uage (e.g., lists of ourses maintained	
4.		OPOSED CHANG			
	_	oposal impact other how would you do s	_		Yes 🗌 No 🔀
	-	-		udents in your college	? Yes ☐ No ⊠
	If yes, how	many more (or fewe	r) students do you	expect?	
		cipate a net increase es in your college?	(or decrease) in th	e number of students	from outside of your college Yes ☐ No ⊠
	If yes, pleas d. Do you anti- courses in o	e indicate the numbe cipate a net increase ther colleges?	(or decrease) in th	or class seats involved e number of students to or class seats involved	<u>from your college</u> taking Yes

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:

# 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?

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

Department approval date: September 25, 2017 BIO Course and Curriculum Committee
Dean approval date: September 25, 2017 David Vanden Bout, Associate Dean for

Undergraduate Education

# PROPOSED NEW CATALOG TEXT:

# **COURSES**

# [SCHOOL OF BIOLOGICAL SCIENCES] BIOLOGY

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

# PROPOSED CHANGES TO THE DEGREES AND PROGRAMS SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

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# PROPOSED CHANGES TO THE DEGREES AND PROGRAMS SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Тур	Type of Change  ☐ Degree Program Change (THECB form required)					
Pro	posed classification	∑ Exclusive	General	☐ Major		
1.		ICKENS, DIR CSCOC APPR be program? fing deleted? offer courses the	ECTOR OF AC OVAL IS REQU at will be taught of	CREDITATION A JIRED.  off campus?	YES, THE COLLEGE MUST ND ASSESSMENT, TO  Yes  No  Yes	
2.	EXPLAIN CHANGE EACH INDIVIDUAL		PROGRAM AN	ID GIVE A DETAI	LED RATIONALE FOR	
		major was incre	eased in the 2016-		d Arts to up to 55 hours. updating this statement.	
3.	THIS PROPOSAL IN  Courses in other	•	Courses in pr	oposer's college ently taken by	☐ Flags	
	Course in the courriculum	ore		urse sequencing for	Courses that have to be added to the inventory	
	Change in admrequirements (internal)		catalog langu	s not explicit in the age (e.g., lists of urses maintained t office)	inventory	
4.	SCOPE OF PROPOS	ED CHANGE				
	a. Does this proposal				Yes 🗌 No 🔀	
	b. Do you anticipate If yes, how many	a net change in	the number of stu	dents in your collegents	e? Yes ☐ No ⊠	
					from outside of your college	
	taking <u>classes in y</u>		of students and/o	r class seats involved	Yes ∐ No ⊠	
	d. Do you anticipate	a net increase (d			from your college taking	
	courses in other co		of students and/o	r class seats involved	Yes □ No ⊠ d.	
	If 4 a, b, c, or d was a potential budgetary in	nswered with y npacts for ano the number of ts do you expec- must be contact unicated with:	ves, please answe ther college/scho seats offered, at t to be impacted?	r the following que ol, such as requirin least one contact m	stions. If the proposal has ng new sections or a non- nust be at the college-level.	

e. Does this proposal involve changes to the core curriculum or other basic education requirements (42-hour core, signature courses, flags)? 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?

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

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

If yes, explain:

# 5. COLLEGE/SCHOOL APPROVAL PROCESS

College approval date: September 20, 2017 Course and Curriculum Committee
Dean approval date: September 20, 2017 David Vanden Bout, Associate Dean for

Undergraduate Education

#### PROPOSED NEW CATALOG TEXT:

#### 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, chemistry, computer science, 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 [eomprised of 48] of up to fifty-five hours of science and mathematics. Students choose either a transcript-recognized minor outside of the sciences, [45] fifteen hours in a field of study outside of sciences, or an [48] eighteen to [24] twenty-four-hour transcript-recognized certificate. A full list of the minor and certificate programs offered at the University can be found in The University section of the *Undergraduate Catalog*.

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 [80] to [90] 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, the transcript-recognized certificate, and the minor 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**

{no change to this section}

# **ROTC Courses**

{no change to this section}

# Courses Taken on the Pass/Fail Basis

{no change to this section}

# Courses in a Single Field

{no change to this section}

# College Algebra

{no change to this section}

# PROPOSED CHANGES TO THE GENERAL INFORMATION SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Dean Linda A. Hicke in the College of Natural Sciences has filed with the Secretary of the Faculty Council the following proposal to change the General Information section in the College of Natural Sciences chapter in the *Undergraduate Catalog*, 2018-2020. On September 20, 2017, the Course and Curriculum Committee and Associate Dean David Vanden Bout, on behalf of Dean Hicke, approved the proposal. The Secretary has classified this proposal as legislation of exclusive interest to one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the proposal on September 14, 2017, and forwarded it to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with the Provost on behalf of the President.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by January 15, 2018.

Alan W. Friedman, Secretary of the General Faculty and Faculty Council

The University of Texas at Austin

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Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

# PROPOSED CHANGES TO THE GENERAL INFORMATION SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Ty	pe of Change  ☐ Academic Change ☐ Degree Program Change (THECB form required)
Pro	posed classification
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?  • Is this program being deleted?  • Does the program offer courses that will be taught off campus?  • 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:
	College of Natural Sciences
	Headnote: Update college leadership.  Reason: Updates due to changes in personnel.
	General Information
	Career Design Center: Updated information by the Career Services director. <b>Reason:</b> Description out of date.
	Study Abroad: Change in name of office that handles study abroad science programs.  Reason: Natural Sciences reorganized several offices and consolidated them under the Texas Institute for Discovery Education (TIDES).
	Cornerstones Program: Add description of program to the Natural Sciences chapter. <b>Reason:</b> Students who are not part of honors or research programs upon admission to the college are offered the opportunity to participate in the Cornerstones Program. Small groups of students are enrolled in linked classes, with seminars led by faculty or academic advisers and peer mentors.
	Emerging Scholars Program: Remove section from the catalog. <b>Reason:</b> This program has been inactive for a few years.
	Texas Interdisciplinary Plan: Updated information by the Texas Interdisciplinary Plan director. <b>Reason:</b> Description out of date.
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 courses that have to be added to the inventory  Course in the core an existing program  Courses that have to be added to the inventory
	Change in admission Requirements not explicit in the requirements (external or internal) 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?	
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	n outside of your colleg
	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	n your college taking
	courses in other colleges? Yes	□ No □

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:

If yes, please indicate the number of students and/or class seats involved.

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:

# If yes, undergraduate studies must be informed of the proposed changes and their response included:

Person communicated with:

Date of communication:

Response:

Will this proposal change the number of hours required for degree completion? Note: THECB Semester Credit Hour Change Form required, download from URL: <a href="http://www.thecb.state.tx.us/reports/DocFetch.cfm?DocID=2419&format=doc">http://www.thecb.state.tx.us/reports/DocFetch.cfm?DocID=2419&format=doc</a> If yes, explain:

### 5. COLLEGE/SCHOOL APPROVAL PROCESS

College approval date: September 20, 2017

Dean approval date: September 20, 2017

David Vanden Bout, Associate Dean for Undergraduate Education

# PROPOSED NEW CATALOG TEXT:

# **COLLEGE OF NATURAL SCIENCES**

Linda A. Hicke, PhD, Dean

Dean R. Appling, PhD, Associate Dean, Research and Facilities

David A. Vanden Bout, PhD, Associate Dean, Undergraduate Education

Nataša Pavlović [Shelly Payne], PhD, Associate Dean, Faculty Affairs

Daniel F. Knopf, PHD, Associate Dean, Graduate Education

Melissa Taylor [Catherine A. Stacy], PhD, [Senior] Assistant Dean, Strategy and Planning

Kelsey A. Evans, BA, Assistant Dean, External Relations

Jennifer Moon, PhD, Assistant Dean, Non-tenure Track Faculty

Ricardo Medina, MBA CPA, Assistant Dean, Business Services

Susan C. Harkins, EdD, Assistant Dean, Texas Interdisciplinary Plan

Michael W. Raney, PhD, Assistant Dean, Student Affairs and First-Year Initiatives

http://cns.utexas.edu/

#### **GENERAL INFORMATION**

**Arts and Sciences Education** 

{no change to this section}

Financial Assistance Available through the College

{no change to this section}

**Student Services** 

**Academic Advising** 

{no change to this section}

#### Career Services [Design Center]

[The] Career Services [Design Center] is a multidisciplinary hub for students to explore the next phase of their professional or educational career. Additional information is given on the [Career Design Center website.]

Career Services website. https://cns.utexas.edu/career-services

### **Study Abroad**

Students are encouraged to incorporate an international experience into their course of study. In addition to the traditional study abroad programs, students may take advantage of programs specifically designed for science study, including faculty-led courses, Maymester courses, and research abroad. The <u>Texas Institute for Discovery Education in Science (TIDES)</u> [Office for Honors, Research, and International Study] provides information sessions, one-on-one advising, and resources for science students interested in these programs.

# **Student Programs**

The College of Natural Sciences offers additional programs to supplement the degree plans. Additional information is given at [http://cns.utexas.edu/.] https://cns.utexas.edu/student-communities.

**Biology Scholars Program** 

The Biology Scholars Program (BSP) is designed to provide lower-division biochemistry and biology students with a broader understanding of the study of biology and a strong sense of community as they begin their academic careers. Throughout the two-year program, BSP provides academic support, resources for peer-led study, and community service opportunities. Each semester, BSP students take a specialized critical thinking seminar on topics that range from the study of biological sciences to graduate and professional careers in biology. These classes emphasize working in small groups and help BSP students develop strong problem-solving and study skills.

# **Cornerstones Program**

All entering Natural Sciences majors, freshman or transfer, are eligible for participation in the Cornerstones Program. The guiding principles for students are to connect, acclimate, navigate, and explore. Each entering freshman joins a small learning community led by a faculty or staff advisor, and a peer mentor. The key components of Cornerstones are creating small learning communities, gaining tools to succeed in college, learning about majors, and developing skills and experiences to launch successful careers upon graduation. Transfer students are given the option to join the program. More information is available at <a href="https://cns.utexas.edu/student-communities/cns-cornerstones-communities">https://cns.utexas.edu/student-communities/cns-cornerstones-communities.</a>

## [Emerging Scholars Program]

[The Emerging Scholars Program (ESP) is designed to help highly motivated mathematics, science, and engineering students toward continued academic success in essential first-year math and science courses. ESP students work closely with faculty members and with other high achieving students in a supplemental workshop designed to enrich their course experience and intensify their understanding of the course material. The ESP experience is currently available in calculus and chemistry. Students are invited to participate during the spring of their senior year of high school on the basis of strong academic credentials and history of achievement in mathematics and sciences.]

#### Freshman Research Initiative

{no change to this section}

# **Texas Interdisciplinary Plan**

The Texas Interdisciplinary Plan (TIP) transforms the learning experience for its [students] scholars by creating small academic communities that promote academic excellence and leadership. TIP offers students who have excelled in high school and are enrolled in the College of Natural Sciences a unique opportunity to continue their academic excellence through managed courses, mentoring, collaborative study, dedicated professional academic advisor, and academic and social connections. [collection of selective academic programs that serve about nine hundred students each year, including TIP Scholars, TIP Fellows, Getting Ready for Advanced Degrees (grad), and the TIP Mentor Academy. While each program is unique, all incorporate assisted registration for courses, mentoring, tutoring, and academic and social connections. Admission criteria differ for each program.] More information is available from the TIP office and at https://cns.utexas.edu/

# **Undergraduate Research**

{no change to this section}

**UTeach-Natural Sciences** 

{no change to this section}

**Women in Natural Sciences** 

{no change to this section}

# PROPOSED CHANGES TO THE GRADUATION SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Dean Linda A. Hicke in the College of Natural Sciences has filed with the Secretary of the Faculty Council the following proposal to change the Graduation section in the College of Natural Sciences chapter in the *Undergraduate Catalog*, 2018-2020. On September 20, 2017, the Course and Curriculum Committee and Associate Dean David Vanden Bout, on behalf of Dean Hicke, approved the proposal. The Secretary has classified this proposal as legislation of exclusive interest to one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the proposal on September 14, 2017, and forwarded it to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with the Provost on behalf of the President.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by January 15, 2018.

Alan W. Friedman, Secretary of the General Faculty and Faculty Council

The University of Texas at Austin

llan W. Ornelman

Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

# PROPOSED CHANGES TO THE GRADUATION SECTION IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Гур	pe of Change		nge n Change (THECE	3 form required)		
Pro	posed classificati	on 🛮 Exclusive	General	☐ Major		
1.	CONSULT LIN DETERMINE I	DA DICKENS, DI F SACSCOC APP	RECTOR OF AC	CCREDITATION A	YES, THE COLLEGE MUST ND ASSESSMENT, TO	•
		degree program?			Yes No No	
		am being deleted?	that will ha tayaht	off communa?	Yes ☐ No ☒ Yes ☐ No ☒	
		gram offer courses in this program be			Yes ☐ No ☒ Yes ☐ No ☒	
				•		
2.		NGE TO DEGREE DUAL CHANGE:	E PROGRAM AN	ND GIVE A DETAI	LED RATIONALE FOR	
	Graduation					
	degree requires 6 stating when deg <b>Reason:</b> Updatin hours in the major	0 hours in residence rees can be awarded ng to include BSA d	e, including 18 hou l. legree in statement s might be misinter	ars in the major. Remark about BA degree (60	gree in the statement that the ove "summer session" when 0 hours in residence and 18 think that degrees may be	
					grees can be awarded.  be awarded after the first	
	Reason: The Bio		reased in the 2016		d Arts to up to 55 hours. applicating this statement.	
3.	THIS PROPOSA	AL INVOLVES (P	lease check all tha	at apply)		
		in other colleges	Courses in pr	roposer's college nently taken by	☐ Flags	
	Course in curriculu	n the core m		ourse sequencing for	Courses that have to be added to the inventory	
		n admission ents (external or	catalog langu	s not explicit in the mage (e.g., lists of purses maintained int office)		
4.		OPOSED CHANG				
		oposal impact other			Yes 🗌 No 🔀	
	b. Do you antic		n the number of st	udents in your college	e? Yes □ No ⊠	
		many more (or fewer			from outside of your college	
		es in your college?	(or decrease) iii tii	e number of students	Yes No 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 <u>students from your college</u> taking <u>courses in other colleges</u>? 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)? 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?

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

College approval date: September 20, 2017 Course and Curriculum Committee
Dean approval date: September 20, 2017 David Vanden Bout, Associate Dean for

Undergraduate Education

# PROPOSED NEW CATALOG TEXT:

### 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 <u>sixty</u> [60] semester hours of the coursework counted toward the degree. For the Bachelor of Arts, Plan I, <u>and the Bachelor of Science and Arts</u>, these sixty [60] hours must include at least eighteen [18] hours in the major.
- 2. 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.
- 3. 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 website.

# **Applying for Graduation**

An electronic degree audit is created for each student each semester. The student should view the audit through IDA, the University's Interactive Degree Audit system. The degree audit tells the student the courses he or she must take and the requirements he or she must fulfill to receive the degree. The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the requirements for the

degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill all these requirements. The student should speak with his or her assigned academic adviser before registering if in doubt about any requirement.

In the semester [or summer session] in which the degree is to be conferred, the candidate must be registered at the University and must file an online graduation application form via the graduation section of the College of Natural Sciences website. This should be done during the first week of classes, if possible, but in no event later than the deadline to apply for an undergraduate degree; this date is given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

# REQUEST TO CHANGE THE APPLIED STATISTICAL MODELING CERTIFICATE IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

Dean Linda A. Hicke in the College of Natural Sciences has filed with the Secretary of the Faculty Council the following proposal to change the Applied Statistical Modeling Certificate in the College of Natural Sciences chapter in the *Undergraduate Catalog*, 2018-2020. On October 21, 2016, Interim Chair Peter Mueller approved the proposal and on May 2, 2017, the faculty in the Department of Statistics and Data Sciences approved it. On September 20, 2017, the Course and Curriculum Committee and Associate Dean David Vanden Bout, on behalf of the Dean Hicke, approved the proposal. The Secretary has classified this proposal as legislation of exclusive interest to one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the proposal on September 14, 2017, and forwarded it to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with the Provost on behalf of the President.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by January 15, 2018.

Clau W. Onekwan

Alan W. Friedman, Secretary of the General Faculty and Faculty Council

The University of Texas at Austin

Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

# REQUEST TO CHANGE THE APPLIED STATISTICAL MODELING CERTIFICATE IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG 2018-2020

	Type of Proposal  ☐ New Certificate Program ☐ Change an Existing Certificate Program ☐ Delete a Program							
	Note: If the certificate program proposed for addition or change includes a requirement of 21 to 24 semester credit hours, an additional form is required for THECB approval/notation.							
	<b>Proposed classification:</b>							
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 transcript-recognized certificate program? Yes No ⊠  Is this a request to delete an existing transcript-recognized certificate program? Yes No ⊠  Does the certificate offer courses that will be taught off campus? Yes No ⊠  Will courses in this program be delivered electronically? Yes No ⊠  Will courses be developed specifically for the new certificate? Yes No □  SDS 358, Topic 1: Applied Regression Analysis. Through software application, discussion, and guided instruction, students will first learn simple linear regression – what data is appropriate, how to run the analysis, and how to interpret the output. Then, students will move on to multiple regression with combinations of predictor variables, both continuous and categorical. There will be a discussion/application of ANOVA, prior to preceding on to logistic regression: the prediction of discrete events. Because of the							
<b>2.</b> T	hands-on nature of the course, there will be opportunity to apply the skills learned in class to real data for a final project.  Linda Neavel Dickens, October 24, 2016, email: If you have one course only that is developed just for this certificate, then we do not need to report it to SACSCOC and we do not need approval.  2. THIS PROPOSAL INVOLVES (Please check all that apply)  Courses in other colleges Courses in proposer's college that are Flags frequently taken by students in other							
	Course in the core curriculum  Change in admission requirements (external or internal)  Course in the core curriculum  Change in admission requirements (external or internal)  Courses that have to be added to the inventory  Requirements not explicit in the catalog language (e.g., lists of acceptable courses maintained by department office)  SDS 358, Topic 1, created for certificate, effective fall 2017							
3.	a. Does this proposal impact other colleges/schools?  If yes, then how?  Note: EE 361M and ECO 350K (Topic 4: Advanced Econometrics) were removed from the certificate. They were deleted by their colleges from the course inventory effective fall 2017 and fall 2016, respectively.  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 colleges their places in your college?							
	college taking <u>classes in your college</u> ? Yes No X  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 <u>students from your college</u>							

taking courses in other colleges?

Yes 🗌 No 🔀

If yes, please indicate the number of students and/or class seats involved.

If 3 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:

- 4. OFFICIAL CERTIFICATE NAME: Undergraduate Certificate: Applied Statistical Modeling Certificate
- **5. CIP CODE** (administrative unit awarding the certificate):
- 7. STATEMENT OF OBJECTIVE:
- 8. NUMBER OF STUDENTS EXPECTED TO RECEIVE THE CERTIFICATE EACH SEMESTER:
- 9. NUMBER OF HOURS REQUIRED FOR COMPLETION (Note: If the number of required hours is 21 to 24, THECB form is required): Eighteen hours
- 10. LIST FACULTY ON THE CERTIFICATE PROGRAM FACULTY COMMITTEE.

Name of Faculty Member	College/Department	Title at UT Austin	Highest Degree and Awarding Institution

11. ACADEMIC COURSE REQUIREMENTS: Use this table to identify the courses that qualify for this certificate program.

Course	Course Title	SCH
Abbreviation	breviation	
and Number		
M 378K	Introduction to Mathematical Statistics #	3
	# M 362K.	
SDS 332	Statistical Models for the Health and Behavioral Sciences #	3
	# SDS 302, 304, 306, 328M, or the equivalent.	
SDS 358	Special Topics in Statistics #	3
	# Upper-division standing; additional prerequisites may vary	
	with the topic.	
SDS 358,	Topic 1: Applied Regression Analysis	3
Topic 1	# Upper-division standing; and credit for Statistics and Data	
	Sciences 302, 304, 306, or 328M.	
SDS 378	Introduction to Mathematical Statistics #	
	# M 362K.	

# 12. OTHER CERTIFICATE REQUIREMENTS:

# 13. GIVE A DETAILED RATIONALE FOR CHANGE(S):

This change is a restructure to the certificate sequence with three SDS courses added and no courses removed. The current sequence creates a bottleneck in 1b as the only regularly offered course is M 378K.

The alternate course in this track, SDS 323, is no longer being offered as the professor who taught this course has left the university. To mitigate this bottleneck and reduce the burden on students attempting to complete the certificate in a timely manner, 1b is being removed and its courses are shifting to the electives section. Additional SDS courses are added to sequence 2b and 3a. Three additional Math courses are added as prerequisite options. The course lost from requirement 1 is added to requirement 3. The statement requiring three hours upper-division is redundant because there are only upper-division choices on the lists.

SDS 358 (Topic 1: Applied Regression Analysis), will be available as an elective in the SDS Applied Statistical Modeling certificate, intended to expand on basic statistics knowledge into regression analysis. This course provides students with real-world data to examine real-world questions using various regression techniques. These skills will then be used in a final project on data of the student's choosing.

Certificate prerequisite change: The calculus choices were expanded to include M 408N, 408R, or 408S. Students need calculus exposure but any of these choices are appropriate.

A statement regarding M 378K and SDS 378 was added to 3a. The courses are in duplicate relationships with each other.

EE 361M and ECO 350K (Topic 4: Advanced Econometrics) were removed from the certificate. They were deleted by their colleges from the course inventory effective fall 2017 and fall 2016, respectively.

Added a statement that SDS 358, Topic 1, cannot count toward both requirement 2b and 3a.

#### 14. COLLEGE/SCHOOL APPROVAL PROCESS:

Approver: Peter Mueller, chair, ad interim October 21, 2016; May 2, 2017

Department of Statistics and Data Sciences

Approver: Course and Curriculum Committee November 3, 2016; September 20, 2017

Approver: David Vanden Bout September 20, 2017

# PROPOSED NEW CATALOGTEXT: Applied Statistical Modeling Certificate

The certificate in Applied Statistical Modeling equips undergraduate students with the tools necessary to understand how to apply statistics to their primary field of study. This certificate program is designed to complement diverse degree programs and to appeal to students across the University in engineering, science, economics, mathematics, and many other disciplines. Certificate students will complete [a two-course sequence] one course in the mathematical foundations of statistics, a two-course sequence in applied statistics, [data mining, and machine learning,] and [six] nine additional hours in statistics, machine learning, econometrics, and other relevant courses from the approved list below.

Admission to the certificate is by application only. Students may download an application from the Department of Statistics and Data Sciences webpage. Students seeking the certificate must also complete the prerequisite course Mathematics 408C, [er] 408L, 408N, 408R, or 408S with a grade of at least C-.

The certificate consists of <u>eighteen</u> [48] hours. Students must receive a grade of at least C in each course applied toward the certificate and have a cumulative grade point average of at least 3.0 in the courses presented to fulfill the certificate. Courses that appear in multiple approved course lists may be used to satisfy only one requirement. Students must contact the Department of Statistics and Data Sciences to apply for the certificate in the semester in which they are completing the requirements and graduating.

- 1. [Sequence in the m] Mathematical foundation of statistics, choose one of the following:
  - a. [Choose one of the following:]Electrical Engineering 351K, Mathematics 362K, or Statistics and Data Sciences 321
  - [b. Choose one of the following: Mathematics 378K, Statistics and Data Sciences 323, or 378]
- 2. Sequence in applied statistics[, data mining, and machine learning]:

- a. Choose one of the following: Economics 329, Educational Psychology 371, Mathematics 358K, Psychology 418, Sociology 317L, Statistics 309, Statistics and Data Sciences 302, 304, 306, or 328M
- b. Choose one of the following: Economics 341K, Mathematics 349R, Statistics 371G, 371H, 375, Statistics and Data Sciences 325H, [e+] 332, 352, or 358 (*Topic 1: Applied Regression Analysis*)
- 3. [Six] Nine hours of additional coursework chosen freely from the following lists. [Of the six hours, a minimum of three hours must be upper division.]

Students are encouraged to select courses within their own majors or colleges as appropriate. The Statistics and Data Sciences courses listed in requirement 3a are available to students in all majors.

a. Courses in the College of Natural Sciences: Computer Science 343, Mathematics 339J, 349P, [and] 362M, and 378K\*, Public Health 354, Statistics and Data Sciences 323, 348, 353, 358, 374E, 375, 378\*, and 379R

Statistics and Data Sciences 358 (Topic 1: Applied Regression Analysis) may not count toward both requirement 2b and requirement 3a

- \* Note, only one of the following may be counted: Mathematics 378K and Statistics and Data Sciences 378
- b. Courses in the McCombs School of Business: Statistics 372 (Topic 5: *Financial and Econometric Time Series Modeling*)
- Courses in the Moody College of Communication: Advertising 344K, and Communication Studies 348
- d. Courses in the College of Education: Health Education 343 and 373, and Kinesiology 376
- e. Courses in the Cockrell School of Engineering: [Electrical Engineering 361M and] Petroleum and Geosystems Engineering 378
- f. Courses in the Jackson School of Geosciences: Geological Sciences 325K and 365N
- g. Courses in the College of Liberal Arts: Economics [350K (Topic 4: Advanced Econometrics) and] 354K[-] and Psychology 325K

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

Dean Linda A. Hicke in the College of Natural Sciences has filed with the Secretary of the Faculty Council the following proposal to change the Bachelor of Science and Arts in the College of Natural Sciences chapter in the *Undergraduate Catalog*, 2018-2020. On September 27, 2017, the Course and Curriculum Committee and Associate Dean David Vanden Bout, on behalf of Dean Hicke, approved the proposal. The Secretary has classified this proposal as legislation of exclusive interest to one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the proposal on September 14, 2017, and forwarded it to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with the Provost on behalf of the President.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by January 15, 2018.

Alan W. Friedman, Secretary of the General Faculty and Faculty Council

The University of Texas at Austin

llan W. Oriekwan

Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

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

Type of Change  ☐ Academic Change ☐ Degree Program Change (THECB form required)					
Pro	posed classification	n 🛮 Exclusive	General	☐ Major	
1.	<ul> <li>CONSULT LINI</li> <li>DETERMINE II</li> <li>Is this a new</li> <li>Is this progra</li> <li>Does the prog</li> </ul>	DA DICKENS, DI SACSCOC APP degree program? m being deleted? gram offer courses		CREDITATION AND IRED.  Y off campus?  Y	ES, THE COLLEGE MUST D ASSESSMENT, TO  Tes  No   Tes  No
2.	EXPLAIN CHAI EACH INDIVID		E PROGRAM AN	D GIVE A DETAIL	ED RATIONALE FOR
	in which stud University Fe Reason: These pr catalogs. The	ments to earn an ho ents participate, fro llows to Polymathi ograms were being	om Health Science the Scholars. established as the ors programs are no	Honors to Health Scients  BSA legislation was fi	s of the two honors programs nce Scholars, and from arst written for the 2014-16 his will update their names
	Change one-year Reason: Change to	o match updated for	ompetency to begin oreign language sug	ning level competency ggested by the College is used to define what	of Liberal Arts (COLA). The
		mum number of ho	urs in the BSA maj	f hours in the major.	
	overlap accor <b>Reason:</b> Beginni overlap without	at the major and tra ding to university- ng with the 2016-1 out creating individ	wide rules regardin 8 degree audits, the	g overlaps. College of Natural Sc ery Natural Sciences de	cognized certificate may ciences is unable to restrict egree profile with an attached
3.		AL INVOLVES (P other colleges	are frequently	oposer's college that taken by students in	☐ Flags
	Course in to curriculum Change in a requirement internal)		an existing pro Requirements catalog langua	orse sequencing for ogram not explicit in the age (e.g., lists of urses maintained by	Courses that have to be added to the inventory

#### 4. SCOPE OF PROPOSED CHANGE

a.	Does this proposal impact other colleges/schools?	Yes 🗌 No 🔀
	If yes, then how would you do so?	
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 or	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 y	our 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)? 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? 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

College approval date: September 27, 2017 Course and Curriculum Committee
Dean approval date: September 27, 2017 David Vanden Bout, Associate Dean for
Undergraduate Education

# PROPOSED NEW CATALOG TEXT: BACHELOR OF SCIENCE AND ARTS

The requirements for the bachelor of science and arts degree are designed to give each student an opportunity to combine a core mathematics or science experience with an interdisciplinary curriculum which complements his or her major. Students pursuing the Bachelor of Science and Arts will major in a discipline within the College of Natural Sciences and complete one of the following: a transcript-recognized minor, transcript-recognized certificate, or <u>fifteen</u> [15] hours in a single field of study. This will allow the student to explore applications of his or her major in the broader society, allow the student to see the impacts of the sciences in other fields of study, and develop a complementary expertise, which supports multidisciplinary study.

All students pursuing an undergraduate degree must complete the University's Core Curriculum. The prescribed work requirements for the Bachelor of Science and Arts consist of the University's Core Curriculum, college flag requirements, language, arts, and culture requirement, major requirements, additional requirement, and electives.

In the process of fulfilling the core curriculum and other degree requirements, all students must complete courses with content in the following areas:

1. Core curriculum

- 2. Skills and experience flags:
  - 1. Writing: two flagged courses beyond Rhetoric and Writing 306 or its equivalent, including one at the upper-division level
  - 2. Quantitative reasoning: one flagged course
  - 3. Global cultures: one flagged course
  - 4. Cultural diversity in the United States: one flagged course
  - 5. Ethics and leadership: one flagged course
  - 6. Independent inquiry: one flagged course

Courses that may be used to fulfill flag requirements are identified in the Course Schedule. They may be used simultaneously to fulfill other requirements, unless otherwise specified. Please note, students may not earn the cultural diversity in the United States and the global cultures flags from the same course. Students are encouraged to discuss options with their academic advisers.

Students may earn an honors major in their fields of study upon graduation by completing the following requirements:

- 1. Good standing in the Health Science [Honors] Scholars Program or the [University Fellows] Polymathic Scholars Program;
- 2. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser;
- 3. Six hours of coursework in the major must be at the honors-level;
- 4. Natural Sciences 371;
- 5. A University grade point average of at least 3.50.

# **Prescribed Work Common to All Majors**

1. Language, Arts, and Culture Requirement:

<u>Twelve</u> [12] hours selected from at least two of the following four areas:

- a. *Fine arts*: courses chosen from design, ensemble, fine arts, music, studio art, performance, visual art studies, art history, and theatre and dance
- b. *Humanities*: courses chosen from American studies, ancient history and classical civilization, classical civilization, comparative literature, creative writing, English, humanities, philosophy, religious studies, and rhetoric and writing
- c. *Social and behavioral sciences*: courses chosen from anthropology, economics, geography, government, history, linguistics, psychology, and sociology
- d. Foreign language and culture: foreign language courses or culture courses chosen from an approved list available in the college advising centers. Students who elect to pursue a foreign language must complete a [one year] beginning level competency. Students who complete intermediate or advanced level foreign language courses rather than courses equivalent to beginning level competency may count only one intermediate or advanced course toward the language, arts, and culture requirement.

A maximum of six semester hours earned through credit by examination may count toward the language arts and culture requirement.

- 2. Major Requirements: The specific courses required for the major vary with the major selected and are described in the links to the right. Unless the requirements of the major state otherwise, a major consists of at least thirty-sixt [36] but no more than [49] fifty-five semester hours. The major consists of the mathematics, primary science, and secondary science requirements.
- 3. Additional Requirement: The Bachelor of Science and Arts requires the completion of one of the following: transcript-recognized minor, transcript-recognized certificate, or <a href="fifteen">fifteen</a> [15] hours in a single field of study. Students who complete a transcript-recognized minor or <a href="fifteen">fifteen</a> [15] hours in a single field of study must select a minor or field of study that is outside the College of Natural Sciences, College of Pharmacy, Cockrell School of Engineering, Jackson School of Geosciences, and School of Nursing.
- 4. Electives: Enough additional coursework to make a total of 120 semester hours.

# **Special Requirements**

- 1. Students may not use a course counting toward one area of prescribed work to fulfill the requirements of another area of prescribed work unless expressly permitted as follows:
  - a. Courses counting toward the university core curriculum may also count toward the major requirements, the additional requirement, and electives.
  - b. Courses counting toward the university core curriculum writing flag may also count toward the language, arts, and culture requirement.
  - c. Courses counting toward the college flag requirements may also count toward the university core curriculum, language, arts, and culture requirement, major requirements, additional requirement, and electives.
  - d. Per university policy, a minimum of nine hours of the transcript-recognized minor may not be also used to satisfy the major. [A maximum of six hours may overlap between the major and a transcript-recognized certificate.]
  - e. Per university policy, a minimum of one course taken in a transcript-recognized certificate to satisfy the additional requirement may not also count toward the major.
- 2. Students who seek a transcript-recognized minor or transcript-recognized certificate must meet the minimum grade requirements and grade point average requirements of the program.
- 3. Students must earn a University grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension), a grade of at least *C* in each mathematics and science course counted toward the major, and a grade point average of at least 2.00 in the courses fulfilling the major.
- 4. Students must complete a minimum of [60] sixty hours in residence at the University, including at least [18] eighteen hours of the major. The [18] eighteen hours of the major in residence must include at least nine hours of advanced coursework.