

FORM G

BOARD OF REGENTS, STATE OF IOWA
PROPOSAL FOR PROGRAM/DEPARTMENT CHANGE

Institution: Iowa State University

Current Title of Program/Department: Agricultural Biochemistry

Proposed Title of Program/Department: Biochemistry

Name of College: Agriculture and Life Sciences

Current CIP Discipline Specialty Title: Biochemistry

Proposed CIP Discipline Specialty Title: Biochemistry

Current CIP Discipline Specialty Number (six digits): 26.0202

Proposed CIP Discipline Specialty Number (six digits): 26.0202

Current Level: B X M _____ D _____ FP _____

Proposed Level: B X M _____ D _____ FP _____

Degree Abbreviation (e.g., B.S., B.A., M.A.): B.S.

Approximate date to implement changes: Month _____ Fall _____ Year 2019

Contact person: (name, telephone, and e-mail) Mark Hargrove, (515) 294-2616,
msh@iastate.edu

Please do not use acronyms without defining them.

1. Provide a brief description of the current department/program.

The Agricultural Biochemistry undergraduate major in the College of Agriculture and Life Sciences (CALS) is a basic science major with significant course requirements in Biochemistry, Chemistry, Biology, Physics, and Mathematics. It is overseen by the Roy J. Carver Department of Biochemistry, Biophysics, and Molecular Biology (BBMB), which is in both CALS and in the College of Liberal Arts and Sciences (LAS).

2. Describe reasons (justification) for the proposed changes. Include information about the value of the changes to the department, program, discipline, college, and/or the university.

We propose this change in name to better describe the contents of the major. This is a basic science major with no "Agricultural" requirement. The major has a number of elective courses in Agricultural Sciences that could give a student an Agricultural experience, but other electives exist in CALS that allow the student to complete the major entirely as a basic science major. Many students in this major take a program of courses that is not different in the basic science courses from the Biochemistry major offered in LAS. Changing the name will more accurately reflect what the major actually is, a rigorous, basic science major suitable for CALS students who are interested in diverse areas of Biochemistry.

3. What will be the effect of the proposed change on current students?

Changing the name will in no way restrict or reduce the ability of students who wish to have an Agricultural experience from taking Agriculture-oriented electives. No change is proposed in the major course requirements.

4. If this is a program/department name change, describe the proposed name is consistent with the mission of the college and university.

Changing the name of this major is consistent with the mission of CALS, and with BBMB. Some 10 years ago, the College of Agriculture changed its name to the College of Agriculture and Life Sciences to reflect the fact that the college has significant research and teaching expertise in basic life sciences beyond Agriculture. Renaming the major will indicate that CALS students can have training and career interests in Biochemistry beyond Agriculture.

5. Will the proposed change be consistent with other programs at the university or other universities in the state? If this is a program/department name change, identify other institutions with the same or similar name.

The proposed change is consistent with other programs at ISU. There is ample precedent at ISU for having a basic science major with the same name in both CALS and LAS. For example, the Biology and Genetics majors are both currently offered with the same name in both colleges. The Genetics major has been offered in both colleges for more than 30 years, and has been highly successful (currently Genetics has more than 200 majors). Genetics majors have more options/choices in designing their program of study with the major being in two colleges. Many Biology or Genetics majors who go on to graduate school, medical school, or other non-Agricultural careers choose to be in CALS for reasons other than studying Agriculture. Biochemistry is a basic science major that is offered by most universities.

6. Is the proposed change consistent with association/accreditation requirements? Have accreditation requirements been addressed?

NA.

7. Describe program configuration changes that will result from the proposed program change, e.g., change in number of credit hours required, etc.

No change in program configuration will result. The number of credit hours and the course requirements will be the same as they are now.

8. What costs will be incurred by the proposed program change? Identify new resources that will be needed in connection with the proposed program change, e.g., facilities, faculty, funds, etc. How will the proposed program change be administered? Provide a three-year analysis of costs resulting from the proposed program change.

This is simple name change and there will be minimal costs associated with this change. There will be no increase in facilities, faculty, staff, or funds. The major is currently administered by the BBMB department, and this will continue. The only costs will be associated with changing catalog, advising, and promotional material. These costs will not be significantly different from the costs associated with preparing every new edition of the catalog.

9. Is this intended to be a temporary or permanent change? If temporary, for how long?

This is a permanent change.

10. What are the workforce needs in the state for the proposed program change? Be as specific as possible and include sources of data.

There are no additional workforce needs in the state for the proposed change.

11. Provide any other information that might be helpful to the Board of Regents in considering this request.

March 24, 2017

Proposal: Renaming the Agricultural Biochemistry major

The faculty in the Roy J. Carver Department of Biochemistry, Biophysics, and Molecular Biology propose that the name of the Agricultural Biochemistry undergraduate major in CALS be changed to “Biochemistry”. This proposed change of name was voted on and approved by the BBMB faculty on Jan. 23, 2017. No changes in the curricular requirements of the major are requested.

Examination of the current curricular requirements of the Agricultural Biochemistry major shows that it is a rigorous, basic science major with significant course requirements in Biochemistry, Chemistry, Biology, Physics, and Mathematics. However, there is no obvious “Agricultural” requirement. The major has a number of Biochemistry elective courses (taken from a Departmental list) that if a student so chooses could give an Agricultural experience, but by making other elective courses the student may complete the major entirely as a basic science major. Many students take a program of courses that is not different in the basic science courses taken by Biochemistry majors in LAS. Changing the name will more accurately reflect what the major actually is, a rigorous, basic science major suitable for CALS students who are interested in diverse areas of Biochemistry. Changing the name will in no way restrict or reduce the ability of students who wish to have an Agricultural experience from taking Agriculture-oriented electives.

This proposed change is in line with the direction taken by CALS. Some 10 years ago, the College of Agriculture changed its name to the College of Agriculture and Life Sciences to reflect the fact that the college has significant research and teaching expertise in basic life sciences beyond Agriculture. Renaming the major will indicate that CALS students can have training and career interests in Biochemistry beyond Agriculture.

Please let me know if addition information is needed for consideration of our request.

Mark Hargrove, Professor
BBMB Curriculum Committee Chair

Sample 4-year plan for Biochemistry in CALS (Unchanged)

Freshman			
Fall	Credits	Spring	Credits
CHEM 201	5	MATH 166	4
CHEM 201L	1	ENGL 150	3
MATH 165	4	BBMB 102	1
BIOL 211	3	BIOL 212	3
BIOL 211L	1	LIB 160	1
BBMB 101	1	CHEM 211	2
		CHEM 211L	2
	15		16
Sophomore			
Fall	Credits	Spring	Credits
PHYS 221	5	PHYS 222	5
CHEM 331	3	CHEM 332	3
CHEM 331L	1	BIOL 314	3
BIOL 313	3	BBMB 201	2
ENGL250	3	MATH 265	3
	15		16
Junior			
Fall	Credits	Spring	Credits
BBMB 404	3	BBMB 405	3
SP CM 212	3	Social Science	3
Ethics	3	Biochem Elective	3
Humanities	3	Elective	3
Elective	3	Elective	3
	15		15
Senior			
Fall	Credits	Spring	Credits
BBMB 411	4	CHEM 325	3
CHEM 324	3	BBMB 461	2
Biochem Elective	3	BBMB 561L	2
Elective	3	Biochem Elective	3
Elective	3	Biochem Elective	3
		Elective	3
	16		16

Credit requirements for Biochemistry majors in CALS and LAS

Course Requirements (Credit Hours)	CALS	LAS
BBMB 101	1	1
BBMB 102	1	1
BBMB 201	2	2
BBMB 404 (3 cr) OR 504 & 505 (4cr)	3 or 4	3 or 4
BBMB 405 (3 cr) OR 506 & 507 (4cr)	3 or 4	3 or 4
BBMB 411	4	4
CHEM 201 (5cr) OR CHEM 177 178 (7cr)	5 or 7	5 or 7
CHEM 201L or 177N or 177L	1	1
CHEM211 and 211L	4	4
CHEM 324 (3cr)	3	3
CHEM 325 (3cr)	3	3
CHEM 331 and 332 (6cr)	6	6
CHEM 333L (2cr) OR CHEM 331L (1cr)	1 or 2	1 or 2
MATH 165 (4cr)	4	4
MATH 166 (4cr)	4	4
MATH 265 (4cr) OR 266 (3cr) OR 267 (3cr)	3 or 4	3 or 4
PHYS 221 AND 222	10	10
BIOL 211 AND 212	6	6
BIOL 211L OR 212L OR 313L	1	1
BIOL 313	3	3
BIOL 314	3	3
SCIENCE/AG SCIENCE ELECTIVES	9	4
BBMB 461 (2cr)		2
CHEM 322L (3cr) OR BBMB 561 (2cr)		2 or 3
CHEM 322L (3cr) OR BBMB 461 (2cr) and BBMB 561L (2cr)	3 or 4	
CHEM 334L (2cr) OR 332L (1cr)		1 or 2
TOTALS CREDITS	83 to 90 (depending on options above)	80 to 88
TOTAL FOR DEGREE	120	120

Memorandum of Agreement

Name Change in BBMB for Undergraduate B.S. Major from Agricultural Biochemistry to Biochemistry

College of Agriculture and Life Sciences and College of Liberal Arts and Sciences

This memorandum of agreement articulates the terms under which both college deans support the proposed name change of the undergraduate B.S degree in agricultural biochemistry, administered by the College of Agriculture and Life Sciences (CALs). By changing the name from "agricultural biochemistry" to "biochemistry", the degree administered by CALs will carry the same name as the current undergraduate B.S. degree in biochemistry, administered by the College of Liberal Arts and Sciences (LAS). The two degrees share the same core science requirements but differ in the general education courses required by the two colleges. The name change will put the biochemistry degree on the same footing as the biology and genetics degrees, which are each jointly offered through both colleges.

Both colleges recognize that the elimination of a difference in the name of the degree can potentially lead to changes in enrollment, with associated budget implications for the colleges. To alleviate such concerns, the colleges agree to a three-year trial period, starting upon final approval by the ISU Faculty Senate and University Administration, in which net tuition revenue will be shared as follows:

- Students will be allowed to choose their home college.
- The portion of net tuition revenue generated by student credit hours (SCH) produced by BBMB will continue to be shared based on a negotiated formula (the so-called SCH split). This formula allocates revenue to each college based on the fraction of the department budget contributed by each college. This is currently 50% to each college.
- For the first three years after the name change goes into effect, the colleges will continue to share revenue based on the percentages specified below, irrespective of the students' home colleges or changes in enrollment. The percentage split will include revenue from the proposed differential tuition as well as international tuition, which is now distributed according to the RMM. Student enrollments by year, college, and residency are shown in the table below for the last three years. For these three years,

LAS received an average of 83.84% of resident and 93.41% of non-resident undergraduate tuition, and would have received 89.36% of international tuition if the latter had been included in the RMM at the time. CALS received an average of 16.16% of resident and 6.59% of non-resident undergraduate tuition, and would have received 10.64% of international tuition if the latter had been included in the RMM at the time.

- Following the three-year transition period, the enrollment portion of net tuition revenue will be distributed according to the students' home colleges.
- The three-year transition period gives the colleges enough time to gauge the effect of the name change on their revenue and to adjust their support of the BBMB budget accordingly.

Undergraduate headcount of enrolled BBMB majors, by year, college, and residency

	2015-16			2016-17			2017-18			3-year average		
	R	NR	I	R	NR	I	R	NR	I	R	NR	I
CALS	22	3	1	17	4	2	14	4	2	17.67	3.67	1.67
LAS	86	51	16	102	54	17	87	51	9	91.67	52.00	14.00

R= resident; NR = non-resident; I international

Joe Colletti 6/26/2018

Joe Colletti
Interim Dean, CALS

Date

Beate Schmittmann

6/26/18

Beate Schmittmann
Dean, LAS

Date

Academic Program Approval Voting Record

This document is to be appended as the last page of the proposal for any new or revised academic program to record the successive votes of approval as the proposal moves through its required review and approval steps. Consult Faculty Handbook Section 10.8 or the Faculty Senate Curriculum Committee website for information regarding Committee review and voting requirements for each action.

Curricular Action: (check appropriate boxes below)

1. New Program Name Change Discontinuation Concurrent Degree for:
2. Undergraduate Major Graduate Major Undergraduate Minor Graduate Minor
 Undergraduate Certificate Graduate Certificate Other: _____
3. Name of Proposed Change: Agricultural Biochemistry to Biochemistry _____
4. Name of Contact Person: Mark Hargrove e-mail address: msh@iastate.edu
5. Primary College: CALS Secondary College: _____
6. Involved Department(s): BBMB _____

Voting record for this curricular action:

Voting Body	Votes			Date of Vote
	For	Against	Abstain	
Dept. or Program Committee				
Dept.	19	1	0	1/23/2017
College Curriculum Committee				
CALS Curriculum Committee	16	0	0	4/24/2017
LAS Curriculum Committee	7	0	1	12/1/2017
College Approval Vote				
CALS Faculty	70	4	2	12/21/2017
Faculty Senate Curriculum Committee	7	0	0	2/2/2018
Faculty Senate Academic Affairs Council				
Faculty Senate				