

Approval Chart for Curriculum Changes

A = Approve I= Information Item¹ R= Advise & Respond²

Course Number _____ or Degree Plan(s) Biology, BS (BIOL)

State the requested change and reason. A memo may be attached if more space is necessary.

See explanation of requested changes below.

Circle the number that corresponds to the requested change. Degree plan changes are on the second page.

		COUNCIL ³								
	Change to a Course	Dept./School	College Academic	Deans	TEC	UGEC	UUAC	GRAD	Provost	President
1.	Title (description unchanged)	A	A	A	I				I	I
2.	Description (not affecting content)	A	A	A	I				I	I
3.	Course term(s)	A	I	A	I				I	I
4.	Content (substantive change)	A	A	A	I				A	A
5.	Number of hours (lecture, lab, contact)	A	A	A	A				A	A
6.	Course number within the hundred	A	A	I	I				I	I
7.	Course number beyond the hundred	A	A	A	A				A	A
8.	Prerequisites	A	A	A	I				I	I
9.	Course fee(s)	A	--	A	--				A	I
10.	From U to G <i>or</i> G to U	A	A	A	A				A	A
11.	Cross list with another department: U or G level	A	A	A	A				A	A
12.	Department of record	A	A	A	A				A	A
13.	Open or close a course	A	A	A	A				A	A
14.	New course — See website for application and process. This change includes combining or splitting a course(s).	A	A	A	A				A	A

Note: When an academic unit does not have a council, the UGEC and/or UUAC will serve as its academic council, depending on the nature of the issue.

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COUNCIL ³												
	Change to a Degree Plan	Dept./School	College Academic	Deans	TEC	UGEC	UUAC	GRAD	Provost	Faculty	President	Board of Trustees
1.	University Requirements — Change in approved course content ⁶	A	A	A	A				A	--	A	--
2.	University Requirements — Add or drop a required course from the University Requirements chart ⁶	A	A	A	A				A	A	A	--
3.	University Requirements — Add or drop a course from a menu within the University Requirements ⁶	A	--	--	A				A	--	A	--
4.	University Requirements — Change hours within a menu on the University Requirements chart ⁶	A	A	A	A				A	A	A	--
5.	Major — Revision of major ^{4,5}	A	A	A	A				A	--	A	--
6.	Major — Adopt or change admission requirements	A	A	A	A				A	--	A	--
7.	Major — Add ^{4,5}	A	A	A	A				A	A	A	I
8.	Major – Discontinue (proposed by the department or college)	A	A	A	A				A	A	A	I
9.	Major – Discontinue (proposed by the Provost)	See below.										
10.	GPA — Revise major or cumulative requirement	A	A	A	A				A	A	A	--
11.	Minor — Revise course selection	A	A	A	I				I	--	I	--
12.	Minor — Add	A	A	A	A				A	--	A	--
13.	Minor – Discontinue (proposed by the department or college)	A	A	A	A				A	--	A	--
14.	Minor – Discontinue (proposed by the Provost)	See below.										
15.	Degree — Add	A	A	A	A				A	A	A	I
16.	Degree – Discontinue (proposed by the department or college)	A	A	A	A				A	A	A	I
17.	Degree – Discontinue (proposed by the Provost)	See below.										
18.	Any change to a graduate degree program	A	A	A	A				A	--	A	--

COUNCIL ³										
	Provost-Proposed Change	Provost	Department	Dean	TEC	UUAC	Graduate	Faculty	President	Board of Trustees
1.	Major/Graduate Program – Discontinue (proposed by the Provost)	A	R	R	A			A	A	I
2.	Minor – Discontinue (proposed by the Provost)	A	R	R	A			--	A	--
3.	Degree – Discontinue (proposed by the Provost)	A	R	R	A			A	A	I

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COUNCIL³

	Change to the Catalog Information	Dept./School	College Academic	Deans	UGEC	UUAC	GRAD	Provost	Faculty	President
1.	General requirements for graduation including course requirements that are common to all majors for all degrees ⁷	--	--	--		A		A	A	A
2.	Admission requirements	--	--	--		A		A	A	A
3.	Policies governing academic probation and suspension	--	--	--		A		A	A	A
4.	Requirements for graduating with honors	--	--	--		A		A	A	A
5.	Other academic policy changes	--	--	--		A		A	--	A

¹ Councils may request additional information about “Information” items. These items are approved as “Consent Agenda.”

² The Dean and Department should respond to the Provost’s recommendation to close a program in writing. Advise & Respond (R) requires that the voting body should receive the written responses at least one week prior to the vote.

³ All courses that meet University Requirements for general education must go through UGEC. Courses or degrees offered only to students seeking teacher certification must go through the Teacher Education Council. All undergraduate changes must go before the UUAC. All graduate degree plan changes must go through the Graduate Council.

⁴ A minimum of 30 hours is required for a major. A maximum is specified for each degree (e.g., BA, BS). The university minimum for elective hours is 6, unless the requirements of external accrediting bodies make it impossible.

⁵ Program or course changes that apply to any major that includes Teacher Certification will be reviewed by the college, the Teacher Education Council (TEC), and then the UUAC.

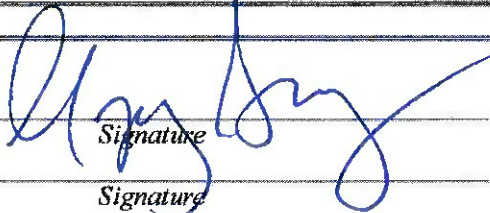
⁶ Courses that satisfy ACU’s University Requirements (General Education) will normally have lower-level numbering, be free of prerequisites and co-requisites, appeal to more than one or two majors, and “not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession” (SACS 2.7.3). Departments may request exceptions to the first three criteria.

⁷ The UUAC approved the clarification that “general requirements for graduation” means the enumerated items in the “General Requirements for Bachelor’s Degrees” section of the catalog.

Revised 3-8-17

Department/School Chair(s)	
 Signature	22 Jan. 2020 Approval date
_____ Signature	_____ Approval date

College Academic Council(s)	
 Signature	2/21/2020 Approval date
_____ Signature	_____ Approval date

Dean(s)	
 Signature	3/17/2020 Approval date
_____ Signature	_____ Approval date

Teacher Education Council	
_____ Chair's signature	_____ Approval date

General Education Council	
_____ Chair's signature	_____ Approval date

Undergraduate Academic Council	
_____ Chair's signature	_____ Approval date

Graduate Council	
_____ Chair's signature	_____ Approval date

Provost	
_____ Signature	_____ Approval date

Faculty	
_____ Chair of faculty senate	_____ Approval date

President	
_____ Signature	_____ Approval date

Explanation of Revision of the Majors & Tracks

The Department of Biology performed a major curriculum revision in 2018, and the following changes 'clean up' lingering objectives that were temporarily shelved for technical reasons in order to allow the accomplishment of the primary objectives to move forward prior to Fall 2018.

Summary of changes:

1. Changing the names and ordering of the General Biology lecture and lab courses will require changes to the Biology degree plans. Specifically, General Biology I lecture and lab (BIOL 112/114) will be substituted for Introductory Biology II lecture and lab (BIOL 123/124), and General Biology II lecture and lab (BIOL 113/115) will be substituted for Introductory Biology I lecture and lab (BIOL 121/122).
2. One of the most important objectives in 2018 was that biology majors will be required to participate in at least one field-based laboratory course (1 hour credit). Justification: the study of biology requires an integrated approach; students must consider the interrelationships between processes that occur at many levels (e.g. molecule, cell, organism, community, ecosystem). Therefore, biology majors will be required to learn to investigate questions at each of these levels in lab courses, including field labs that study natural ecosystems beyond the boundaries of urban and suburban communities.
 - a. However, the appropriate field courses in our program had different numbers of credit hours (1, 3, or 4), and the catalog system at ACU could not accommodate this objective for technical reasons.
 - b. In 2018, under the guidance of Jessica Smith, we agreed to temporarily limit the field requirement to a single 1-hour field course for all biology majors (Ecology Lab, BIOL 364) until time could be taken to separate the 1-hour labs in other field courses from their 2- or 3-hour lectures.
 - c. Now, with the proposed separation of labs and lectures in several field courses accompanying this proposed revision of the majors, we are prepared to proceed with the incorporation of these field labs in the 'Field Requirement' menu of the biology degree plans.
3. An additional objective in 2018 was to create a menu of several organismal diversity and evolution courses from which every biology major must choose at least one option that is best suited to their degree plan. This objective was achieved for the following organismal diversity courses:
 - a. General Mammalogy [BIOL 380]
 - b. Plant Systematics [BIOL 481]
 - c. Comparative Botany [BIOL 486]
 - d. Comparative Zoology [BIOL 487]At that time it was also proposed that General Mammalogy be given a 400-level course number in order to recognize its equivalent position with respect to the other three options.
 - a. However, it should be noted that the labs of General Mammalogy [BIOL 380] and Plant Systematics [BIOL 481] also fulfill the field requirement, and the catalog and advising system were not able to accommodate this status information.

- b. Therefore, we temporarily shelved the course number change for General Mammalogy [BIOL 380] until all of the labs and lectures could be divided into separate course numbers.
- c. Because of the separation of labs and lectures, we are now proposing that the 3-hour lectures for all four diversity courses count for the diversity credit and that the 1-hour labs for General Mammalogy [BIOL 380] and Plant Systematics [BIOL 481] count for the field requirement.
- d. Changes to the degree plans have been made to reflect this proposal, and Comparative Botany [BIOL 486] and Comparative Zoology [BIOL 487] have been split into lab and lecture courses in order to allow their 3-hour lectures to be counted for the diversity requirement matching with the 3-hour lectures of General Mammalogy [BIOL 380] and Plant Systematics [BIOL 481].

2019-2020 Proposed Changes to BIOL-BS Major

Key to changes: ~~Removed sections~~ Added sections

BS: Biology Degree Plan (BIOL)

Major Requirements

Biology

- ~~BIOL 112 - General Biology I Credit Hours: 3 *~~
- ~~BIOL 114 - General Biology I Laboratory Credit Hours: 1~~
- ~~BIOL 113 - General Biology II Credit Hours: 3~~
- ~~BIOL 115 - General Biology II Laboratory Credit Hours: 1~~
- BIOL 121 - Introductory Biology I Credit Hours: 3*
- BIOL 122 - Introductory Biology I Lab Credit Hours: 1
- BIOL 123 - Introductory Biology II Credit Hours: 3
- BIOL 124 - Introductory Biology II Lab Credit Hours: 1
- BIOL 351 - Genetics Credit Hours: 3
- BIOL 362 - Ecology Credit Hours: 3
- BIOL 497 - Seminar in Biology Credit Hours: 3 (capstone and writing-intensive course)

*Hours may also fulfill university requirements and are not included in total major hours

Total: 14 Credit Hours

Cellular/Molecular Biology Track (BIOL-BICM)

- BIOL 312 - Cell Biology Credit Hours: 3
- ~~BIOL 364 - Ecology Laboratory Credit Hours: 4~~
- BIOL 472 - Biochemistry I: Foundations of Biochemistry Credit Hours: 3
- BIOL 475 - Molecular Genetics Credit Hours: 3
- BIOL 476 - Biotechnology Credit Hours: 3

Choose 1 hour from the following:

-
- BIOL 346 - Range and Wildland Plants Laboratory Credit Hours: 1
 - BIOL 364 - Ecology Laboratory Credit Hours: 1
 - BIOL 404 - Marine Biology Laboratory Credit Hours: 1
 - BIOL 409 - General Mammalogy Laboratory Credit Hours: 1
 - BIOL 414 - Plant Systematics Laboratory Credit Hours: 1

~~Choose 4 hours from the following:~~

-
- ~~BIOL 380 - General Mammalogy Credit Hours: 4~~
 - ~~BIOL 481 - Plant Systematics Credit Hours: 4~~
 - ~~BIOL 486 - Comparative Botany Credit Hours: 4~~
 - ~~BIOL 487 - Comparative Zoology Credit Hours: 4~~

Choose 3 hours from the following:

-
- BIOL 408 - General Mammalogy Credit Hours: 3
 - BIOL 413 - Plant Systematics Credit Hours: 3
 - BIOL 486 - Comparative Botany Credit Hours: 3
 - BIOL 487 - Comparative Zoology Credit Hours: 3

~~Choose 8 hours from the following:~~

Choose 9 hours from the following:

-
- BIOL 313 - Cell Biology Laboratory Credit Hours: 1
 - BIOL 330 - Neurobiology Credit Hours: 3
 - BIOL 355 - Microbiology Credit Hours: 3
 - BIOL 357 - Microbiology Laboratory Credit Hours: 1
 - BIOL 399 - Biology Research Credit Hours: 3
 - BIOL 454 - Immunology Credit Hours: 3
 - BIOL 488 - Comparative Botany Laboratory Credit Hours: 1
 - BIOL 489 - Comparative Zoology Laboratory Credit Hours: 1
 - BIOL 498 - Cancer Biology Credit Hours: 3
 - CHEM 453 - Biochemistry I: Foundations of Biochemistry Credit Hours: 3
 - CHEM 454 - Biochemistry II: Gene Expression Credit Hours: 3
 - CHEM 456 - Biochemistry III: Metabolism Credit Hours: 2
 - CHEM 463 - Biochemistry Laboratory I Credit Hours: 1

Total: 25 Credit Hours

General Biology Track (BIOL- BIOG)

- ~~BIOL 364 - Ecology Laboratory Credit Hours: 1~~
- BIOL 312 - Cell Biology Credit Hours: 3

Choose 1 hour from the following:

-
- BIOL 346 - Range and Wildland Plants Laboratory Credit Hours: 1
 - BIOL 364 - Ecology Laboratory Credit Hours: 1
 - BIOL 404 - Marine Biology Laboratory Credit Hours: 1
 - BIOL 409 - General Mammalogy Laboratory Credit Hours: 1
 - BIOL 414 - Plant Systematics Laboratory Credit Hours: 1

~~Choose 4 hours from the following:~~

-
- ~~BIOL 380 - General Mammalogy Credit Hours: 4~~
 - ~~BIOL 481 - Plant Systematics Credit Hours: 4~~
 - ~~BIOL 486 - Comparative Botany Credit Hours: 4~~
 - ~~BIOL 487 - Comparative Zoology Credit Hours: 4~~

Choose 3 hours from the following:

-
- BIOL 408 - General Mammalogy Credit Hours: 3
 - BIOL 413 - Plant Systematics Credit Hours: 3
 - BIOL 486 - Comparative Botany Credit Hours: 3
 - BIOL 487 - Comparative Zoology Credit Hours: 3

~~Choose 17 hours from the following:~~

Choose 18 hours from the following:

-
- BIOA or BIOL 300-399-499
 - CHEM 453 - Biochemistry I: Foundations of Biochemistry Credit Hours: 3
 - CHEM 454 - Biochemistry II: Gene Expression Credit Hours: 3
 - CHEM 456 - Biochemistry III: Metabolism Credit Hours: 2
 - CHEM 463 - Biochemistry Laboratory I Credit Hours: 1

Total: 25 Credit Hours

Health Professions Track (BIOL- BIOH)

- ~~BIOL 364 - Ecology Laboratory Credit Hours: 4~~
- BIOL 312 - Cell Biology Credit Hours: 3

Choose 1 hour from the following:

-
- BIOL 346 - Range and Wildland Plants Laboratory Credit Hours: 1
 - BIOL 364 - Ecology Laboratory Credit Hours: 1
 - BIOL 404 - Marine Biology Laboratory Credit Hours: 1
 - BIOL 409 - General Mammalogy Laboratory Credit Hours: 1
 - BIOL 414 - Plant Systematics Laboratory Credit Hours: 1

~~Choose 4 hours from the following:~~

-
- ~~BIOL 380 - General Mammalogy Credit Hours: 4~~
 - ~~BIOL 481 - Plant Systematics Credit Hours: 4~~
 - ~~BIOL 486 - Comparative Botany Credit Hours: 4~~
 - ~~BIOL 487 - Comparative Zoology Credit Hours: 4~~

Choose 3 hours from the following:

-
- BIOL 408 - General Mammalogy Credit Hours: 3
 - BIOL 413 - Plant Systematics Credit Hours: 3
 - BIOL 486 - Comparative Botany Credit Hours: 3
 - BIOL 487 - Comparative Zoology Credit Hours: 3

~~Choose 17 hours from the following:~~

Choose 18 hours from the following:

-
- BIOL 308 - Global Healthcare Credit Hours: 3
 - BIOL 309 - Medicinal Botany Credit Hours: 3
 - BIOL 330 - Neurobiology Credit Hours: 3
 - BIOL 355 - Microbiology Credit Hours: 3
 - BIOL 357 - Microbiology Laboratory Credit Hours: 1
 - BIOL 448 - Biology of Aging Credit Hours: 3
 - BIOL 454 - Immunology Credit Hours: 3
 - BIOL 475 - Molecular Genetics Credit Hours: 3
 - BIOL 476 - Biotechnology Credit Hours: 3
 - BIOL 480 - Histology Credit Hours: 3
 - BIOL 484 - Developmental Biology Credit Hours: 3
 - BIOL 488 - Comparative Botany Laboratory Credit Hours: 1
 - BIOL 489 - Comparative Zoology Laboratory Credit Hours: 1
 - BIOL 491 - Human Anatomy Credit Hours: 3
 - BIOL 492 - Physiology Credit Hours: 3
 - BIOL 493 - Human Anatomy Laboratory Credit Hours: 1
 - BIOL 495 - Physiology Laboratory Credit Hours: 1
 - BIOL 498 - Cancer Biology Credit Hours: 3
 - CHEM 453 - Biochemistry I: Foundations of Biochemistry Credit Hours: 3
 - CHEM 454 - Biochemistry II: Gene Expression Credit Hours: 3
 - CHEM 456 - Biochemistry III: Metabolism Credit Hours: 2

- CHEM 463 - Biochemistry Laboratory I Credit Hours: 1

Total: 25 Credit Hours

Organismal Biology Track (BIOL-BIOO)

- BIOL 312 - Cell Biology Credit Hours: 3
- BIOL 364 - Ecology Laboratory Credit Hours: 1
- BIOL 486 - Comparative Botany Credit Hours: 4 3
- BIOL 487 - Comparative Zoology Credit Hours: 4 3
- BIOL 488 - Comparative Botany Laboratory Credit Hours: 1
- BIOL 489 - Comparative Zoology Laboratory Credit Hours: 1

Choose 13 hours from:

- BIOA 302 - Lake Ecology and Management Credit Hours: 4
- BIOA 311 - Field Botany Credit Hours: 4
- BIOA 322 - Aquatic Biology Credit Hours: 4
- BIOA 345 - Wildlife Ecology Credit Hours: 4
- BIOA 362 - Environmental Applications for Geographic Information Systems Credit Hours: 4
- BIOA 471 - Conservation Biology Credit Hours: 4
- BIOL 345 - Range and Wildland Plants Credit Hours: 3 2
- BIOL 346 - Range and Wildland Plants Laboratory Credit Hours: 1
- BIOL 355 - Microbiology Credit Hours: 3
- BIOL 357 - Microbiology Laboratory Credit Hours: 1
- BIOL 370 - Field Biology Credit Hours: 4
- ~~BIOL 380 - General Mammalogy Credit Hours: 4~~
- BIOL 399 - Biology Research Credit Hours: 3
- BIOL 403 - Marine Biology Credit Hours: 4 3
- BIOL 404 - Marine Biology Laboratory Credit Hours: 1
- BIOL 408 - General Mammalogy Credit Hours: 3
- BIOL 409 - General Mammalogy Laboratory Credit Hours: 1
- BIOL 413 - Plant Systematics Credit Hours: 3
- BIOL 414 - Plant Systematics Laboratory Credit Hours: 1
- ~~BIOL 481 - Plant Systematics Credit Hours: 4~~
- BIOL 492 - Physiology Credit Hours: 3
- BIOL 495 - Physiology Laboratory Credit Hours: 1

Total: 25 Credit Hours

Pre-Veterinary Medicine Track (BIOL-BIOV)

- BIOL 312 - Cell Biology Credit Hours: 3
- BIOL 355 - Microbiology Credit Hours: 3
- BIOL 357 - Microbiology Laboratory Credit Hours: 1
- ~~BIOL 364 - Ecology Laboratory Credit Hours: 1~~
- BIOL 472 - Biochemistry I: Foundations of Biochemistry Credit Hours: 3
- BIOL 487 - Comparative Zoology Credit Hours: 4 3
- BIOL 489 - Comparative Zoology Laboratory Credit Hours: 1
- BIOL 492 - Physiology Credit Hours: 3
- BIOL 495 - Physiology Laboratory Credit Hours: 1

Choose 1 hour from the following:

- BIOL 346 - Range and Wildland Plants Laboratory Credit Hours: 1
- BIOL 364 - Ecology Laboratory Credit Hours: 1
- BIOL 404 - Marine Biology Laboratory Credit Hours: 1
- BIOL 409 - General Mammalogy Laboratory Credit Hours: 1
- BIOL 414 - Plant Systematics Laboratory Credit Hours: 1

Total: 19 Credit Hours

Wildlife Biology Track (BIOL-BIOW)

- BIOL 345 - Range and Wildland Plants Credit Hours: 3 2
- BIOL 346 - Range and Wildland Plants Laboratory Credit Hours: 1
- BIOA 362 - Environmental Applications for Geographic Information Systems Credit Hours: 4 *
- BIOL 364 - Ecology Laboratory Credit Hours: 1
- BIOL 370 - Field Biology Ornithology Credit Hours: 4
- ~~BIOL 380 - General Mammalogy Credit Hours: 4~~
- BIOL 408 - General Mammalogy Credit Hours: 3
- BIOL 409 - General Mammalogy Laboratory Credit Hours: 1
- BIOL 483 - Biostatistics Credit Hours: 3

- ~~BIOL 481 - Plant Systematics Credit Hours: 4~~
- BIOL 413 - Plant Systematics Credit Hours: 3
- BIOL 414 - Plant Systematics Laboratory Credit Hours: 1
- or
- BIOL 486 - Comparative Botany Credit Hours: 4 3
- BIOL 488 - Comparative Botany Laboratory Credit Hours: 1

- BIOL 487 - Comparative Zoology Credit Hours: 4 3
- BIOL 489 - Comparative Zoology Laboratory Credit Hours: 1

*Course offered at Au Sable Institute. Travel to site required.

Total: 27 Credit Hours