

# Program Change Request

## New Program Proposal

Date Submitted: 10/05/18 9:53 am

Viewing: **BIOL-BA : Ecology, Evolution, and Organismal Biology**

Last edit: 10/14/18 3:07 pm

Changes proposed by: dyanv

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Biology
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Arts - BA
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	26.1310
Program Name	Ecology, Evolution, and Organismal Biology
Do you intend to offer a track(s)?	No
Location(s) of Instruction	Lawrence
Do you intend for this program to be offered online?	No
Effective Catalog	2019 - 2020

### In Workflow

- A. CLAS Dean or Associate Dean
- B. Provost's Office
- C. CLAS Undergraduate Program and Course Coordinator
- D. CUSA Subcommittee
- E. CUSA Committee
- F. CAC
- G. CLAS Final Approval
- H. OIRP CIP Approval
- I. Provost's Office
- J. COCAO 1st Reading
- K. COCAO 2nd Reading
- L. COPS
- M. BOR
- N. Future Academic Catalog

### Approval Path

- A. 10/05/18 9:51 am  
Rachel Schwien (rschwien): Rollback to Initiator
- B. 10/22/18 7:38 pm  
Karen Ledom (kjh): Approved for CLAS Dean or Associate Dean
- C. 11/14/18 12:41 pm  
Linda Luckey (lluckey): Approved for Provost's Office
- D. 11/15/18 3:11 pm  
Rachel Schwien

(rschwie):  
 Approved for  
 CLAS  
 Undergraduate  
 Program and  
 Course  
 Coordinator  
 E. 11/15/18 3:12  
 pm  
 Rachel  
 Schwien  
 (rschwie):  
 Approved for  
 CUSA  
 Subcommittee  
 F. 11/15/18 3:12  
 pm  
 Rachel  
 Schwien  
 (rschwie):  
 Approved for  
 CUSA  
 Committee

### Program Description

This academic program focuses on the integration of biological systems at the whole organism level, and on how living organisms exist in populations, species, and communities within their environment. Core classes such as genetics, physiology, ecology, and evolutionary biology are combined with courses such as biochemistry, statistics, and systematics or organismal diversity to provide a strong foundation in biology. Students choose electives from a diverse set of classes that allow them to focus on areas of interest.

### Demand/Need for the Program

We are requesting two new degrees; Bachelor of Science and Bachelor of Arts in Ecology, Evolution, and Organismal Biology (EEOB).

Importantly, the B.S. degree in EEOB is currently a sub-plan under the B.S. in Biology. There are no changes to the curriculum being requested for the B.S. - only adding a new stand-alone B.S. in EEOB degree and eliminating the sub-plan offering.

The B.A. degree in EEOB is a new degree. The curriculum for the B.A. is very similar to the B.S. degree, with a reduction of general science and degree specific requirements to enable second language proficiency course work.

Over 170 students are current BS Biology sub-plan EEOB majors and over 300 BA Biology majors are currently enrolled. Among the reasons for this request is a response to student desire (and disappointment). Students have frequently expressed their disappointment that their degree name (just Biology) does not reflect an area of sub-interest.

Most importantly, the degree nomenclature does not fully reflect their expertise/knowledge when applying for employment or professional development, possibly placing them at a disadvantage.

Additionally, these modifications reflect the emphasis and diversity in contemporary Biology. These modifications would mirror the other stand-alone B.S. and B.A. degrees in Microbiology and Biochemistry, as well as the Ph.D. offerings in the Department of Ecology & Evolutionary Biology.

Moving these sub-plans into stand-alone degrees would enhance the exposure to already popular degrees, likely increasing the awareness and attraction for coming to KU for these degrees.

Lastly, top tier universities have begun offering undergraduate degrees in Ecology, Evolution, and Organismal Biology or similar titles. These include Brown, Vanderbilt, and Arizona.

### Comparative/Locational Advantage

With the exception of the University of Northern Iowa, state universities including the other Kansas Board of Regent's universities in our region do not offer a degree in EEOB. Given the excellent universities (above) that do offer this degree, a stand-alone degree provides a recruiting advantage for the University of Kansas and bolsters our standing as the flagship research university in Kansas.

Admission  
 Requirements

## Undergraduate Admission

### Admission to KU

All students applying for admission must send high school and college transcripts to the Office of Admissions. Unless they are college transfer students with at least 24 hours of credit, prospective students must send ACT or SAT scores to the Office of Admissions. Prospective first-year students should be aware that KU has qualified admission requirements that all new first-year students must meet to be admitted. Consult the [Office of Admissions](#) for application deadlines and specific admission requirements.

Visit the [Office of International Student and Scholar Services](#) for information about international admissions.

Students considering transferring to KU may see how their college-level course work will transfer on the [Office of Admissions](#) website.

## Admission to the College of Liberal Arts and Sciences

Admission to the College is a different process from admission to a major field. Some CLAS departments have admission requirements. See individual department/program sections for departmental admission requirements.

## First- and Second-Year Preparation

Because biology study requires preparation in other sciences, students should begin meeting major requirements in the first year. It is particularly important to take [CHEM 130](#) and [CHEM 135](#) in the first year and, for several majors, to take [CHEM 330](#), [CHEM 331](#), [CHEM 335](#), and [CHEM 336](#) in the second year. Ideally, most majors should also take [BIOL 150](#) and [BIOL 152](#) during the first year, as well as BIOL 105. Students who have taken [BIOL 100](#) and [BIOL 102](#), have earned an A or B in both courses, and have decided to major in a biological science should consult a UBP advisor to request permission to substitute [BIOL 100](#) and [BIOL 102](#) for [BIOL 150](#).

[Degree Requirements](#)

### Course List

Code	Title	Hours
<b>General Science Requirements</b>		
<a href="#">BIOL 105</a>	<b>Biology Orientation Seminar</b>	<b>1</b>
<a href="#">CHEM 130</a>	<b>General Chemistry I</b>	<b>5</b>
<a href="#">CHEM 135</a>	<b>General Chemistry II</b>	<b>5</b>
<a href="#">CHEM 330</a>	<b>Organic Chemistry I</b>	<b>3</b>
<a href="#">CHEM 331</a>	<b>Organic Chemistry I Laboratory</b>	<b>2</b>
<b>Choose one of the following:</b>		<b>4-6</b>
<a href="#">MATH 115</a> & <a href="#">MATH 116</a>	<b>Calculus I and Calculus II</b>	
<a href="#">MATH 125</a>	<b>Calculus I</b>	
<b>Choose one of the following:</b>		<b>8-9</b>
<a href="#">PHSX 114</a> & <a href="#">PHSX 115</a>	<b>College Physics I and College Physics II</b>	
<a href="#">PHSX 211</a> & <a href="#">PHSX 216</a> & <a href="#">PHSX 212</a> & <a href="#">PHSX 236</a>	<b>General Physics I and General Physics I Laboratory and General Physics II and General Physics II Laboratory</b>	
<b>Ecology, Evolution, and Organismal Biology Requirements</b>		
<a href="#">BIOL 150</a> or <a href="#">BIOL 151</a>	<b>Principles of Molecular and Cellular Biology</b>	<b>4</b>
<a href="#">BIOL 152</a> or <a href="#">BIOL 153</a>	<b>Principles of Organismal Biology</b>	<b>4</b>
<a href="#">BIOL 350</a> or <a href="#">BIOL 360</a>	<b>Principles of Genetics</b>	<b>4</b>
<a href="#">BIOL 412</a>	<b>Principles of Genetics, Honors</b>	<b>4</b>
<a href="#">BIOL 413</a>	<b>Evolutionary Biology</b>	<b>4</b>
<a href="#">BIOL 414</a>	<b>History and Diversity of Organisms</b>	<b>3</b>
<a href="#">BIOL 414</a>	<b>Principles of Ecology</b>	<b>3</b>
<a href="#">BIOL 428</a>	<b>Introduction to Systematics</b>	<b>3</b>
<a href="#">BIOL 570</a>	<b>Introduction to Biostatistics</b>	<b>4</b>
<a href="#">BIOL 599</a>	<b>Senior Seminar: _____</b>	<b>1</b>
<b>Biology Elective and Laboratory Requirements</b>		<b>6</b>

**BIOL courses numbered 400 or higher, including greater than or equal to 4 hours of lab credit. No more than 3 hours of [BIOL 423 Non-Lab Independent Study](#) and/or [BIOL 424 Independent Study](#) (combined) can be applied toward the elective requirement, with no more than 2 hours of [BIOL 424](#) being applied toward the laboratory requirement.**

### Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

#### Major Hours

Satisfied by 36 hours of major courses

#### Major Hours in Residence

Satisfied by a minimum of 15 hours of KU resident credit in the major.

#### Major Junior/Senior Hours

Satisfied by a minimum of 28 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**

Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F's and repeated courses. See the Semester/Cumulative GPA calculator (<http://clas.ku.edu/undergrad/tools/gpa>).

## Faculty Profile

<b>Name of Faculty and Rank</b>	<b>Highest Degree</b>	<b>Number of Faculty FTE</b>
Folashade Agosto	Ph.D.	1
Helen Alexander	Ph.D.	1
K. Christopher Beard	Ph.D.	1
James Bever	Ph.D.	1
Sharon Billings	Ph.D.	1
Justin Blumenstiel	Ph.D.	1
Rafe Brown	Ph.D.	1
Amy Burgin	Ph.D.	1
Paulyn Cartwright	Ph.D.	1
Gerrit deBoer	Ph.D.	1
Frank deNoyelles	Ph.D.	1
Michael Engel	Ph.D.	1
Bryan Foster	Ph.D.	1
Jennifer Gleason	Ph.D.	1
Richard Glor	Ph.D.	1
Christopher Hauffer	Ph.D.	1
Lena Hileman	Ph.D.	1
Mark Holder	Ph.D.	1
Kirsten Jensen	Ph.D.	1
John Kelly	Ph.D.	1
Leonard Krishtalka	Ph.D.	1
Bruce Lieberman	Ph.D.	1
Craig Martin	Ph.D.	1
Edward Martinko	Ph.D.	1
Mark Mort	Ph.D.	1
Robert Moyle	Ph.D.	1
Maria Orive	Ph.D.	1
A. Townsend Peterson	Ph.D.	1
Raymond Pierotti	Ph.D.	1
Daniel Reuman	Ph.D.	1
Andrew Short	Ph.D.	1
Ben Sikes	Ph.D.	1
Deborah Smith	Ph.D.	1
Wm. Leo Smith	Ph.D.	1
Jorge Soberón	Ph.D.	1
James Thorp	Ph.D.	1
James Walters	Ph.D.	1
Joy Ward	Ph.D.	1

## Student Profile

Anticipated student enrollment			
	Full Time	Part Time	Total
Year 1	100	5	105
Year 2	100	5	105
Year 3	100	5	105

Anticipated number of program graduates	
After 5 Years	100
After 7 Years	100

#### Academic Support

No new support needed. Modification of existing program with existing resources.

#### Facilities and Equipment

No new support needed. Modification of existing program with existing resources.

#### Program Review, Assessment, Accreditation

As part of the Department of Ecology & Evolutionary Biology, this degree and associated educational components are reviewed approximately every 5-7 years.

#### Costs, Financing

	Salaries	OOE	Equipment	Other	TOTAL
Year 1	0	0	0	0	0
Year 2	0	0	0	0	0
Year 3	0	0	0	0	0

#### What is the source of the new funds?

No new support needed. Modification of Existing degree program with existing resources.

#### Rationale for proposal

Over 170 students are current BS Biology sub-plan EEOB majors and over 300 BA Biology majors are currently enrolled, but there is no EEOB BA currently available. Students have frequently expressed their disappointment that their degree name (just Biology) does not reflect a sub-interest. Most importantly, the degree nomenclature does not fully reflect their expertise/knowledge when applying for employment or professional development.

#### Additional Information

#### Supporting Documents

#### Program Reviewer Comments

**Rachel Schwien (rschwien) (10/05/18 9:51 am):** Rollback: Per request by Dyan for additional edits  
**Karen Ledom (kjh) (10/14/18 3:07 pm):** edited total hours and jr/sr hours in major. pre-reqs are not to be included in these totals.

Key: 637



# Program Change Request

## New Program Proposal

Date Submitted: 10/01/18 8:54 am

Viewing: **BIOL-BS : Ecology, Evolution, and Organismal Biology**

Last edit: 10/18/18 2:33 pm

Changes proposed by: dyanv

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Consulting Department(s)	
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Program Name	Ecology, Evolution, and Organismal Biology
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- C. 11/14/18 12:42 pm  
Linda Luckey (lluckey): Approved for Provost's Office
- D. 11/15/18 3:11 pm  
Rachel Schwien

(rschwien):  
 Approved for  
 CLAS  
 Undergraduate  
 Program and  
 Course  
 Coordinator  
 E. 11/15/18 3:12  
 pm  
 Rachel  
 Schwien  
 (rschwien):  
 Approved for  
 CUSA  
 Subcommittee  
 F. 11/15/18 3:12  
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 Rachel  
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### Admission

#### Requirements

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#### Degree Requirements

#### Course List

Code	Title	Hours
<b>General Science Requirements</b>		
<a href="#">BIOL 105</a>	Biology Orientation Seminar	1
<a href="#">CHEM 130</a>	General Chemistry I	5
<a href="#">CHEM 135</a>	General Chemistry II	5
<a href="#">CHEM 330</a>	Organic Chemistry I	3
<a href="#">CHEM 331</a>	Organic Chemistry I Laboratory	2
Choose one of the following:		4-6
<a href="#">MATH 115</a>	Calculus I	
& <a href="#">MATH 116</a>	and Calculus II	
<a href="#">MATH 125</a>	Calculus I	
Choose one of the following:		8-9
<a href="#">PHSX 114</a>	College Physics I	
& <a href="#">PHSX 115</a>	and College Physics II	
<a href="#">PHSX 211</a>	General Physics I	
& <a href="#">PHSX 216</a>	and General Physics I Laboratory	
& <a href="#">PHSX 212</a>	and General Physics II	
& <a href="#">PHSX 236</a>	and General Physics II Laboratory	
<a href="#">BIOL 600</a>	Introductory Biochemistry, Lectures	3
<b>Ecology, Evolution, and Organismal Biology Requirements</b>		
<a href="#">BIOL 150</a>	Principles of Molecular and Cellular Biology	4
or <a href="#">BIOL 151</a>	Principles of Molecular and Cellular Biology, Honors	
<a href="#">BIOL 152</a>	Principles of Organismal Biology	4
or <a href="#">BIOL 153</a>	Principles of Organismal Biology, Honors	
<a href="#">BIOL 350</a>	Principles of Genetics	4
or <a href="#">BIOL 360</a>	Principles of Genetics, Honors	
<a href="#">BIOL 400</a>	Fundamentals of Microbiology	3
or <a href="#">BIOL 544</a>	Comparative Animal Physiology	
<a href="#">BIOL 412</a>	Evolutionary Biology	4
<a href="#">BIOL 413</a>	History and Diversity of Organisms	3
<a href="#">BIOL 414</a>	Principles of Ecology	3
<a href="#">BIOL 428</a>	Introduction to Systematics	3
<a href="#">BIOL 570</a>	Introduction to Biostatistics	4
<a href="#">BIOL 599</a>	Senior Seminar: _____	1

#### Ecology, Evolution, and Organismal Biology Elective Hours

Satisfied by completing 15 hours of BIOL courses numbered 400 or higher, including at least 4 hours of lab credit and 2 hours of seminar/topics courses ([BIOL 419](#), [420](#), [499](#), [701](#)). No more than 5 hours of [BIOL 423](#) Non-Lab Independent Study and/or [BIOL 424](#) Independent Study (combined) can be applied to the elective requirement, with no more than 2 hours of [BIOL 424](#) being applied to the laboratory requirement. The Undergraduate Biology Program must approve exceptions to these elective requirements.

#### Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

##### Major Hours

Satisfied by 48 hours of major courses.

##### Major Hours in Residence

Satisfied by a minimum of 15 hours of KU resident credit in the major.

##### Major Junior/Senior Hours

Satisfied by a minimum of 40 hours from junior/senior courses (300+) in the major.



**Major Junior/Senior Graduation GPA**

Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F's and repeated courses. See the Semester/Cumulative GPA Calculator (<http://clas.ku.edu/undergrad/tools/gpa>).

## Faculty Profile

<b>Name of Faculty and Rank</b>	<b>Highest Degree</b>	<b>Number of Faculty FTE</b>
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Rafe Brown	Ph.D.	1
Amy Burgin	Ph.D.	1
Pauly Cartwright	Ph.D.	1
Gerrit deBoer	Ph.D.	1
Frank deNoyelles	Ph.D.	1
Michael Engel	Ph.D.	1
Bryan Foster	Ph.D.	1
Jennifer Gleason	Ph.D.	1
Richard Glor	Ph.D.	1
Christopher Haufler	Ph.D.	1
Lena Hileman	Ph.D.	1
Mark Holder	Ph.D.	1
Kirsten Jensen	Ph.D.	1
John Kelly	Ph.D.	1
Leonard Krishtalka	Ph.D.	1
Bruce Lieberman	Ph.D.	1
Craig Martin	Ph.D.	1
Edward Martinko	Ph.D.	1
Mark Mort	Ph.D.	1
Robert Moyle	Ph.D.	1
Maria Orive	Ph.D.	1
A. Townsend Peterson	Ph.D.	1
Raymond Pierotti	Ph.D.	1
Daniel Reuman	Ph.D.	1
Andrew Short	Ph.D.	1
Ben Sikes	Ph.D.	1
Deborah Smith	Ph.D.	1
Wm. Leo Smith	Ph.D.	1
Jorge Soberón	Ph.D.	1
James Thorp	Ph.D.	1
James Walters	Ph.D.	1
Joy Ward	Ph.D.	1

Student Profile

Anticipated student enrollment			
	Full Time	Part Time	Total
Year 1	150	0	150
Year 2	150	0	150
Year 3	150	0	150

Anticipated number of program graduates	
After 5 Years	150
After 7 Years	150

Academic Support

No new support needed. Modification of existing program with existing resources.

Facilities and Equipment

No new support needed. Modification of existing program with existing resources.

Program Review, Assessment, Accreditation

As part of the Department of Ecology & Evolutionary Biology, this degree and associated educational components are reviewed approximately every 5-7 years.

Costs, Financing

	Salaries	OOE	Equipment	Other	TOTAL
Year 1	0	0	0	0	0
Year 2	0	0	0	0	0
Year 3	0	0	0	0	0

What is the source of the new funds?

No new support needed. Modification of existing degree program with existing resources.

Rationale for proposal

Over 170 students are current BS Biology sub-plan EEOB majors. Students have frequently expressed their disappointment that their degree name (just Biology) does not reflect a sub-interest. Most importantly, the degree nomenclature does not fully reflect their expertise/knowledge when applying for employment or professional development.

Additional Information

Supporting Documents

Program Reviewer Comments

**Rachel Schwien (rschwien) (10/01/18 8:49 am):** Rollback: per your request for additional edits  
**Karen Ledom (kjh) (10/14/18 3:27 pm):** proposal exceeds maximum hours allowed for BS degrees by 1 hour. Emailed department.

Key: 639



# Program Change Request

## New Program Proposal

Date Submitted: 09/18/18 3:54 pm

Viewing: **BIOL-MIN : Minor in Biotechnology**

Last edit: 10/14/18 3:36 pm

Changes proposed by: dyanv

Academic Career	Undergraduate, Lawrence
Program Type	Minor
Department/ Program	Biology
School/College	College of Lib Arts & Sciences
Consulting School(s)/College(s)	
Consulting Department(s)	
Program Name	Minor in Biotechnology
Do you intend to offer a track(s)?	No
Location(s) of Instruction	Edwards
Do you intend for this program to be offered online?	No
Effective Catalog	2019 - 2020

### In Workflow

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- B. Provost's Office
- C. CLAS Undergraduate Program and Course Coordinator
- D. CUSA Subcommittee
- E. CUSA Committee
- F. CAC
- G. CLAS Final Approval
- H. OIRP CIP Approval
- I. Provost's Office
- J. COCAO 1st Reading
- K. Future Academic Catalog

### Approval Path

- A. 10/22/18 7:38 pm  
Karen Ledom (kjh): Approved for CLAS Dean or Associate Dean
- B. 11/14/18 1:06 pm  
Linda Luckey (lluckey): Approved for Provost's Office
- C. 11/15/18 3:13 pm  
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
- D. 11/15/18 3:14 pm  
Rachel Schwien (rschwien):

Approved for  
CUSA  
Subcommittee  
E. 11/15/18 3:14  
pm  
Rachel  
Schwien  
(rschwien):  
Approved for  
CUSA  
Committee

### Program Description

The biotechnology minor is designed for students seeking to broaden their science content-knowledge and gain cutting-edge, hands-on training in biotech research methods. This minor will help prepare students for the demands of STEM-related graduate programs and the demands of careers in the biotech industry.

### Demand/Need for the Program

There are more than 245 biotech companies that employ over 28,000 people in the Kansas City region. These companies have a significant and growing demand for scientists trained in biotechnology. These companies have expressed a need for scientists trained in functional laboratory skills and research methods. The biotech minor will enhance access to course offerings (B.A.S. in Biotechnology) specifically designed to delivery training on these highly needed skills.

### Comparative/Locational Advantage

Unfortunately, the KC region currently does not have an established undergraduate-level biotechnology minor at any 4-year institution. KU is well-positioned to take advantage of the booming growth in biotech and establish the leading role in this educational sector.

### Admission Requirements

The prerequisites for this minor articulate well with STEM-related degree programs (A.S. degrees at community colleges and bachelor's degrees at 4-year colleges). The general science requirements for admissions are as follows—

General Chemistry I & II, Organic Chemistry I, General Molecular Biology, General Organismal Biology, Genetics, or associates degree in related science field.

### Degree Requirements

#### Course List

Code	Title	Hours
<a href="#">BTEC 300</a>	<b>Research Methods in Biotechnology</b>	<b>3</b>
<a href="#">BTEC 305</a>	<b>Molecular and Microbiological Techniques</b>	<b>4</b>
<a href="#">BTEC 400</a>	<b>Applied Immunology</b>	<b>3</b>
<a href="#">BTEC 475</a>	<b>Applied Separation Science and Quantitative Analysis</b>	<b>6</b>
<a href="#">BTEC 550</a>	<b>Applied Bioinformatics</b>	<b>2</b>

Total: 18 Credit Hours

### Faculty Profile

Name of Faculty and Rank	Highest Degree	Number of Faculty FTE
Dr. Randall Logan	Ph.D.	1.0
Dr. Jack Trembl	Ph.D.	1.0

### Student Profile

#### Anticipated student enrollment

	Full Time	Part Time	Total
<b>Year 1</b>	1	0	1
<b>Year 2</b>	2	0	2
<b>Year 3</b>	4	0	4

#### Anticipated number of program graduates

<b>After 5 Years</b>	15
<b>After 7 Years</b>	20

### Academic Support

No additional resources required.

### Facilities and Equipment

No additional resources required.

**Program Review, Assessment, Accreditation**

Program review will occur every two years.

Assessment of student learning occurs continuously throughout all courses.

Biotechnology has no accrediting body.

**Costs, Financing**

	Salaries	OOE	Equipment	Other	TOTAL
Year 1	0	0	0	0	0
Year 2	0	0	0	0	0
Year 3	0	0	0	0	0

**What is the source of the new funds?**

No additional funding sources required for this minor.

**Rationale for proposal**

There are >245 biotech companies employing >28,000 people in the KC region. These companies have a significant, growing demand for scientists trained in biotechnology. Unfortunately, the KC region currently does not have an established undergraduate-level biotechnology minor at any 4-year institution. KU is well-positioned to take advantage of the booming growth in biotech and establish the leading role in this educational sector.

**Additional Information**

The biotech minor enhances access to courses specifically designed to deliver training on highly needed functional laboratory skills and knowledge of research methods. This minor will allow KU to capitalize on the existing curriculum and courses established in the B.A.S. in Biotechnology with no additional investments in facility FTE or faculty upgrades.

**Supporting Documents**

**Program Reviewer Comments**

**Dyan Morgan (dyanv) (09/18/18 3:55 pm):** Just noticed that language below refers to certificate rather than minor. Would like to change those sections if possible.

Key: 641



# Program Change Request

## New Program Proposal

Date Submitted: 04/03/18 8:08 pm

Viewing: **GEOL-MIN : Petroleum Geology Minor**

Last edit: 10/15/18 8:35 am

Changes proposed by: stearns

Academic Career	Undergraduate, Lawrence		
Program Type	Minor		
Department/ Program	Geology		
School/College	College of Lib Arts & Sciences		
Consulting School(s)/College(s)			
Consulting Department(s)	<table border="1"> <tr> <th>Department(s)</th> </tr> <tr> <td>Geology</td> </tr> </table>	Department(s)	Geology
Department(s)			
Geology			
Program Name	Petroleum Geology Minor		
Do you intend to offer a track(s)?	No		
Location(s) of Instruction	Lawrence		
Do you intend for this program to be offered online?	No		
Effective Catalog	2019-2020		

### In Workflow

- A. CLAS Dean or Associate Dean
- B. Provost's Office
- C. CLAS Undergraduate Program and Course Coordinator
- D. CUSA Subcommittee
- E. CUSA Committee
- F. CAC
- G. CLAS Final Approval
- H. OIRP CIP Approval
- I. Provost's Office
- J. COCAO 1st Reading
- K. Future Academic Catalog

### Approval Path

- A. 09/21/18 10:01 am  
Karen Ledom (kjh): Approved for CLAS Dean or Associate Dean
- B. 10/14/18 2:25 pm  
Linda Luckey (lluckey): Approved for Provost's Office
- C. 10/15/18 8:36 am  
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
- D. 11/06/18 1:33 pm  
Rachel Schwien (rschwien):

Approved for  
CUSA  
Subcommittee  
E. 11/14/18 10:35  
am  
Rachel  
Schwien  
(rschwien):  
Approved for  
CUSA  
Committee

### Program Description

The minor requires 18 hours of courses in geology or geophysics, all of which are important components of the scientific basis of the understanding of, searching for and producing oil and gas. Oil and gas are found in sedimentary rocks that have been more or less deformed by tectonic processes. Geophysical investigations, especially reflection seismology, are the primary means of identifying favorable places to drill for hydrocarbons and are keys in optimizing the recovery process. Courses that may be chosen as part of the minor program include basic upper-division and advanced (senior or graduate level) classes in sedimentology, structural geology and tectonics, geophysics, and field geology. Nine of those 18 required hours are already met by courses required for degrees in Petroleum Engineering.

### Demand/Need for the Program

Petroleum and Subsurface Geology (GEOL 535) is a required course for Petroleum Engineering undergraduate majors and includes all of the senior class in that major. A survey of the 47 Petroleum Engineering students in GEOL 535 in Fall 2017 found that 38 of them would have taken this minor, if they had been offered the opportunity. Thirty-seven of those 47 students were taking the existing Geology minor, which does not emphasize the professional courses as this proposed minor does. The demand is thus a substantial fraction of Petroleum Engineering majors.

Students majoring in subjects other than Petroleum Engineering may choose to take it, as some may seek employment in the oil and gas industry, specifically majors such as physics and mechanical or chemical engineering. This minor offers an opportunity for those students to understand the geological background of the industry as well as improving their resume.

Geology and Petroleum Engineering (PE) are key aspects of the exploration and production activities or "upstream segment" of the oil and natural gas industry. This minor is intended to present Petroleum Engineering students and others with an opportunity to add to the required geology segment of their education and so enhance their professional preparation.

### Comparative/Locational Advantage

There is no analogous minor elsewhere in the southern Mid-continent. Such minors would be meaningful primarily at colleges and universities in oil-producing states and that have petroleum-engineering programs. Websites and contacts with colleagues indicate that no institutions in the Big 12 have similar programs, although most offer non-specialist geology minors. Oklahoma University indicated that they will be starting a geology minor shortly after having suspended it when too many petroleum engineering students crowded, and changed the character of, their core classes. Wichita State University and the University of Tulsa do not have minors in petroleum geology.

### Admission Requirements

### Degree Requirements

### Course List

Code	Title	Hours
<a href="#">GEOL 101</a>	<b>The Way The Earth Works</b> <sup>1</sup>	<b>3</b>
<a href="#">GEOL 103</a>	<b>Geology Fundamentals Laboratory</b> <sup>1</sup>	<b>2</b>
<a href="#">GEOL 331</a>	<b>Sedimentology and Stratigraphy</b> <sup>1</sup>	<b>4</b>
<b>Electives: Choose courses totaling at least 9 hours</b>		
<a href="#">GEOL 360</a>	<b>Field Investigation</b>	
<a href="#">GEOL 533</a>	<b>Shales and Other Mudstones</b>	
<a href="#">GEOL 535</a>	<b>Petroleum and Subsurface Geology</b> <sup>1,2</sup>	
<a href="#">GEOL 536</a>	<b>Geological Log Analysis</b> <sup>2</sup>	
<a href="#">GEOL 562</a>	<b>Structural Geology</b>	
<a href="#">GEOL 572</a>	<b>Geophysics</b>	
<a href="#">GEOL 578</a>	<b>Seismic Data Analysis and Interpretation</b>	
<a href="#">GEOL 731</a>	<b>Terrigenous Depositional Systems</b>	
<a href="#">GEOL 732</a>	<b>Carbonate Depositional Systems</b>	

<sup>1</sup> Course required for the undergraduate BS in Petroleum Engineering major

<sup>2</sup>Not open for credit toward the minor for students who are majoring in Petroleum Engineering

### Faculty Profile

Name of Faculty and Rank	Highest Degree	Number of FTE
Anthony Walton, Associate Prof. \nDiane Kamola, Associate Prof. \nJ. Douglas Walker Distinguished Prof. \nGeorge Tsoflias Prof. \nMichael Blum Distinguished Prof. \nEugene Rankey Prof. \nMichael Taylor Associate Prof.	PhD (for all)	0.35

## Student Profile

Anticipated student enrollment			
	Full Time	Part Time	Total
Year 1	10	0	10
Year 2	20	0	20
Year 3	20	0	20

Anticipated number of program graduates	
After 5 Years	30
After 7 Years	50

## Academic Support

No additional library or laboratory support seen as necessary. Enrollment will likely achieve a steady state of a fraction of the students enrolled in petroleum engineering.

## Facilities and Equipment

No additional facilities or equipment viewed as necessary.

## Program Review, Assessment, Accreditation

Program review with the periodic review of the Department of Geology. Assessment as part of the Department's on-going process. No accreditation for geology. This program will not by itself prepare students to pursue licensure as a geologist, that requires 30 undergraduate hours.

## Costs, Financing

	Salaries	OOE	Equipment	Other	TOTAL
Year 1	0	0	0	0	0
Year 2	0	0	0	0	0
Year 3	0	0	0	0	0

## What is the source of the new funds?

No additional costs are anticipated.

## Rationale for proposal

This minor will enhance the professional preparation of the Petroleum Engineering or other students who plan to enter the oil and gas industry.

## Additional Information

1. Results of survey of students taking GEOL 535
2. Survey of geology minors at Big 12 universities and two other oil-patch institutions.

## Supporting Documents

[Minors in Petroleum Geology.docx](#)  
[Proposal for a minor in Petroleum Geology.xlsx](#)

## Program Reviewer Comments

**Karen Ledom (kjh) (09/16/18 7:23 pm):** concerns about 3.00 GPA restricted minor admission. emailed department. KJL  
**Karen Ledom (kjh) (09/17/18 1:21 pm):** Department agreed (L. Stearns) to remove 3.0 admissions GPA requirement from proposal. Edit completed on their behalf.

**Karen Ledom (kjh) (09/17/18 7:36 pm):** Per follow up question I submitted, the rationale for the restriction GEOL 535 and 536 for students in the Petroleum Engineering major is intended to have students branch out and take the 9 hours of elective beyond what they would normally be required to take as a part of the Petroleum Engineering major.

**Karen Ledom (kjh) (09/21/18 10:01 am):** The College requested clarification regarding the restriction of GEOL 535 and 536 for students in the Petroleum Engineering major and the Petroleum Geology minor. The department confirmed that the reason for the restriction was so that students doing both would take 9 hours of electives beyond what they would normally be required to take between the two programs. In other words, to help students "branch out" a bit further.

Key: 618

