



Request for Substantial Changes to an Existing Program

- I. Program Details
 - a) Name (and Degree Type) of Academic Program: Bachelor of Science in Animal Sciences
 - i) Emphases: Animal Industry; Equine; Science & Pre-Professional
 - b) Academic Unit(s)/College(s): Animal and Comparative Biomedical Sciences / College of Agriculture, Life and Environmental Sciences
- II. Primary Contact and Email:

Dr. Duane Wulf
dmwulf@arizona.edu
- III. Planned start term for changes: Fall 2024
- IV. Describe the proposed changes to the program as well as the rationale for making the specific changes and include any relevant supporting data.

The faculty of SACBS conducted a self-study of the curriculum in 2021 as part of a long-range planning initiative. This included a review of six peer programs to ensure that our programs are up-to-date, competitive, and meeting our students' needs. The recommendations in this self-study report provided the basis for these changes.

The Bachelor of Science in Animal Science program currently requires too many credit hours in the departmental core of courses to allow for sufficient differentiation among the emphases. One goal of this revised curriculum was to decrease the departmental core from 48 credits to 34 credits, allowing for more courses tailored to each particular emphasis.

Based on the self-study report, two classes are being added to the departmental core: Animal Health Behavior and Welfare, Data and Science Communication. These courses are currently being created by current faculty and should be available in the next year. In the interim, student will take ACBS 405 to meet the health and welfare requirement and a general communication course to fulfill the Data and Science Communication requirement. Moving the chemistry requirement from the core to the emphasis allows for the Equine and Industry emphases to replace Chem 151 & Lab and Chem 152 & Lab (8 units) with Chem 130 & Lab (4 units) as it provides more applied chemistry for their purposes. Econ 200 was replaced with AREC 217 which is more applicable to the Animal Science student. Applied Animal Nutrition (ACBS 336A) and Agribusiness Economics (AREC 315) have been removed from the major core and added to the Animal Industry Emphasis requirements.. ACBS 317 (One Health) is also being removed from the curriculum. This course has been removed because it is a more specialized course and should be listed under one of our current emphases. It will remain as an elective course for Animal Science, Microbiology and Veterinary Science Students.

- V. Comparison Chart – complete the appropriate chart below (delete the unnecessary one) to compare your current requirements with the proposed modifications. Only list modifications to requirements, if there is no change, leave blank.

Animal Industry Emphasis

UNDERGRADUATE Only list modifications to requirements, if there is no change, leave blank.	Existing Major Requirements	Requirements For Modified Major
Minimum # of units required in the major (units counting towards major units and major GPA)	88	85
Minimum # of upper-division units required in the major (upper division units counting towards major GPA)	53	52
Major requirements. List all major requirements including core and electives. If applicable, list the emphasis requirements. Courses listed count towards major units and major GPA. Courses listed must include prefix, number, units, and title. Mark new coursework (New). Include any limits/restrictions in place/needed (house number limit, etc.). Provide email(s)/letter(s) of support from home department head(s) for courses being added and are not owned by your department. Recommend ordering requirements in the same order as your advisement report.	CORE: <ul style="list-style-type: none"> • ACBS395A Professional Development (1 unit) • ACBS 102R&L Intro to Animal Science (4 units) • ACBS 215 Physiology and Anatomy of Domestic Animals (3 units) • ACBS 334 Principles of Animal Nutrition (3 units) • ACBS 336A Applied Animal Nutrition (3 units) • ACBS 315R&L Physiology of Reproduction (4 units) • ACBS 317 One Health (3 units) • ACBS 313 Animal Genetics (3 units) • AREC 315 Agribusiness Economics and Management (3 units) • MCB181/R Biology I (4 units) • ECON 200 Basic Economic Issues (3 units) • Communications: ACBS 396A, ACBS 496B, AED 301, ALC 422, COMM 101, COMM 119, ENGL 307, ENGL 308, or PR 119 (3 units) • Chem 151 Gen Chem (4 units) • Chem 152 Gen Chem (4 units) • Statistics: MATH 163, MATH 263, PSY 230, SBS 200, AREC 239 (3 units) 	CORE: <ul style="list-style-type: none"> • ACBS 395A Professional Development (1 unit) • ACBS 102R&L Intro to Animal Science (4 units) • ACBS 215 Physiology and Anatomy of Domestic Animals (3 units) • ACBS 334 Principles of Animal Nutrition (3 units) • ACBS 405 Principles of Livestock Health Management (3 units) • ACBS 315R&L Physiology of Reproduction (4 units) • ACBS 313 Animal Genetics (3 units) • MCB 181/R Biology I (4 units) • AREC 217 Economics of Food and Agriculture: Sustainable Solutions for a Changing World (3 units) • Communications: ACBS 396A, ACBS 496B, AED 301, ALC 422, COMM 101, COMM 119, ENGL 307, ENGL 308, or PR 119 (3 units) • Statistics: MATH 163, MATH 263, PSY 230, SBS 200, AREC 239 (3 units)

	<p>EMPHASIS:</p> <ul style="list-style-type: none"> • ACBS 301 Financial and Economic Strategies (3 units) • ACBS 380r&L Food Safety and Microbiology Lecture & Lab (4 units) • ACBS 405 Principles of Livestock Health Management (3 units) • ACBS 420 Meat Animal Composition (3 units) • ACBS 446 Human Resource Management (3 units) • ACBS 447 Legal Environment of Business (3 units) • ECOL 182R General Bio II Lecture (3 units) • MIC 205A, L General Microbiology Lecture and Lab (4 units) • ACBS 477 or 409 Beef Resource Management or Environmental PSIO (3 units) • ANS Electives (11 units) 	<p>EMPHASIS:</p> <ul style="list-style-type: none"> • CHEM 130 and CHEM 130L Chem for Allied and Public Health (4 units) • ACBS 210 OR 220 OR 270 Species Cluster: Intro to Carcass Eval; Intro To Dairy Science or Intro to Horse Science (3 units) • ACBS 301 OR AREC 315 Financial & Economic Strategies or Agribusiness Economics and Management (3 units) • ACBS 380r, ACBS 471, ACBS 355 Food Safety Course (3 units) • ACBS 420 Meat Animal Composition (3 units) • ACBS 302 OR 446 Management and the Human Side of Organizations or Human Resource Management (3 units) • ECOL 182R General Biology II (3 units) • MIC 205A General Microbiology (3 units) • ACBS 477 OR 409 Beef Resource Management or Environmental Physiology (3 units) • ACBS 336A OR 445 Applied Animal Nutrition or Nutrition and Metabolic Biochemistry (3 units) • ANS ELECTIVES Minimum 6 units ACBS (17 units)
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Equine Emphasis

UNDERGRADUATE Only list modifications to requirements, if there is no change, leave blank.	Existing Major Requirements	Requirements For Modified Major
Minimum # of units required in the major (units counting towards major units and major GPA)	88	85
Minimum # of upper-division units required in the major (upper division units counting towards major GPA)	47	48
Major requirements. List all major requirements including core and electives. If applicable, list the emphasis requirements. Courses listed count towards major units and major GPA. Courses listed must include prefix, number, units, and title. Mark new coursework (New). Include any limits/restrictions in place/needed (house number limit, etc.). Provide email(s)/letter(s) of support from home department head(s) for courses being added and are not owned by your department. Recommend ordering requirements in the same order as your advisement report.	EMPHASIS: <ul style="list-style-type: none"> • ACBS 142 Intro to Horse Racing (2 units) • ACBS 270 Intro to Horse Science (3 units) • ACBS 272 Intro to Horsemanship Programs (2 units) • ACBS 316 Equine Repro (3 units) • ACBS 340 Media and Marketing (3 units) • ACBS 370 Form and Function of the Equine Athlete (3 units) • ACBS 431 Equine Nutrition and Management (3 units) • ACBS 444 Management of the Racing Animal (3 units) • ACBS 446 Human Resource Management (3 units) • ACBS 447 Legal Environment of Business (3 units) • ACBS 273 or 271A Yearling or Weanling Courses (6 units) • 6 units electives 	EMPHASIS: <ul style="list-style-type: none"> • ACBS 142 Intro to Horse Racing (2 units) • ACBS 270 Intro to Horse Science (3 units) • ACBS 272 Intro to Horsemanship Programs (2 units) • ACBS 316 Equine Repro (3 units) • ACBS 340 Media and Marketing (3 units) • ACBS 370 Form and Function of the Equine Athlete (3 units) • ACBS 431 Equine Nutrition and Management (3 units) • AREC 315 OR ACBS 301 Financial & Economic Strategies or Agribusiness Economics and Management (3 units) • CHEM 130 and CHEM 130L Chem for Allied and Public Health (4 units) • ACBS 302 or 446 Management and the Human Side of Organizations or Human Resource Management (3 units) • ACBS 447 Legal Environment of Business (3 units) • ACBS 273 Training and Management of the Weanling (3 units) • ACBS 271A Developing the Training Foundation in Yearlings (3 units) • ANS ELECT 6 UNIT MINIMUM IN ACBS (13 units)

Science & Pre-Professional Emphasis

UNDERGRADUATE Only list modifications to requirements, if there is no change, leave blank.	Existing Major Requirements	Requirements For Modified Major
Minimum # of units required in the major (units counting towards major units and major GPA)	88	85
Minimum # of upper-division units required in the major (upper division units counting towards major GPA)	37	34
Major requirements. List all major requirements including core and electives. If applicable, list the emphasis requirements. Courses listed count towards major units and major GPA. Courses listed must include prefix, number, units, and title. Mark new coursework (New). Include any limits/restrictions in place/needed (house number limit, etc.). Provide email(s)/letter(s) of support from home department head(s) for courses being added and are not owned by your department. Recommend ordering requirements in the same order as your advisement report.	EMPHASIS: <ul style="list-style-type: none"> • ACBS 400A Anatomy & Physiology (3 units) • ACBS 445 Nutritional Physiology and Metabolic Biochem (3 units) • PHYS 102, 181 Physics I (4 units) • PHY 103, 182 Physics II (4 units) • ECOL 182R, 182L General Biology II (4 units) • CHEM 241A, 243A Ochem I (4 units) • CHEM 241B, 243B Ochem II (4 units) • MIC 205A General Microbiology (3 units) • ANS Elect Animal Science Electives (11 units) 	EMPHASIS: <ul style="list-style-type: none"> • Chem 151 General Chem I (4 units) • Chem 152 General Chem I (4 units) • MCB 410 Cell Biology (3 units) • ACBS 400A Anatomy & Physiology (3 units) • ACBS 445 Nutritional Physiology and Metabolic Biochem (3 units) • PHYS 102, 181 Physics I & Lab (4 units) • PHY 103, 182 Physics II & Lab (4 units) • ECOL 182R, 182L General Biology II & Lab (4 units) • CHEM 241A, 243A Ochem I (4 units) • CHEM 241B, 243B Ochem II (4 units) • MIC 205A General Microbiology (3 units) • ANS Elect Animal Science Electives minimum 6 units- ACBS prefixed - 300-400 level (11 units)

VI. Faculty impact – will new faculty hires be required to deliver the new, proposed curriculum?

No new faculty hires will be required to deliver the new proposed curriculum. All courses in the update are already being taught. Existing faculty will teach the two new courses being introduced (Data and Science Communication and Animal Health and Welfare). Slight adjustments will just need to be made in capacity of

classes that are already existing.

VII. Budgetary impact –

There should be no impact to our School budget with the implementation of this new curriculum.

VIII. Transfer Student Consideration – Please explain how you have planned and evaluated the changes you requested in the context of:

- a) Mitigating the complexity of the transfer pathway/curriculum
 - i) We will update all the transfer guides to ensure that the new curriculum is being reflected. Academic Advisors will continue to help student find appropriate equivalents at their institution.
- b) Supporting transfer student success
 - i) We will work closely with our CALES Transfer Recruitment Coordinator to ensure that transfer students are aware of the changes to the curriculum and that they are selecting the appropriate courses to meet degree requirements.
- c) Ensuring transferability of course work from Arizona community colleges
 - i) All courses that are in the update that have previously transferred will still transfer to fulfill degree requirements. Therefore, it should not affect transfer students and their ability to complete the degree.
 - ii) We will continue to work with community colleges to ensure that all transferable courses are being identified on a regular basis.

IX. Required signatures

Program Director/Main Proposer (print name and title):

Dr. Duane Wulf (Director, Arid Lands Animal Production Center)

Program Director/Main Proposer signature:

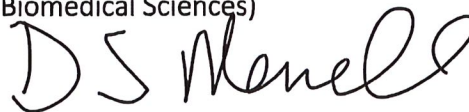
Date: 11/27/2023



Department Head (print name and title): **Dr. D. Scott Merrell (Director, School of Animal & Comparative Biomedical Sciences)**

Department Head's signature:

Date:



Associate/Assistant Dean (print name): **Dr. Mike Staten (Associate Dean, Bart Cardon Academic Programs and Career Development)**

Associate/Assistant Dean's signature:

Date: 11/29/2023



Dean (print name): **Dr. Shane C. Burgess (Charles-Sander Dean of the College of Agricultural, Life and Environmental Sciences)**

Dean's signature:

Date: 11/29/2023



Graduate: For use by Curricular Affairs (for majors):

Committee	Approval date
GPERC	
Graduate Council	
College Academic Administrators Council	
Arizona Board of Regents (if applicable)	

For minors and certificates:

Committee	Approval date
GPERC	

UG: For use by Curricular Affairs (for majors):

Committee	Approval date
APC	
Undergraduate Council	
U-CAAC	

For minors and certificates:

Committee	Approval date
APS	
Undergraduate Council	

Permission to use AREC 217

From: Buhrow, Danielle Pilar - (danielleb) <danielleb@arizona.edu>
Sent: Monday, October 2, 2023 10:12 AM
To: Garcia, J. Christina - (jcb3) <jcb3@arizona.edu>
Subject: Re: Kalya Class, share AREC315 with ABEM minor & in ANS major?

We would be grateful for AREC 217 to be listed, yes! Thank you.
AREC 217 is planned for consistent offerings in Fall and Spring, and ideally summer-but summer isn't confirmed yet; the dept's goal is to eventually remove ECON200 completely from our curriculum now that we have 217.

Thank You,



Danielle Pilar Buhrow

Senior II Academic Advisor;
Graduate Program Coordinator
Department of Agricultural & Resource Economics
THE UNIVERSITY OF ARIZONA
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[learn how to pronounce my name](#)
economics.arizona.edu/person/danielle-buhrow |

[Access my advising availability here](#)

From: Garcia, J. Christina - (jcb3) <jcb3@arizona.edu>
Sent: Monday, October 2, 2023 10:08 AM
To: Buhrow, Danielle Pilar - (danielleb) <danielleb@arizona.edu>
Subject: RE: Kalya Class, share AREC315 with ABEM minor & in ANS major?

We are updating our curriculum and was wondering if the department would be ok for us to add AREC 217 instead of ECON 200, if not could we list it as an option?

Best,



J. Christina Garcia, MS

Assistant Director - Academic Advising, ACBS
Academic Advisor, Animal Science

School of Animal & Comparative Biomedical Sciences (ACBS)
College of Agriculture and Life Sciences
THE UNIVERSITY OF ARIZONA

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Thursday 9am to 12pm

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jcb3@email.arizona.edu
Pronouns: she, her, hers, ella

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From: Buhrow, Danielle Pilar - (danielleb) <danielleb@arizona.edu>
Sent: Monday, October 2, 2023 10:06 AM
To: Garcia, J. Christina - (jcb3) <jcb3@arizona.edu>
Subject: Re: Kalya Class, share AREC315 with ABEM minor & in ANS major?

Thank you!

Yes, and it will be an either-or pre-req, AREC 217 or ECON 200, to ensure students that previously completed ECON 200 remain eligible for AREC 315 and other AREC courses and since 217 doesn't have a CC equivalent, TR students can still take our courses with ECN transfer credits. All of our upper division courses will have AREC 217 as an included pre-req; we are in the process of submitting the course modifications. Thanks again, Christina.

Thank You,



Danielle Pilar Buhrow

Senior II Academic Advisor;
Graduate Program Coordinator
Department of Agricultural & Resource Economics
THE UNIVERSITY OF ARIZONA
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[Access my advising availability here](#)

Permission to use CHEM 130

From: Belle-Oudry, Deirdre A - (dbelle) <dbelle@arizona.edu>
Sent: Tuesday, October 3, 2023 8:51 AM
To: Garcia, J. Christina - (jcb3) <jcb3@arizona.edu>
Cc: Van Dorn, Laura O - (lvandorn) <lvandorn@arizona.edu>; Lustro, Laura M - (lmlustro) <lmlustro@arizona.edu>
Subject: RE: Using CHEM 130 in Animal Science Major

Hi Christina

Yes, this will be fine for us.
Best
Dee

From: Garcia, J. Christina - (jcb3) <jcb3@arizona.edu>
Sent: Monday, October 2, 2023 6:07 PM
To: Belle-Oudry, Deirdre A - (dbelle) <dbelle@arizona.edu>
Cc: Van Dorn, Laura O - (lvandorn) <lvandorn@arizona.edu>
Subject: RE: Using CHEM 130 in Animal Science Major

Hi All,
Just circling back on this as we are getting closer to putting together our update.

Please let me know what other questions I can answer for you or how I can assist you!

Best,



J. Christina Garcia, MS
Assistant Director - Academic Advising, ACBS
Academic Advisor, Animal Science

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From: Garcia, J. Christina - (jcb3)
Sent: Wednesday, September 6, 2023 9:20 AM
To: Belle-Oudry, Deirdre A - (dbelle) <dbelle@arizona.edu>
Cc: Van Dorn, Laura O - (lvandorn) <lvandorn@arizona.edu>
Subject: RE: Using CHEM 130 in Animal Science Major

Hi !

Please see my answers below

1. Approximately how many students enter in the ACBS program each year? ~60 students
2. Is there, or will there be, an online degree program? No
3. Do you have a feel for which course students will more likely take, or be advised to take? Of the 60 entering students, I would say 60% will take CHEM 151 and the other 40% will take CHEM 130/130L

Please let me know what other questions I can answer for you or how I can assist you!

Best,



J. Christina Garcia, MEd

Assistant Director - Academic Advising, ACBS

Academic Advisor, Animal Science

School of Animal & Comparative Biomedical Sciences (ACBS)
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From: Belle-Oudry, Deirdre A - (dbelle) <dbelle@arizona.edu>

Sent: Wednesday, September 6, 2023 9:17 AM

To: Garcia, J. Christina - (jcb3) <jcb3@arizona.edu>

Cc: Van Dorn, Laura O - (lvandorn) <lvandorn@arizona.edu>

Subject: RE: Using CHEM 130 in Animal Science Major

Hi Christina,

We are happy to hear of your interest in the CHEM 130/130L courses.

I do have a few questions for you:

1. Approximately how many students enter in the ACBS program each year?

2. Is there, or will there be, an online degree program?
 3. Do you have a feel for which course students will more likely take, or be advised to take?
- Best

Dee

From: Garcia, J. Christina - (jcb3) <jcb3@arizona.edu>
Sent: Friday, September 1, 2023 3:46 PM
To: Belle-Oudry, Deirdre A - (dbelle) <dbelle@arizona.edu>
Cc: Van Dorn, Laura O - (lvandorn) <lvandorn@arizona.edu>
Subject: RE: Using CHEM 130 in Animal Science Major

Hi All,

Sorry for long delay in any follow up. I talked to my curriculum committee and they appreciate the clarification on the difference between the courses. The committee would like to move forward with CHEM 130 with lab to be an option as the CHEM requirement for 3 of our 4 Animal Science Emphases. We would like to offer either CHEM 151 or CHEM 130 and CHEM 130L. Do you need more information before something can be drafted to submit to curriculum affairs approving the use of the courses?

Thanks in advance for your assistance!

Best,



J. Christina Garcia, MS

Assistant Director - Academic Advising, ACBS
Academic Advisor, Animal Science

School of Animal & Comparative Biomedical Sciences (ACBS)
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