

Deactivation Proposal

Date Submitted: 11/27/23 5:18 pm

Viewing: **5271 : Agricultural & Biological Engineering: Biological Engineering, BS**

Last approved: 04/21/22 3:21 pm

Last edit: 03/28/24 9:03 am

Changes proposed by: Kent Rausch

[Agricultural & Biological Engineering: Biological Engineering, BS](#)

Catalog Pages
Using this
Program

Proposal Type:

In Workflow

1. U Program Review
2. 1741 Committee Chair
3. 1741 Head
4. 1227 Head
5. KL Committee Chair
6. KL Dean
7. KP Committee Chair
8. KP Dean
9. University Librarian
10. COTE Programs
11. Provost
12. Senate EPC
13. Senate
14. U Senate Conf
15. Board of Trustees
16. IBHE
17. HLC
18. DMI

Approval Path

1. 11/28/23 2:21 pm
Donna Butler (dbutler):
Approved for U Program Review
2. 12/12/23 11:13 am
Kent Rausch (krausch):
Approved for 1741 Committee Chair
3. 12/12/23 8:28 pm
Ronaldo Maghirang (ronaldom):
Approved for 1741 Head

4. 12/13/23 3:22 pm
Ashley Hallock
(ahallock):
Approved for 1227
Head
5. 12/13/23 3:29 pm
Brianna Gregg
(bjgray2):
Approved for KL
Committee Chair
6. 12/20/23 10:07
am
Anna Ball (aball):
Approved for KL
Dean
7. 03/08/24 8:57 am
Ashley Hallock
(ahallock):
Approved for KP
Committee Chair
8. 03/08/24 8:59 am
Michael Stoller
(stoller4):
Approved for KP
Dean
9. 03/18/24 10:23
am
Claire Stewart
(clairest):
Approved for
University
Librarian
10. 03/18/24 10:42
am
Suzanne Lee
(suzannel):
Approved for
COTE Programs
11. 03/21/24 10:38
am
Brooke Newell
(bsnewell):
Approved for
Provost

History

1. Apr 9, 2019 by

- Deb Forgacs (dforgacs)
- 2. Jun 20, 2019 by Deb Forgacs (dforgacs)
- 3. Feb 26, 2020 by Brooke Newell (bsnewell)
- 4. Jan 27, 2021 by Deb Forgacs (dforgacs)
- 5. Apr 21, 2022 by Kent Rausch (krausch)

Concentration (ex. Dietetics)

This proposal is for a:

~~Revision~~

Phase Down/Elimination

Administration Details

Official Program Name	Agricultural & Biological Engineering: Biological Engineering, BS	
Diploma Title		
Sponsor College	<u>Granger College of Engineering Agr,</u> Consumer & Env Sciences	
Sponsor Department	<u>Engineering Administration</u> Agricultural & Biological Engr	
Sponsor Name	Ronaldo Maghirang, Kent Rausch	
Sponsor Email	ronaldom@illinois.edu, krausch@illinois.edu	
College Contact	<u>Ashley Hallock</u> Jonathan Makela, Anna Ball	College Contact Email
	<u>ahallock@illinois.edu</u> jmakela@illinois.edu, aball@illinois.edu	
College Budget Officer	Tessa Hile	
College Budget Officer Email	tmhile@illinois.edu	

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

[Ashley Hallock ahallock@illinois.edu](mailto:ahallock@illinois.edu); ~~Brooke Newell, bsnewell@illinois.edu~~; Ronaldo Maghirang, ronaldom@illinois.edu (ABE head); Kent Rausch, krausch@illinois.edu (ABE CnC editing)

Does this program have inter-departmental administration?

Yes

Interdisciplinary Colleges and Departments (list other colleges/departments which are involved other than the sponsor chose above)

Please describe the oversight/governance for this program, e.g., traditional departmental/college governance. Inclusion of/roles of elected faculty committees? Inclusion of/roles of any advisory committees.

~~Administrative approval to revise the Biological Engineering concentration within the BS in~~

Agricultural & Biological Engineering ~~Agricultural & Biological Engineering~~ programs are governed through a Courses and Curricula committee consisting of ABE faculty and ex officio officers.

Faculty are housed in the College of Agricultural, Consumer and Environmental Sciences (ACES), while ABE students graduate through the Grainger College of Engineering.

College [Agr, Consumer & Env Sciences](#) ~~Grainger~~
~~College of Engineering~~

Department [Agricultural & Biological Engr](#) ~~Engineering~~
~~Administration~~

Is there an additional department involved in governance?

No

Proposal Title

Effective Catalog Term Fall 2025

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Eliminate the Concentration in Biological Engineering in the Bachelor of Science in Agricultural & Biological Engineering in the Grainger College of Engineering

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This phase down proposal is related to the revision of the ABE BS program (key 507) and the phase down of the Agricultural Engineering concentration (key 732).

Program Justification

Provide a brief description of what changes are being made to the program.

The two current concentrations (Agricultural Engineering and Biological Engineering) are being phased down and replaced with 6 new concentrations.

Why are these changes necessary?

Revisions to the Agricultural and Biological Engineering (ABE) major will provide more cohesive progression of introductory fundamental ABE courses during years 1 and 2, followed by distinctive concentrations in focused career fields. The concentrations will communicate to potential students and employers the capabilities of students graduating from the ABE major with one of the concentrations.

The 6 new concentrations more clearly articulate unique capabilities desired by employers and students alike that are needed for careers in ABE. The programs balance conventional engineering fundamentals with specialized courses that will serve students long term in their chosen career paths. The six new concentrations provide more descriptive transcript information that will be attractive to potential students and marketable to potential employers.

1. Bioprocess Engineering and Industrial Biotechnology (BEIB), key 1176
2. Off-Highway Vehicle and Equipment Engineering (OHVEE), key 1174
3. Renewable Energy Systems Engineering (RESE), key 1178
4. Soil and Water Resources Engineering (SWRE), key 1175
5. Sustainable Ecological and Environmental Systems Engineering (SEESE), key 1177
6. Synthetic Biological Engineering (SBE), key 1179

Ongoing discussions with students, employers, alumni and faculty indicate that there is confusion regarding the capabilities of students graduating from our programs. Feedback from the Academic Program Review and from the Accreditation Board for Engineering and Technology (ABET) both noted that the ABE curriculum had not been updated for several years.

Some of the confusion from employers and students has to do with perceptions of the words "agricultural" and "biological", with much debate among alumni, faculty and students regarding their meaning and scope. Over time, courses taken for the Agricultural Engineering or the Biological Engineering concentrations have become indistinguishable by potential students and employers. For example, students have taken a Biological concentration while wanting a Soil and Water Resources focus; this required only a few substitutions in the courses taken in our current curriculum. Employers would look for "soil and water" capabilities among the pools of students from either Agricultural or Biological concentration students. Although placement rates for our graduates remain high, we feel this confusion is part of the reason enrollments have decreased during the past several years.

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects outside of the sponsoring department impacted by the creation/revision of this program?

No

Program Regulation and Assessment

Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

The department of Agricultural and Biological Engineering has undergraduate curriculum program educational objectives (PEOs) that prepare our graduates to succeed in their career activities relating to the ABE discipline. These PEOs are:

Objective 1: Enter the agricultural and biological engineering profession as practicing engineers and consultants with prominent companies and organizations in diverse areas that include agricultural and off-road equipment manufacturing and automation, food and fiber processing, renewable energy production, environmental conservation and water quality engineering, indoor environmental control, systems informatics and analysis, or other related fields.

Objective 2: Pursue graduate education and research at major research universities in agricultural and biological engineering and related fields.

Objective 3: Advance in their chosen fields to supervisory and management positions.

Objective 4: Engage in continued learning through professional development.

Objective 5: Participate in and contribute to professional societies and community services.

These PEOs were developed and are regularly reviewed by our constituent groups to evaluate, revise and refocus issues relating to the ABE BS program. These constituent groups are:

Students – The purpose of the PEOs is to prepare undergraduate students for employment in agricultural and biological engineering and related fields. Students are served by all five PEOs.

Alumni - ABE alumni are considered a valuable asset to the development and evaluation of the ABE Program Educational Objectives. They are served directly by PEOs 2, 3, 4 and 5 as they continue their professional careers.

Employers – The overall expected student outcome of ABE PEOs is to prepare qualified professional engineers for agricultural and biological engineering fields. Employers are served directly by objectives 1, 3, 4 and 5.

This process allows for continued assessment and improvement to our curricula and to maintain quality and vitality of ABE programs. The ABE Courses and Curriculum Committee and the ABE Faculty Advisory Committee work with department administration to maintain and revise PEOs. The ABE Outcomes and Assessment Committee manages the processes of the development, collection and summarization of PEO review data collection.

Student Outcomes:

The seven student outcomes for the agricultural and biological engineering program

are:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Process for Review of the Program Educational Objectives:

The process of periodical reviews is an ongoing continuous improvement process. The ABE Course and Curriculum Committee and the ABE Faculty Advisory Committee work with the department administration to maintain and revise the program educational objectives. The ABE Outcomes and Assessment Committee manages the processes of the development, collection and summarization of the program education objectives review data collection.

Student senior exit interviews are conducted by the Head. A written senior exit survey questionnaire is provided to each graduating senior at the end of the last semester of enrollment. All graduating seniors are asked to participate in a focus group to discuss the nature of their undergraduate experience. Participation in the senior exit interviews and the completion of the written senior exit questionnaire are voluntary. The information provided by the senior exit interview and questionnaires are compiled by the ABE Undergraduate Program Coordinator. The summary information is provided to the ABE Administration, the ABE Faculty Advisory Committee and the ABE Course and Curriculum Committee. The information is used to review the program educational objectives.

Alumni surveys also are used. ABE alumni are surveyed after graduation at 2, 5 and 10 year intervals post-graduation. A survey form is sent to each available alumnus via electronic media. Completed forms are compiled in a summary format. The information is available to the ABE faculty, administration and Courses and Curriculum Committee

for reviewing the objectives.

Feedback from employers is provided by the ABE External Advisory Committee and companies representatives that work with the senior design team projects. The ABE External Advisory Committee meets on an annual basis with ABE administration, students, faculty and staff. The Committee provides feedback relative to PEOs as part of a committee report. This report is provided to faculty, administration and staff as a written report and a discussion presentation. Companies sponsor the ABE senior industry linked design projects, and representatives from these companies provide feedback to students and faculty about students' preparedness upon completion of the projects. This information is considered very useful in assessing and reviewing the program educational objectives.

Alumni surveys also are used to assess involvement of ABE graduates in the ABE profession. Participation in professional meetings and conferences is not formally assessed, but efforts are made on behalf of the ABE department to connect with graduates in professional activities through departmental sponsored receptions at annual ASBAE International Meetings, local ASABE section meetings, the Grainger College of Engineering annual open house, College of ACES annual ExplorACES open house, an annual ABE@Illinois on-campus event for all alumni and annual homecoming activities in conjunction with university events. These activities are not formally assessed, but they are discussed by the ABE department relative to our program quality and program educational objectives.

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program

Description and

Requirements

Attach Documents

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

Program of Study

Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source: <https://www.ibhe.org/assets/files/PublicAdminRules2017.pdf>). For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

Description of program for the catalog page. This is not official content, it is used to help build the new catalog page for the program. Can be edited in the catalog by the college or department.

Statement for
Programs of
Study Catalog

Biological Engineering Concentration Requirements

Course List

Code	Title	Hours
Required courses for ABE Biological Engineering Concentration Core		14
<u>ABE 340</u>	Thermodynamics for Agricultural and Biological Engineering	4
<u>ABE 341</u>	Transport Processes in ABE	3
<u>CHEM 232</u>	Elementary Organic Chemistry I (may be taken for 4 credit hours; the extra hour may be used to help meet free elective requirements)	3
<u>MCB 150</u>	Molec & Cellular Basis of Life	4
Electives		21
From Departmentally Approved List of Electives, to include: 6 hours of Biological and Natural Sciences Electives and 15 hours of Technical Electives.		
Biological and Natural Science Electives. Three of the six credit hours must be at the 300 or 400 level. Must include one course with a lab component.		6
<u>ANSC 100</u>	Intro to Animal Sciences	4
<u>ANSC 221</u>	Cells, Metabolism and Genetics	3
<u>ANSC 350</u>	Cellular Metabolism in Animals	3
<u>ANSC 363</u>	Behavior of Domestic Animals	4
<u>ANSC 400</u>	Dairy Herd Management	3
<u>ANSC 401</u>	Beef Production	3
<u>ANSC 402</u>	Sheep and Goat Production	3
<u>ANSC 403</u>	Pork Production	3
<u>ANSC 404</u>	Poultry Science	3
<u>ANSC 406</u>	Zoo Animal Conservation Sci	3
<u>ANSC 450</u>	Comparative Immunobiology	4
<u>ATMS 201</u>	General Physical Meteorology	3
<u>ATMS 307</u>	Climate Processes	3
<u>CHEM 233</u>	Elementary Organic Chem Lab I	2
<u>CHEM 312</u>	Inorganic Chemistry	3
<u>CHEM 332</u>	Elementary Organic Chem II	4
<u>CHEM 360</u>	Chemistry of the Environment	3
<u>CHEM 460</u>	Green Chemistry	3 or
		4
<u>CPSC 112</u>	Introduction to Crop Sciences	4
<u>CPSC 261</u>	Biotechnology in Agriculture	3
<u>CPSC 265</u>	Genetic Engineering Lab	3
<u>CPSC 270</u>	Applied Entomology	3
<u>CPSC 352</u>	Plant Genetics	4
<u>CPSC 414</u>	Forage Crops & Pasture Ecology	3
<u>CPSC 415</u>	Bioenergy Crops	3

Code	Title	Hours
CPSC 418	Crop Growth and Management	3
CPSC 431	Plants and Global Change	3
CPSC 437	Principles of Agroecology	3
CPSC 473	Mgmt of Field Crop Insects	3
FSHN 101	The Science of Food and How it Relates to You	3
FSHN 414	Food Chemistry	3
FSHN 416	Food Chemistry Laboratory	3
FSHN 471	Food & Industrial Microbiology	3
FSHN 481	Food Processing Unit Operations I	2
FSHN 482	Food Processing Unit Operations I Lab	1
FSHN 483	Food Processing Unit Operations II	2
FSHN 484	Food Processing Unit Operations II Lab	1
GEOL 107	Physical Geology	4
GEOL 380	Environmental Geology	4
GGIS 379	Introduction to Geographic Information Systems	4
HORT 100	Introduction to Horticulture	3
HORT 341	Greenhouse Mgmt and Production	4
HORT 344	Planting for Biodiversity and Aesthetics	3
HORT 360	Vegetable Crop Production	3
HORT 361	Small Fruit Production	2
HORT 362	Tree Fruit Production	2
HORT 363	Postharvest Handling Hort Crop	2
HORT 421	Horticultural Physiology	4
HORT 435	Urban Food Production	3
IB 103	Introduction to Plant Biology	4
IB 150	Organismal & Evolutionary Biol	4
IB 151	Organismal & Evol Biol Lab	1
IB 203	Ecology	4
IB 329	Animal Behavior	3
IB 335	Course IB 335 Not Found	
IB 411	Bioinspiration	3
IB 420	Plant Physiology	3
IB 439	Biogeography	3
IB 444	Insect Ecology	3 or 4
IB 452	Ecosystem Ecology	3
IB 482	Insect Pest Management	3
IB 485	Course IB 485 Not Found	
IB 486	Course IB 486 Not Found	
MCB 100	Introductory Microbiology	3
MCB 101	Intro Microbiology Laboratory	2
MCB 244	Human Anatomy & Physiology I	3
MCB 245	Human Anat & Physiol Lab I	2
MCB 250	Molecular Genetics	3
MCB 251	Exp Techniqs in Molecular Biol	2
MCB 252	Cells, Tissues & Development	3
MCB 253	Exp Techniqs in Cellular Biol	2

Code	Title	Hours
MCB 300	Microbiology	3
MCB 301	Experimental Microbiology	3
MCB 314	Introduction to Neurobiology	3
MCB 316	Genetics and Disease	4
MCB 450	Introductory Biochemistry	3
NRES 201	Introductory Soils	4
NRES 219	Applied Ecology	3
NRES 348	Fish and Wildlife Ecology	3
NRES 351	Introduction to Environmental Chemistry	3
NRES 419	Env and Plant Ecosystems	3
NRES 420	Restoration Ecology	4
NRES 429	Aquatic Ecosystem Conservation	3
NRES 439	Env and Sustainable Dev	3
NRES 471	Pedology	3
NRES 475	Environmental Microbiology	3
NRES 487	Soil Chemistry	3
NRES 488	Soil Fertility and Fertilizers	3
PLPA 405	Plant Disease Diagnosis & Mgmt	3
<p>Technical electives chosen in consultation with an advisor. At least 8 hours must be 15 Agricultural and Biological Engineering Technical Electives. Must include one course with a lab component.</p>		
ABE 361	Functional Analysis and Design of Agricultural Machine Systems	3
ABE 425	Engrg Measurement Systems	4
ABE 426	Principles of Mobile Robotics	4
ABE 436	Renewable Energy Systems	3 or 4
ABE 446	Biological Nanoengineering	3 or 4
ABE 450	International Water Project I	3
ABE 451	International Water Project II	3
ABE 452	Engineering for Disaster Resilience	3 or 4
ABE 454	Environmental Soil Physics	3
ABE 455	Erosion and Sediment Control	2
ABE 456	Land & Water Resources Engrg	3 or 4
ABE 457	NPS Pollution Processes	2
ABE 458	NPS Pollution Modeling	2
ABE 459	Drainage and Water Management	3 or 4
ABE 463	Course ABE 463 Not Found	3
ABE 466	Engineering Off-Road Vehicles	3
ABE 474	Course ABE 474 Not Found	3 or 4
ABE 476	Indoor Air Quality Engineering	4
ABE 482	Package Engineering	3
ABE 483	Engineering Properties of Food Materials	3

Code	Title	Hours
ABE 488	Bioprocessing Biomass for Fuel	4
BIOE 416	Biosensors	3
BIOE 461	Cellular Biomechanics	4
BIOE 467	Biophotonics	3
BIOE 476	Tissue Engineering	3
CHBE 221	Principles of CHE	3
CHBE 422	Mass Transfer Operations	4
CHBE 424	Chemical Reaction Engineering	3
CHBE 471	Biochemical Engineering	3 or 4
CHBE 472	Techniques in Biomolecular Eng	3 or 4
CHBE 473	Biomolecular Engineering	3 or 4
CHBE 475	Tissue Engineering	3
CHBE 476	Biotransport	3
CHBE 478	Bioenergy Technology	3
CEE 300	Behavior of Materials	4
CEE 330	Environmental Engineering	3
CEE 350	Water Resources Engineering	3
CEE 360	Structural Engineering	3
CEE 380	Geotechnical Engineering	3
CEE 430	Course CEE 430 Not Found	
CEE 432	Stream Ecology	3 or 4
CEE 434	Environmental Systems I	3
CEE 437	Water Quality Engineering	3
CEE 440	Fate Cleanup Environ Pollutant	4
CEE 442	Environmental Engineering Principles, Physical	4
CEE 443	Env Eng Principles, Chemical	4
CEE 444	Env Eng Principles, Biological	4
CEE 446	Course CEE 446 Not Found	
CEE 447	Atmospheric Chemistry	4
CEE 449	Environmental Engineering Lab	3
CEE 450	Surface Hydrology	3
CEE 451	Environmental Fluid Mechanics	3
CEE 452	Hydraulic Analysis and Design	3
CEE 453	Urban Hydrology and Hydraulics	4
CEE 457	Groundwater	3
CEE 458	Water Resources Field Methods	4
CEE 461	Reinforced Concrete I	3
CEE 463	Reinforced Concrete II	3 or 4
CEE 465	Design of Structural Systems	3
CEE 470	Structural Analysis	4
CEE 483	Soil Mechanics and Behavior	4

Code	Title	Hours
CEE 484	Applied Soil Mechanics	3 or 4
CS 466	Introduction to Bioinformatics	3 or 4
ECE 206	Electrical and Electronic Circuits Lab	1
ECE 333	Green Electric Energy	3
ECE 468	Optical Remote Sensing	3
ECE 470	Introduction to Robotics	4
ECE 481	Nanotechnology	4
ENG 471	Seminar Energy & Sustain Engrg	1
SE 320	Control Systems	4
SE 423	Mechatronics	3
IE 431	Design for Six Sigma	3
ME 320	Heat Transfer	4
ME 330	Engineering Materials	4
ME 340	Dynamics of Mechanical Systems	3.5
ME 370	Mechanical Design I	3
ME 371	Mechanical Design II	3
ME 400	Energy Conversion Systems	3 or 4
ME 402	Design of Thermal Systems	3 or 4
ME 403	Internal Combustion Engines	3 or 4
ME 461	Computer Cntrl of Mech Systems	3 or 4
ME 483	Mechanobiology	4
MSE 280	Engineering Materials	3
MSE 401	Thermodynamics of Materials	3
MSE 470	Design and Use of Biomaterials	3
MSE 473	Biomolecular Materials Science	3
MSE 474	Biomaterials and Nanomedicine	3
MSE 489	Matl Select for Sustainability	3 or 4
NPRE 201	Energy Systems	2 or 3
NPRE 470	Fuel Cells & Hydrogen Sources	3
NPRE 475	Wind Power Systems	3 or 4

Program Relationships

Corresponding

Program(s):

Corresponding Program(s)

Agricultural & Biological Engineering, BS

Program Features

Academic Level Undergraduate

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)

Delivery Method

This program is
available:

On Campus - Students are required to be on campus, they may take some online courses.

Phase Down/Elimination Enrollment

Does this program Yes
currently have
enrollment?

If so, what is the Fall 2026
anticipated term
of completion?

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

Phase down of the Biological Engineering concentration will not occur until 1) all degrees in the concentration have been awarded, and 2) the proposal for the revised concentrations have been approved and are active for enrollment.

There are currently 12 students in the Ag Concentration and 8 students in the Biol Concentration. Also, there are 15 students in the BS program without a concentration. Finally, there are 40 students in the BSAG degree program who, in the current curriculum would normally declare one of these two concentrations in their junior year. Students with catalog year of Fall 2023 will be allowed (but not required) to switch to a concentration within the newly proposed curriculum. Students with a catalog year earlier than Fall 2023 will continue in their current curriculum. The proposed deactivated concentrations will remain in effect until all students in them graduate and will then be fully deactivated. However, incoming students for Fall 2024 and beyond will not be able to choose the Ag or Biol concentrations.

There is minimal impact expected on total enrollments in the ABE major, since the new concentrations are composed primarily of existing courses offered in ABE and on campus. If they choose, students will be allowed to transfer into one of the new concentrations once they are active. It is anticipated that the revised degree programs will have stronger enrollments, and that total enrollments are expected to reach levels experienced about 5 years ago.

Number of Students in Program (estimate)

Year One Estimate

5th Year Estimate (or when fully implemented)

Budget

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

Additional Budget Information

Attach File(s)

Financial Resources

How does the unit intend to financially support this proposal?

Will the unit need to seek campus or other external resources?

No

Attach letters of support

Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

No impact is anticipated on faculty resources. The revisions primarily reorganize the overall ABE-BS program content, but do not change teaching loads significantly.

Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Revisions to the ABE-BS core courses of the proposed degree program draw upon existing course content, and new concentrations do not add new courses. As the ABE - Ag Eng and Bio Eng concentrations are phased down, students may move from these concentrations to one of the new concentrations. Therefore, Library resources are not expected to be impacted.

EP Documentation

EP Control Number EP.24.100

Attach Rollback/Approval Notices

This proposal requires HLC inquiry No

DMI Documentation

Attach Final Approval Notices

Banner/Codebook Name Biological Engineering

Program Code: 5271

Minor Code	5163	Conc Code	5271	Degree Code	BS	Major Code
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Senate Approval Date

Senate Conference Approval Date

BOT Approval

Date

IBHE Approval

Date

HLC Approval

Date

DOE Approval

Date

Effective Date:

Attached

Document

Justification for
this request

Program Reviewer

Comments

Brooke Newell (bsnewell) (04/24/23 9:24 am): Rollback: Revisions requested for Justification, Corresponding Program, and Library Resources. Detailed email sent to Ashley, Ronaldo, Kent, and Brianna

Brooke Newell (bsnewell) (09/11/23 3:00 pm): Rollback: Email sent to Kent, Ashley and Ronaldo