Course Change Request

New Course Proposal

Date Submitted: 10/26/17 2:24 pm

Viewing: CHEM 191 : Foundations of Chemistry I Laboratory, Honors

Last edit: 10/26/17 2:24 pm

Changes proposed by: drb

Programs referencing this course	PHSX-BS: Physics, B.S. GEOG-BS: Geography, B.S. BIOL-BA: Biochemistry, B.A. BIOL-BA: Microbiology, B.A. BIOL-BS: Biochemistry, B.S.
Academic Career	Undergraduate, Lawrence
Subject Code	CHEM
Course Number	191
Academic Unit	Department: Chemistry
	School/College: College of Lib Arts & Sciences
Locations	Lawrence
Do you intend to offer any portion of this course online?	No
Title	Foundations of Chemistry I Laboratory, Honors
Transcript Title	Foundations Chem I Lab, Honors
Effective Term	Fall 2018
Catalog Description	Laboratory course for students enrolled in CHEM 190
Prerequisites	Co-requisite: CHEM 190
Cross Listed Courses:	
Credits	2
Course Type	Laboratory Main (Laboratory that is a main component) (LAB)
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	Yes
Are you proposing this course for KU Core?	No
Typically Offered	Only Fall Semester
Repeatable for credit?	No
Principal Course Designator	NP - Physical Sciences
Course Designator	N - Natural Sciences

Are you proposing that the course count towards the CLAS BA degree specific requirements?

Yes

Justification for counting this course towards the CLAS BA

Students taking CHEM 190 in its current form can use it to satisfy the Laboratory or Field Experience requirement. As a separate but co-requisite lab course CHEM 191 will serve the same purpose.

How does this course meet the CLAS BA requirements?

Lab and Field Experiences (LFE)

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/28/17 3:19 pm Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:49 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:07 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Will this course be required for a degree, major, minor, certificate, or concentration?

Yes

Which Program(s)?

Program Code - Name
(CHEM-BA) Chemistry, B.A.
(CHEM-BS) Chemistry, B.S.
(CHEM-MIN) Chemistry, Minor

Describe how: The current sequence CHEM 190 +195 is one of three General Chemistry options for Chemistry majors (BS and BA), Chemistry minors, and students in a number of other majors at KU.

Rationale for Course Proposal: The University Honors Program has expressed strong interest in increasing the number of STEM Honors courses for students in the UHP. To assist with that goal, the Chemistry Department is proposing to split CHEM 190 into separate lecture and laboratory components, with the lab becoming CHEM 191 (and to do the same with CHEM 195, the second course in a two-semester general chemistry sequence).

Supporting Documents: Addendum to CHEM 190 and 195 proposals.pdf
CHEM 191 Syllabus.pdf

Course Reviewer Comments: **Rachel Schwien (rschwien) (10/19/17 8:20 am):** Rollback: per request
Rachel Schwien (rschwien) (11/07/17 10:31 am): Holding for associated changes from other departments

Key: 12349

Course Change Request

New Course Proposal

Date Submitted: 10/26/17 2:27 pm

Viewing: CHEM 196 : Foundations of Chemistry II Laboratory, Honors

Last edit: 10/26/17 2:27 pm

Changes proposed by: drb

Programs referencing this course	PHSX-BS: Physics, B.S. GEOG-BS: Geography, B.S. BIOL-BA: Biochemistry, B.A. BIOL-BA: Biology, B.A. BIOL-BA: Microbiology, B.A.
Academic Career	Undergraduate, Lawrence
Subject Code	CHEM
Course Number	196
Academic Unit	Department: Chemistry
	School/College: College of Lib Arts & Sciences
Locations	Lawrence
Do you intend to offer any portion of this course online?	No
Title	Foundations of Chemistry II Laboratory, Honors
Transcript Title	Foundations Chem II Lab Honors
Effective Term	Spring 2019
Catalog Description	Laboratory course for students enrolled in CHEM 195
Prerequisites	CHEM 130, CHEM 170, or CHEM 190 and CHEM 191 with a grade of C- or better, and permission of the instructor. Co-requisite: CHEM 195
Cross Listed Courses:	
Credits	2
Course Type	Laboratory Main (Laboratory that is a main component) (LAB)
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	Yes
Are you proposing this course for KU Core?	No
Typically Offered	Only Spring Semester
Repeatable for credit?	No
Principal Course Designator	NP - Physical Sciences
Course Designator	N - Natural Sciences
Are you proposing that the course count towards the CLAS BA degree specific requirements?	Yes

Justification for counting this course towards the CLAS BA

Students taking CHEM 195 in its current form can use it to satisfy the Laboratory or Field Experience requirement. As a separate but co-requisite lab course CHEM 196 will serve the same purpose.

How does this course meet the CLAS BA requirements?

Lab and Field Experiences (LFE)

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/28/17 3:19 pm Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:49 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:07 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Will this course be required for a degree, major, minor, certificate, or concentration?

Yes

Which Program(s)?

Program Code - Name
(CHEM-BA) Chemistry, B.A.
(CHEM-BS) Chemistry, B.S.
(CHEM-MIN) Chemistry, Minor

Describe how: The current sequence CHEM 190 +195 is one of three General Chemistry options for Chemistry majors (BS and BA), Chemistry minors, and students in many other majors at KU (do I really need to list them all? Not all of them specifically note 190/195 as an option.

Rationale for Course Proposal: The University Honors Program has expressed strong interest in increasing the number of STEM Honors courses for students in the UHP. To assist with that goal, the Chemistry Department is proposing to split CHEM 195 into separate lecture and laboratory components (and to do the same with CHEM 190, the first course in a two-semester Honors general chemistry sequence).

Supporting Documents: Addendum to CHEM 190 and 195 proposals.pdf
CHEM 196 Syllabus.pdf

Course Reviewer Comments: **Rachel Schwien (rschwien) (11/07/17 10:32 am):** Holding for associated changes from other departments

Key: 12350

Course Change Request

Date Submitted: 11/27/17 3:06 pm

Viewing: SCUL 330 : Sculpture Intercepting the Waste Stream

Also listed as: **EVRN 330**

Last approved: 02/04/17 4:31 am

Last edit: 11/27/17 3:06 pm

Changes proposed by: rschwien

Academic Career	Undergraduate, Lawrence		
Subject Code	SCUL	Course Number	330
Academic Unit	Department	Visual Art	
	School/College	School of the Arts, CLAS	

Do you intend to offer any portion of this course online?

No

Title	Sculpture Intercepting the Waste Stream
Transcript Title	Sculptr Intrcptng&Waste Stream
Effective Term	Spring 2017

Catalog Description

An introductory course using engaged learning to exploring the genre of ecological art practice (eco-art.) Class focuses on the waste stream particularly as it affects the Kansas River. Through remediation events, students build works of art from trash, in turn auctioned for environmental efforts. Creative attention is focused on ecological imbalance.

Prerequisites

Visual Art major or minor, or instructor permission.

Cross Listed Courses:

Code	Title
EVRN 330	Sculpture Intercepting the Waste Stream

Credits	3
Course Type	Laboratory Main (Laboratory that is a main component) (LAB)
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	No
Are you proposing this course for KU Core?	No
Typically Offered	Once a Year, Usually Fall
Repeatable for credit?	Yes

How many times may this course be ***taken*** 99 **- AND/OR -** For how many ***maximum credits*** 999

Can a student be enrolled in multiple sections in the same semester?

Yes

Principal Course Designator

Course Designator

N - Natural Sciences

Are you proposing that the course count towards the CLAS BA degree specific requirements?

No

Will this course be required for a degree, major, minor, certificate, or concentration?

No

Engage students in environmental issues from a creative based curriculum

In Workflow

1. **ARTS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. ARTS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/27/17 3:08 pm Rachel Schwien (rschwien): Approved for ARTS Undergraduate Program and Course Coordinator
2. 12/13/17 1:05 pm Rachel Schwien (rschwien): Approved for CUSA Subcommittee
3. 12/13/17 1:06 pm Rachel Schwien (rschwien): Approved for CUSA Committee

History

1. Feb 4, 2017 by Sydney Stone (s208s270)

Rationale for Course Proposal	
Supporting Documents	EVRN 330_ Sculpture and Intercepting the Waste Stream.pdf

Course Reviewer Comments

Key: 11902

Course Change Request

Date Submitted: 11/27/17 3:08 pm

Viewing: SCUL 362 : Art and Ecology: Inhabiting the Ecosphere

Also listed as: **EVRN 362**

Last approved: 02/04/17 4:31 am

Last edit: 11/27/17 3:08 pm

Changes proposed by: rschwien

Academic Career	Undergraduate, Lawrence		
Subject Code	SCUL	Course Number	362
Academic Unit	Department	Visual Art	
	School/College	School of the Arts, CLAS	

Do you intend to offer any portion of this course online?

No

Title	Art and Ecology: Inhabiting the Ecosphere
Transcript Title	Art and Ecology: Ecosphere
Effective Term	Spring 2017

Catalog Description

An introductory course exploring the genre of ecological art practice (eco-art) through a series of engaged learning projects that focus on habitat, the waste stream and natural resources, local ecologies and interventionist creative strategies that focus attention on ecological imbalance.

Prerequisites

Visual Art major or minor, or instructor permission.

Cross Listed Courses:

Code	Title
EVRN 362	**Art and Ecology: Inhabiting the Ecosphere**

Credits	3
Course Type	Laboratory Main (Laboratory that is a main component) (LAB)
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	No
Are you proposing this course for KU Core?	No
Typically Offered	Once a Year, Usually Spring
Repeatable for credit?	Yes

How many times may this course be ***taken*** 99 **- AND/OR -** For how many ***maximum credits*** 999

Can a student be enrolled in multiple sections in the same semester?

Yes

Principal Course Designator

Course Designator

N - Natural Sciences

Are you proposing that the course count towards the CLAS BA degree specific requirements?

No

Will this course be required for a degree, major, minor, certificate, or concentration?

No

In Workflow

1. **ARTS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. ARTS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/27/17 3:08 pm Rachel Schwien (rschwien): Approved for ARTS Undergraduate Program and Course Coordinator
2. 12/13/17 1:05 pm Rachel Schwien (rschwien): Approved for CUSA Subcommittee
3. 12/13/17 1:06 pm Rachel Schwien (rschwien): Approved for CUSA Committee

History

1. Feb 4, 2017 by Sydney Stone (s208s270)

Rationale for Course Proposal	Engaging students in environmental topics through creative practice and placing emphasis on sensory engagement, storytelling (narrative), fabrication strategies in order to elicit a range of intelligences (emotional, spatial, visual, movement based) in addition to strategies rooted in analytical modalities.
Supporting Documents	EVRN 362_ Art and Ecology_ Inhabiting the Ecosphere.pdf
Course Reviewer Comments	

Key: 11900

Course Change Request

Date Submitted: 10/26/17 2:24 pm

Viewing: CHEM 190 : Foundations of Chemistry I, Honors

Last edit: 10/26/17 2:24 pm

Changes proposed by: drb

Catalog Pages referencing this course	BS in Chemistry BS in Chemistry with concentration in Biological Chemistry BS in Chemistry with concentration in Chemical Physics Biology Undergraduate Program College of Liberal Arts & Sciences

Academic Career	Undergraduate, Lawrence		
Subject Code	CHEM	Course Number	190
Academic Unit	Department	Chemistry	
	School/College	College of Lib Arts & Sciences	

Do you intend to offer any portion of this course online?

No

Title	Foundations of Chemistry I, Honors
Transcript Title	Foundations of Chemistry I Hnr
Effective Term	**Fall 2018**

Catalog Description

CHEM 190, together with co-requisite laboratory course CHEM 191, ~~This integrated lecture and laboratory course, which is designed for qualified and motivated students having a strong interest in chemistry,~~ provides **an integrated** ~~a more thorough~~ treatment of **theoretical and experimental aspects of chemistry for qualified and highly motivated students.** ~~the concepts and topics covered in CHEM 130 and CHEM 170.~~ It is anticipated that students in CHEM 190 **and CHEM 191** plan to take more than one year of chemistry at the college level. Students with credit in CHEM 110 will have two hours added on to their total number of hours required for graduation.

Prerequisites

Prerequisite: high-school chemistry and calculus; at least one of the following: (a) acceptance into the KU Honors Program, (b) an AP exam score in chemistry of 3 or higher, (c) a mathematics ACT score of **30** ~~28~~ or higher; or permission of instructor. **Co-requisite: CHEM 191.**

Cross Listed Courses:

Credits	**3** ~~5~~
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Associated Components *(Optional)*	Discussion **optional** – **Voluntary** ~~Mandatory~~ discussion associated with a main component ~~Discussion optional - Voluntary discussion associated with a main component~~ ~~Laboratory - Associated with a main component~~
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	Yes
Are you proposing this course for KU Core?	Yes
Typically Offered	Only Fall Semester
Repeatable for credit?	No

Principal Course Designator	NP - Physical Sciences
Course Designator	N - Natural Sciences

Are you proposing that the course count towards the CLAS BA degree specific requirements?

No

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft
8. UCCC CIM Support
9. UCCC Preliminary Vote
10. UCCC Voting Outcome
11. SIS KU Core Contact
12. Registrar
13. PeopleSoft

Approval Path

1. 11/28/17 3:18 pm Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:46 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:04 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Will this course be required for a degree, major, minor, certificate, or concentration?

Yes

Which Program(s)?

Program Code - Name
(CHEM-BA) Chemistry, B.A.
(CHEM-BS) Chemistry, B.S.
(CHEM-MIN) Chemistry, Minor

Describe how: **The current sequence CHEM 190 +195 is one of three General Chemistry options for Chemistry majors (BS and BA), Chemistry minors, and students in a number of other majors at KU**

Rationale for Course Proposal: The University Honors Program has expressed strong interest in increasing the number of STEM Honors courses for students in the UHP. To help achieve that goal, the Chemistry Department is proposing to split CHEM 190 into separate lecture and laboratory components (and to do the same with CHEM 195, the second course in the two-semester Honors general chemistry sequence).

Supporting Documents: **Addendum to CHEM 190 and 195 proposals.pdf** **CHEM 190 Syllabus.pdf**

KU Core Information

Has the department approved the nomination of this course to KU Core?

Yes

Name of person giving departmental approval: **Brian Laird** Date of Departmental Approval: **10/12/17**

Selected Goal(s)

Do all instructors of this course agree to include content that enables students to meet KU Core learning outcome(s)?

Yes

Do all instructors of this course agree to develop and save direct evidence that students have met the learning outcomes(s)?

Yes

Provide an abstract (1000 characters maximum) that summarizes how this course meets the learning outcome.

CHEM 190 satisfies KU Core Goals 1.2 and 3N in its current form, and we would like for that to continue. There will be no practical change in course content associated with this proposal, as the laboratory component that is being separated out (proposed course CHEM 191) will be a co-requisite.

Selected Learning Outcome(s):

Goal 1, Learning Outcome 2

State how your course uses discussion and course assignments to teach students to solve problems using mathematical functions and numerical techniques. (Please limit responses to 1000 characters.)

N/A

State what aspects of your course or educational experience require students to apply mathematical or statistical principles to organize or process numerical information. (Please limit responses to 1000 characters.) *

N/A

State how your course or educational experience will use assignments, readings, class discussion, and lecture to require students to use specific quantitative methods to solve problems and to choose appropriate methods for given problems. (Please limit responses to 1000 characters.) *

N/A

Indicate the weight of the evidence that will be used to evaluate student performance in the tasks above and how you will use this evaluation for a supermajority (greater than or equal to 60%) of the final course grade. (Please limit responses to 1000 characters.) *
N/A

Goal 3 - Natural Sciences

State how your course or educational experience will use assignments, readings, projects, or lectures to move students from their current knowledge to a deeper understanding of specific concepts fundamental to the area(s) in question. (Please limit responses to 1000 characters.)
N/A

State what course assignments, readings, class discussions, and lectures will synthesize the development over time of the principles, theories, and analytical methods of the discipline(s). (Please limit responses to 1000 characters.)
N/A

State what learning activities will integrate the analysis of contemporary issues with principles, theories, and analytical methods appropriate to the area in question. (Please limit responses to 1000 characters.)
N/A

State what course assignments, projects, quizzes, examinations, etc. will be used to evaluate whether students have a functional understanding of the development of these concepts, and can demonstrate their capability to analyze contemporary issues using the principles, theories, and analytical methods in the academic area. (Please limit responses to 1000 characters.)
N/A

KU Core Documents

Course Reviewer Comments

Rachel Schwien (rschwien) (10/19/17 8:20 am): Rollback: per request
Rachel Schwien (rschwien) (11/07/17 10:31 am): Holding for associated changes from other departments

Key: 3000

Course Change Request

Date Submitted: 10/26/17 2:25 pm

Viewing: CHEM 195 : Foundations of Chemistry II, Honors

Last approved: 03/16/16 4:31 am

Last edit: 11/17/17 1:39 pm

Changes proposed by: drb

Catalog Pages referencing this course	BS in Chemistry BS in Chemistry with concentration in Biological Chemistry BS in Chemistry with concentration in Chemical Physics Biology Undergraduate Program College of Liberal Arts & Sciences
Academic Career	Undergraduate, Lawrence
Subject Code	CHEM
Course Number	195
Academic Unit	Department: Chemistry
	School/College: College of Lib Arts & Sciences
Do you intend to offer any portion of this course online?	No
Title	Foundations of Chemistry II, Honors
Transcript Title	Foundations of Chemistry II Hn
Effective Term	Fall **2018** ~~2016~~
Catalog Description	**CHEM 195** ~~A course designed for qualified~~ and **co-requisite laboratory course CHEM 196 continue** ~~motivated students with strong interest in chemistry to provide a more thorough treatment of~~ the **integrated theoretical** ~~concepts~~ and **experimental exploration of chemistry** topics **for qualified and highly motivated students.** ~~of advanced general chemistry. Recommended for students in the University Honors Program.~~
Prerequisites	CHEM 130, CHEM 170, or CHEM 190 **& CHEM 191** with a grade of C- or better, and permission of the instructor. **Co-requisite: CHEM 196.**
Cross Listed Courses:	
Credits	**3** ~~5~~
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Associated Components *(Optional)*	Discussion **optional** – **Voluntary** ~~Mandatory~~ discussion associated with a main component ~~Discussion optional - Voluntary discussion associated with a main component~~ ~~Laboratory - Associated with a main component~~
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	Yes
Are you proposing this course for KU Core?	Yes
Typically Offered	Only Spring Semester
Repeatable for credit?	No
Principal Course Designator	**NP - Physical Sciences**
Course Designator	N - Natural Sciences
Are you proposing that the course count towards the CLAS BA degree specific requirements?	No
Will this course be required for a degree, major, minor, certificate, or concentration?	**Yes** ~~No~~

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft
8. UCCC CIM Support
9. UCCC Preliminary Vote
10. UCCC Voting Outcome
11. SIS KU Core Contact
12. Registrar
13. PeopleSoft

Approval Path

1. 11/28/17 3:19 pm Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:46 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:04 pm Rachel Schwien (rschwien): Approved for CUSA Committee

History

1. Mar 8, 2016 by David Benson (drb)
2. Mar 16, 2016 by j775k831

Which Program(s)?

Program Code - Name
(CHEM-BA) Chemistry, B.A.
(CHEM-BS) Chemistry, B.S.
(CHEM-MIN) Chemistry, Minor

Describe how: **The current sequence CHEM 190 +195 is one of three General Chemistry options for Chemistry majors (BS and BA), Chemistry minors, and students in a number of other majors at KU.**

Rationale for Course Proposal: The University Honors Program has expressed strong interest in increasing the number of STEM Honors courses for students in the UHP. To assist with that goal, the Chemistry Department is proposing to split CHEM 195 into separate lecture and laboratory components (and to do the same with CHEM 190, the first course in the two-semester Honors general chemistry sequence).

Supporting Documents: **Addendum to CHEM 190 and 195 proposals.pdf** **CHEM 195 Syllabus.pdf**

KU Core Information

Has the department approved the nomination of this course to KU Core?

Yes

Name of person giving departmental approval: **Brian Laird** Date of Departmental Approval: **10/12/17**

Selected Goal(s)

Do all instructors of this course agree to include content that enables students to meet KU Core learning outcome(s)?

Yes

Do all instructors of this course agree to develop and save direct evidence that students have met the learning outcomes(s)?

Yes

Provide an abstract (1000 characters maximum) that summarizes how this course meets the learning outcome.

CHEM 195 satisfies KU Core Goal 3N in its current form, and we would like for that to continue. There will be no practical change in course content associated with this proposal, as the laboratory component that is being separated out (proposed course CHEM 196) will be a co-requisite.

Selected Learning Outcome(s):

Goal 3 - Natural Sciences

State how your course or educational experience will use assignments, readings, projects, or lectures to move students from their current knowledge to a deeper understanding of specific concepts fundamental to the area(s) in question. (Please limit responses to 1000 characters.)

N/A

State what course assignments, readings, class discussions, and lectures will synthesize the development over time of the principles, theories, and analytical methods of the discipline(s). (Please limit responses to 1000 characters.)

N/A

State what learning activities will integrate the analysis of contemporary issues with principles, theories, and analytical methods appropriate to the area in question. (Please limit responses to 1000 characters.)

N/A

State what course assignments, projects, quizzes, examinations, etc. will be used to evaluate whether students have a functional understanding of the development of these concepts, and can demonstrate their capability to analyze contemporary issues using the principles, theories, and analytical methods in the academic area. (Please limit responses to 1000 characters.)

N/A

KU Core Documents

Course Reviewer Comments

Rachel Schwien (rschwien) (10/19/17 8:20 am): Rollback: per request

Rachel Schwien (rschwien) (11/07/17 10:32 am): Holding for associated changes from other departments

Key: 3015

Course Change Request

Date Submitted: 11/28/17 8:31 am

Viewing: EVRN 538 : Soil Chemistry

Also listed as: GEOG 538

Last approved: 01/27/16 4:30 am

Last edit: 11/28/17 8:31 am

Changes proposed by: koerner

Catalog Pages referencing this course	EVRN 538: College of Liberal Arts & Sciences Geography and Atmospheric Science GEOG 538: College of Liberal Arts & Sciences
Academic Career	Undergraduate, Lawrence
Subject Code	EVRN
Course Number	538
Academic Unit	Department: Environmental Studies
	School/College: College of Lib Arts & Sciences
Do you intend to offer any portion of this course online?	No
Title	Soil Chemistry
Transcript Title	Soil Chemistry
Effective Term	**Spring 2018** ~~Fall 2016~~

Catalog Description

This course examines the chemical properties and processes of soils and methods of evaluation. Topics include solid and solution speciation, mineral solubility, soil colloidal behavior, ion exchange, surface complexation, soil salinity and sodicity, soil acidity, oxidation-reduction reactions, and kinetics of soil chemical processes.

Prerequisites

GEOG 335 or GEOG 535 or EVRN 335 or EVRN 535, CHEM 135 or CHEM **195 and CHEM 196,** ~~195,~~ MATH 125, or consent of the instructor.

Cross Listed Courses:

Code	Title
GEOG 538	Soil Chemistry

Credits	3
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Associated Components *(Optional)*	Laboratory - Associated with a main component
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	No
Are you proposing this course for KU Core?	No
Typically Offered	Typically Every Semester
Repeatable for credit?	No
Principal Course Designator	
Course Designator	N - Natural Sciences

Are you proposing that the course count towards the CLAS BA degree specific requirements?

No

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/28/17 9:02 am Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:47 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:04 pm Rachel Schwien (rschwien): Approved for CUSA Committee

History

1. Jan 27, 2016 by Karen Ledom (kjh)

Will this course be required for a degree, major, minor, certificate, or concentration?

No

Rationale for Course Proposal	CHEM 195 has been changed to CHEM 195 (lecture) and CHEM 196 (lab).

Course Reviewer Comments

Key: 3842

Course Change Request

Date Submitted: 11/28/17 8:27 am

Viewing: GEOG 335 : Introduction to Soil Geography

Also listed as: EVRN 335

Last edit: 11/28/17 8:27 am

Changes proposed by: koerner

Catalog Pages referencing this course	EVRN 335: College of Liberal Arts & Sciences Environmental Studies Program Geography and Atmospheric Science GEOG 335:
Academic Career	Undergraduate, Lawrence
Subject Code	GEOG
Course Number	335
Academic Unit	Department: Geography
	School/College: College of Lib Arts & Sciences
Do you intend to offer any portion of this course online?	**No**
Title	Introduction to Soil Geography
Transcript Title	Introduction to Soil Geography
Effective Term	**Spring 2018**

Catalog Description

This course focuses on the properties and processes of soils as they occur in their environment. The student is introduced to the nature of soil as it functions as a body; genesis of soils; properties of soil solids, especially colloids; soil chemical composition, properties, and reactions; interaction between solid, liquid, and gaseous components in soils; plant-soil-water relationships; biological interactions with soil; classification of soils; and the distribution of soils on the landscape. Not open to students who have taken EVRN 535 or GEOG 535.

Prerequisites

GEOG 104 or GEOL 101 or consent of instructor; BIOL 100 and CHEM 130 or CHEM 190 **and CHEM 191** recommended.

Cross Listed Courses:

Code	Title
EVRN 335	Introduction to Soil Geography

Credits	4
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Associated Components *(Optional)*	Laboratory - Associated with a main component
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	No
Are you proposing this course for KU Core?	No
Typically Offered	Once a Year, Usually Fall
Repeatable for credit?	No
Principal Course Designator	
Course Designator	N - Natural Sciences

Are you proposing that the course count towards the CLAS BA degree specific requirements?

No

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/28/17 9:03 am Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:47 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:04 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Will this course be required for a degree, major, minor, certificate, or concentration?

No

Rationale for Course Proposal	CHEM 190 has been changed to CHEM 190 (lecture) and CHEM 191 (lab).

Course Reviewer Comments

Key: 3984

Course Change Request

Date Submitted: 11/28/17 8:29 am

Viewing: GEOG 535 : Soil Geography

Also listed as: EVRN 535

Last edit: 11/28/17 8:29 am

Changes proposed by: koerner

Catalog Pages referencing this course	EVRN 535: College of Liberal Arts & Sciences Environmental Studies Program Geography and Atmospheric Science GEOG 535:
Academic Career	Undergraduate, Lawrence
Subject Code	GEOG
Course Number	535
Academic Unit	Department: Geography
	School/College: College of Lib Arts & Sciences

Do you intend to offer any portion of this course online?

No

Title	Soil Geography
Transcript Title	Soil Geography
Effective Term	**Spring 2018**

Catalog Description

A broad study of the principles and properties of soils and their distribution on the landscape. Topics covered include: pedology, clay mineralogy, soil physics, soil chemistry, management of soils, soil biology, taxonomy, and soil geomorphology. Laboratory section and a field project are required. Not open to students who have taken GEOG 335 or EVRN 335.

Prerequisites

GEOG 104 or GEOL 101 or consent of the instructor; BIOL 104 and CHEM 130 or **CHEM** 190 **and CHEM 191** recommended.

Cross Listed Courses:

Code	Title
EVRN 535	Soil Geography

Credits	4
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Associated Components *(Optional)*	Laboratory - Associated with a main component
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	No
Are you proposing this course for KU Core?	No
Typically Offered	Once a Year, Usually Fall
Repeatable for credit?	No
Principal Course Designator	
Course Designator	N - Natural Sciences

Are you proposing that the course count towards the CLAS BA degree specific requirements?

No

Will this course be required for a degree, major, minor, certificate, or concentration?

No

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/28/17 9:03 am Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:47 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:04 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Rationale for Course Proposal	CHEM 190 has been changed to CHEM 190 (lecture) and CHEM 191 (lab).

Course Reviewer Comments

Key: 4025

Course Change Request

Date Submitted: 11/21/17 9:52 am

Viewing: PHSX 313 : General Physics III

Last approved: 02/17/16 4:30 am

Last edit: 11/27/17 9:52 am

Changes proposed by: shark

Catalog Pages referencing this course	BA in Physics with concentration in Computational Physics BS in Geology with concentration in Geophysics BS in Physics with concentration in Interdisciplinary Physics BS in Physics with concentration in Pre-Professional Physics Bachelor of Arts in Physics
Academic Career	Undergraduate, Lawrence
Subject Code	PHSX
Course Number	313
Academic Unit	Department: Physics & Astronomy
	School/College: College of Lib Arts & Sciences
Do you intend to offer any portion of this course online?	No
Title	General Physics III
Transcript Title	General Physics III
Effective Term	Fall 2016
Catalog Description	Introduction to modern physics. Topics include special relativity, optics, and introductions to quantum mechanics and solid state physics.
Prerequisites	PHSX 212 and PHSX 236, or PHSX 214, or PHSX 202, or EECS 220 or EECS 221. Corequisite: MATH 320 or MATH **220 or MATH 221.** ~~220.~~
Cross Listed Courses:	
Credits	3
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	No
Are you proposing this course for KU Core?	Yes
Typically Offered	Twice a Year, Fall and Spring
Repeatable for credit?	No
Principal Course Designator	
Course Designator	N - Natural Sciences

Are you proposing that the course count towards the CLAS BA degree specific requirements?

No

Will this course be required for a degree, major, minor, certificate, or concentration?

Yes

Which Program(s)?

Program Code - Name
~~PHSX-BA~~
~~PHSX-BS~~

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft
8. UCCC CIM Support
9. UCCC Preliminary Vote
10. UCCC Voting Outcome
11. SIS KU Core Contact
12. Registrar
13. PeopleSoft

Approval Path

1. 11/27/17 9:52 am Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:47 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:04 pm Rachel Schwien (rschwien): Approved for CUSA Committee

History

1. Feb 17, 2016 by Christopher Fischer (shark)

~~PHSX-BS~~
(PHSX-BS) Physics, B.S.
(PHSX-BA) Physics, B.A.
(PHSX-BS) Astronomy, B.S.

Describe how: This is a requirement for several majors and minors, a few of which are listed above. No major (outside of our department) in CLAS requires this course, but a few majors in the SoE might still require it.

Rationale for Course Proposal: We want to include the honors version of differential equations as an acceptable pre-requisite.

KU Core Information

Has the department approved the nomination of this course to KU Core?

Yes

Name of person giving departmental approval: **Already Approved**

Date of Departmental Approval: **Already approved**

Selected Goal(s)

Do all instructors of this course agree to include content that enables students to meet KU Core learning outcome(s)?

Yes

Do all instructors of this course agree to develop and save direct evidence that students have met the learning outcomes(s)?

Yes

Provide an abstract (1000 characters maximum) that summarizes how this course meets the learning outcome.

Already approved for KU Core goal 3N

Selected Learning Outcome(s):

Goal 3 - Natural Sciences

State how your course or educational experience will use assignments, readings, projects, or lectures to move students from their current knowledge to a deeper understanding of specific concepts fundamental to the area(s) in question. (Please limit responses to 1000 characters.)

Already approved for KU Core goal 3N

State what course assignments, readings, class discussions, and lectures will synthesize the development over time of the principles, theories, and analytical methods of the discipline(s). (Please limit responses to 1000 characters.)

Already approved for KU Core goal 3N

State what learning activities will integrate the analysis of contemporary issues with principles, theories, and analytical methods appropriate to the area in question. (Please limit responses to 1000 characters.)

Already approved for KU Core goal 3N

State what course assignments, projects, quizzes, examinations, etc. will be used to evaluate whether students have a functional understanding of the development of these concepts, and can demonstrate their capability to analyze contemporary issues using the principles, theories, and analytical methods in the academic area. (Please limit responses to 1000 characters.)

Already approved for KU Core goal 3N

KU Core Documents: **PHSX 313.docx**

Course Reviewer Comments

Key: 5800

Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 10/31/17 2:57 pm

Viewing: HIST 470 : Popular Culture in Latin America and Africa

Last edit: 10/31/17 2:57 pm

Changes proposed by: acon

Academic Career	Undergraduate, Lawrence		
Subject Code	HIST	Course Number	470
Academic Unit	Department	History	
	School/College	College of Lib Arts & Sciences	
Title	Popular Culture in Latin America and Africa		
Transcript Title	Poplr Cultur Latin Amer&Africa		
Last Term Offered	**Fall 2017**		

Catalog Description

This course offers a comparative assessment of the origins and practice of various forms of popular culture in the 20th Century in these two regions. Theories that explain the links between modernism and popular culture are discussed. Topics investigated may include the impact of spectacle on the urban environment, the legacies of colonialism in the sphere of culture, and the intersection of public space and popular culture. Forms such as music, cinema, street theater, and sports are explored.

Prerequisites	None
Cross Listed Courses:	

Credits	3
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	No
Are you proposing this course for KU Core?	No
Typically Offered	Not Typically Offered
Please explain	
Repeatable for credit?	No

Principal Course Designator	NW - Non-Western Culture
Course Designator	H - Humanities

Are you proposing that the course count towards the CLAS BA degree specific requirements?

Will this course be required for a degree, major, minor, certificate, or concentration?

Rationale for Course Proposal

Justification for this request

This course was last offered in fall 2005. This course has not been offered in several semesters and there is no interest from our current instructional faculty to teach this course. Removing this course will help update our catalog to reflect our current offerings and will allow us to reuse these numbers for new course proposals.

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/27/17 8:42 am Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:47 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:04 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Course Reviewer Comments **Rachel Schwien (rschwien) (11/07/17 8:27 am):** Holding for program changes in other depts

Key: 4771

Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 11/01/17 10:08 am

Viewing: HIST 599 : The Rise and Fall of Apartheid

Also listed as: AAAS 590

Last edit: 11/01/17 10:08 am

Changes proposed by: acon

Catalog Pages referencing this course	College of Liberal Arts & Sciences Department of History HIST 599: College of Liberal Arts & Sciences Department of African and African-American Studies
Academic Career	Undergraduate, Lawrence
Subject Code	HIST
Course Number	599
Academic Unit	Department: History
	School/College: College of Lib Arts & Sciences
Title	The Rise and Fall of Apartheid
Transcript Title	The Rise and Fall of Apartheid
Last Term Offered	**Fall 2017**

Catalog Description

This course will deal with the last fifty years of South African history during which apartheid came to be formulated, supported, and perpetuated, and the forces that were responsible for its disintegration by 1990. Reference will also be made to the transformation process since April 1994.

Prerequisites

None

Cross Listed Courses:

Code	Title
AAAS 590	The Rise and Fall of Apartheid

Credits	3
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Grading Basis	A-D(+/-)FI (G11)
Is this course part of the University Honors Program?	No
Are you proposing this course for KU Core?	No
Typically Offered	Not Typically Offered
	Please explain
Repeatable for credit?	No
Principal Course Designator	
Course Designator	H - Humanities

Are you proposing that the course count towards the CLAS BA degree specific requirements?

Will this course be required for a degree, major, minor, certificate, or concentration?

In Workflow

1. **CLAS Undergraduate Program and Course Coordinator**
2. **CUSA Subcommittee**
3. **CUSA Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/21/17 8:43 am Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
2. 12/12/17 8:47 am Karen Ledom (kjh): Approved for CUSA Subcommittee
3. 12/13/17 1:04 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Rationale for Course Proposal	
Justification for this request	This course was last offered in Spring 2009. This course has not been offered in several semesters and there is no interest from our current instructional faculty to teach this course. Removing this course will help update our catalog to reflect our current offerings and will allow us to reuse these numbers for new course proposals. Since the course was cross-listed with AAAS we contacted them before submitting this deletion. They agreed to delete the course.
Course Reviewer Comments	**Rachel Schwien (rschwien) (11/01/17 10:50 am):** AAAS (R. Lytle) approves of deactivation **Rachel Schwien (rschwien) (11/07/17 8:28 am):** holding for program changes **Rachel Schwien (rschwien) (11/14/17 10:45 am):** followed up with dept 11/14

Key: 4862

Program Change Request

Date Submitted: 11/16/17 11:29 am

Viewing: PHSX-BA : Astronomy, B.A.

Last approved: 01/31/17 10:28 am

Last edit: 11/16/17 11:29 am

Changes proposed by: shark

Catalog Pages Using this Program	Bachelor of Arts in Astronomy

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Physics & Astronomy
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Arts - BA
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	400201
Program Name	Astronomy, B.A.

Do you intend to offer a track(s)?

Do you intend for this program to be offered online?

No

Effective Catalog **2018-2019** ~~2017 - 2018~~

In Workflow

A. CLAS Undergraduate Program and Course Coordinator

B. CUSA Subcommittee

C. CUSA Committee

D. CAC

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:19 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Jan 31, 2017 by Kristin Rennells (tatekris)

Program Description

Degree Requirements

Advising

Students considering a major in astronomy should confer early with a departmental representative about the selection of courses. The B.A. degree is appropriate for students who want a general education in astronomy as part of a broadly structured liberal education. The B.S. is a more specialized program with a substantial emphasis on physics content as well as astronomy. It provides preparation for a professional career or graduate work in astronomy, astrophysics, or related fields. A total of 120 credit hours is required for graduation.

First- and Second-Year Preparation

All major programs in physics and astronomy share requirements in basic physics and mathematics including PHSX 150, a seminar course for majors. Completion of MATH 125 and MATH 126 in the first year allows students to start calculus-based physics foundation courses (PHSX 211 or PHSX 213, followed by PHSX 212 or PHSX 214, with labs PHSX 216 and PHSX 236) by the second semester. Majors are encouraged to take PHSX 213 and PHSX 214, the honors versions of PHSX 211 and PHSX 212. Students should take these courses and ASTR 391 in their first two years. B.S. astronomy majors normally complete additional course work in mathematics (MATH 127, MATH 290, and MATH 320), as well as PHSX 313 and PHSX 316, in the second year.

Requirements for the B.A. Major in Astronomy

All students pursuing the Bachelor of Arts in Astronomy must complete the KU Core requirements and the College BA specific requirements, listed in the KU Core and College sections of the catalog.

Additional general science requirements (31.5)

Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. These hours do not contribute to the minimum number of hours required for the major.

Calculus I. Satisfied by one of the following:

Or equivalent

MATH 125	Calculus I	4
or MATH 145	Calculus I, Honors	

Calculus II. Satisfied by one of the following:

Or equivalent

MATH 126	Calculus II	4
or MATH 146	Calculus II, Honors	

Seminar in Physics, Astronomy, & Engineering Physics. Satisfied by the following:

PHSX 150	Seminar in Physics, Astronomy and Engineering Physics	0.5

General Physics I. Satisfied by one of the following:

PHSX 211	General Physics I	5
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	5

General Physics II. Satisfied by one of the following:

PHSX 212	General Physics II	4
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	4

Foundations of Chemistry I. Satisfied by one of the following:

CHEM 130	General Chemistry I	5
or CHEM 150	Chemistry for Engineers	
or CHEM 170	Chemistry for the Chemical Sciences I	
or CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	

Astronomy Major Requirements (11)

Majors must complete each of the four following courses:

ASTR 391	Physical Astronomy, Honors	3
ASTR 591	Stellar Astronomy	3
ASTR 596	Observational Astrophysics	2
ASTR 592	Galactic and Extragalactic Astronomy	3

Additional astronomy, astrophysics, or physics courses required for major (5)

In addition to the above specifically required courses, Astronomy BA candidates must complete at least 5 additional credits in physics or astronomy at the 300+ level. Students may enroll in ASTR 390 for undergraduate problems for 1 or more credit hours and in ASTR 503 (ASTR 501 honors) for research credit. ASTR 394 is highly recommended. Other recommended courses include ASTR 691 and 692, PHSX 594, GEOL 572, PHSX 313/316 and other PHSX courses 500 and above; most of these course have pre-requisites that may require additional preparation in mathematics and/or physics.		5

Major Hours & Major GPA

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

Major Hours

Satisfied by 25.5 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 (300+) Hours

Satisfied by a minimum of 16 hours from junior/senior courses (300+) in the major.

Major Junior/Senior (300+) 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.

Rationale for proposal	Updating chemistry requirements because of changes to chemistry courses.
Additional Information	
Supporting Documents	
Program Reviewer Comments	**Rachel Schwien (rschwien) (11/17/17 4:17 pm):** holding for chemistry changes **Rachel Schwien (rschwien) (11/17/17 4:17 pm):** holding for chemistry changes

Key: 80

Program Change Request

Date Submitted: 11/16/17 11:36 am

Viewing: PHSX-BS : Astronomy, B.S.

Last approved: 01/31/17 10:29 am

Last edit: 11/16/17 11:36 am

Changes proposed by: shark

Catalog Pages Using this Program	Bachelor of Science in Astronomy

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Physics & Astronomy
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Science - BS
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	400201
Program Name	Astronomy, B.S.

Do you intend to offer a track(s)?

Do you intend for this program to be offered online?

No

Effective Catalog **2018-2019** ~~2017 - 2018~~

Program Description

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:19 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Mar 21, 2016 by Kristin Rennells (tatekris)

B. Jan 31, 2017 by Kristin Rennells (tatekris)

Degree Requirements

Advising

Students considering a major in astronomy should confer early with a departmental representative about the selection of courses. The B.A. degree is appropriate for students who want a general education in astronomy as part of a broadly structured liberal education. The B.S. is a more specialized program with a substantial emphasis on physics content as well as astronomy. It provides preparation for a professional career or graduate work in astronomy, astrophysics, or related fields. A total of 120 credit hours is required for graduation.

First- and Second-Year Preparation

All major programs in physics and astronomy share requirements in basic physics and mathematics including PHSX 150, a seminar course for majors. Completion of MATH 125 and MATH 126 in the first year allows students to start calculus-based physics foundation courses (PHSX 211 and PHSX 216 or PHSX 213, followed by PHSX 212 and PHSX 236 or PHSX 214) by the second semester. Majors are encouraged to take PHSX 213 and PHSX 214, the honors versions of PHSX 211/PHSX 216 and PHSX 212 /PHSX 236. Students should take these courses and ASTR 391 in their first two years. B.S. astronomy majors normally complete additional course work in mathematics (MATH 127, MATH 290, and MATH 320), as well as PHSX 313 and PHSX 316, in the second year.

Requirements for the B.S. Degree in Astronomy

All students pursuing the Bachelor of Science in Astronomy must complete the KU Core requirements in addition to the degree and major requirements. For details regarding the KU Core requirements, please see the KU Core section of the catalog.

General science requirements (43.5-44.5)

Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. These hours do not contribute to the minimum number of hours required for the major.

Computing and Programming. Satisfied by one of the following:

EECS 138	Introduction to Computing: _____	3-4
or EECS 168	Programming I	
or EECS 169	Programming I: Honors	
~~EECS 168~~	~~Programming I~~	~~4~~

Calculus I. Satisfied by one of the following:

~~Or equivalent~~

MATH 125	Calculus I	4
or MATH 145	Calculus I, Honors	

Calculus II. Satisfied by one of the following:

~~Or equivalent~~

MATH 126	Calculus II	4
or MATH 146	Calculus II, Honors	

Seminar in Physics, Astronomy, & Engineering Physics. Satisfied by the following:

PHSX 150	Seminar in Physics, Astronomy and Engineering Physics	0.5

General Physics I. Satisfied by one of the following:		5
PHSX 211	General Physics I	5
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	5

General Physics II. Satisfied by one of the following:		4
PHSX 212	General Physics II	4
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	4

Foundations of Chemistry I. Satisfied by one of the following:

CHEM 130	General Chemistry I	5
or CHEM 150	Chemistry for Engineers	
or CHEM 170	Chemistry for the Chemical Sciences I	
or CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	

Advanced Mathematics Core Knowledge and Skills (12)

Vector Calculus. Satisfied by the following:

MATH 127	Calculus III	4
or MATH 147	Calculus III, Honors	

Elementary Linear Algebra. Satisfied by the following:

MATH 290	Elementary Linear Algebra	2
or MATH 291	Elementary Linear Algebra, Honors	

Elementary Differential Equations. Satisfied by the following:

MATH 320	Elementary Differential Equations	3

Math Elective. Satisfied by one of the following:		3

PHSX 518	Mathematical Physics
PHSX 718	Mathematical Methods in Physical Sciences
MATH 526	Applied Mathematical Statistics I
MATH 530	Mathematical Models
MATH 558	Introductory Modern Algebra
MATH 581	Numerical Methods
MATH 590	Linear Algebra
MATH 628	Mathematical Theory of Statistics
MATH 646	Complex Variable and Applications
MATH 647	Applied Partial Differential Equations
MATH 648	Calculus of Variations and Integral Equations
MATH 660	Geometry I
MATH 661	Geometry II

any 700-level MATH lecture course except MATH 701 and MATH 715.

Astronomy Requirements for Major (18-21)

Majors must complete the following seven courses:

ASTR 391	Physical Astronomy, Honors	3
ASTR 591	Stellar Astronomy	3
ASTR 592	Galactic and Extragalactic Astronomy	3
ASTR 596	Observational Astrophysics	2
ASTR 691	Astrophysics I	3
ASTR 692	Astrophysics II	3
ASTR 503	Undergraduate Research	1-4

Physics Core Knowledge and Skills (27)

Majors must complete courses as indicated in the following areas:

General Physics III. Satisfied by the following:

PHSX 313	General Physics III	3

Intermediate Physics Lab. Satisfied by the following:

PHSX 316	Intermediate Physics Laboratory I	1

Introductory Quantum Mechanics. Satisfied by the following:

PHSX 511	Introductory Quantum Mechanics	3

Physical Measurements or Electronic Circuit Measurement and Design. Satisfied by one of the following:

PHSX 516	Physical Measurements	4
PHSX 536	Electronic Circuit Measurement and Design	4

Mechanics I. Satisfied by the following:

PHSX 521	Mechanics I	3

Electricity and Magnetism. Satisfied by the following:

PHSX 531	Electricity and Magnetism	3

Thermal Physics. Satisfied by the following:

PHSX 671	Thermal Physics	3

Physics Elective. Satisfied by any PHSX lecture or laboratory course numbered 500 or higher (PHSX 693 recommended) (with the exception of PHSX 594), including: 3

ASTR 792	Topics in Advanced Astrophyics
ASTR 795	Space Plasma Physics
or PHSX 795	Space Plasma Physics
~~GEOL 572~~	~~Geophysics~~
PHSX 693	Gravitation and Cosmology (recommended)

Major Hours & Major GPA

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

Major Hours

Satisfied by 30 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(300+) Hours

Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.

Major Junior/Senior (300+) 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.

Rationale for proposal	Updated honors course changes in EECS and CHEM.

Additional Information	
Supporting Documents	
Program Reviewer Comments	**Rachel Schwien (rschwien) (11/17/17 4:17 pm):** holding for chemistry changes

Key: 77

Program Change Request

Date Submitted: 11/27/17 11:01 am

Viewing: GEOG-BS : Atmospheric Science, B.S.

Last approved: 05/22/17 9:27 am

Last edit: 11/27/17 11:00 am

Changes proposed by: koerner

Catalog Pages Using this Program	Bachelor of Science in Atmospheric Science

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Geography
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Science - BS
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	400401
Program Name	Atmospheric Science, B.S.
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:19 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Nov 11, 2016 by Kim O'Bryon (kobryon)

B. May 22, 2017 by Beverly Koerner (koerner)

Program Description

Degree Requirements

Advising

Students who may decide to major in atmospheric science should confer early with a departmental representative about the selection of courses.

Requirements for the B.S. Degree in Atmospheric Science

4 specialized options are available for students who plan professional careers in meteorology or atmospheric science. The **general meteorology** option satisfies all the traditional professional meteorology requirements for employment with the National Weather Service, airlines, or other agencies. The **air pollution meteorology** option meets the need for trained specialists. The **hydrometeorology** option may lead to a career as a meteorologist in one of the many water-related activities in private and governmental agencies. The **news media forecasting** option can lead to a career forecasting the weather on television or radio. The B.S. degree with any of these specialties also prepares students to begin graduate programs in meteorology or atmospheric science.

Written Communication - Core Skill and Critical Inquiry

Composition (0)

Satisfied by one of the following: [1]

ENGL 101	Composition
ACT English score of 27 or above or SAT English score of 600 or above	
AP English Literature & Composition score of 3 or above	
Equivalent transfer course	

Critical Reading and Writing (0)

Satisfied by one of the following: [2]

ENGL 102	Critical Reading and Writing
ENGL 105	Freshman Honors English
AP English Literature & Composition score of 4 or above	
Equivalent transfer course	

Sophomore Reading and Writing II (0)

Satisfied by one of the following:

ENGL 203	Topics in Reading and Writing: _____
ENGL 205	Freshman-Sophomore Honors Proseminar: _____
ENGL 209	Introduction to Fiction
ENGL 210	Introduction to Poetry
ENGL 211	Introduction to the Drama
ENGL 362	Foundations of Technical Writing (recommended)
AP English Literature & Composition score of 5 or above	
Equivalent	

[1] Requirement must be completed during initial term of admission at KU.

[2] Requirement must be completed within the first academic year at KU.

Communication - Core Skills and Critical Inquiry. Satisfied by the following:

Select one of the following:

COMS 130	Speaker-Audience Communication
COMS 131	Speaker-Audience Communication, Honors
or COMS 150	Personal Communication

Humanities - Understanding the Human Condition. Satisfied by completing 1 course with requirement code H. Approved courses may be searched for availability through the Kyou portal.

Social and Behavioral Sciences - Understanding Society and Behavior. Satisfied by completing one course with requirement code S. Approved courses may be searched for availability through the Kyou portal.

Atmospheric Science Prerequisite or Co-requisite Knowledge (47-50)

Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. These hours do not contribute to the minimum number of hours required for the major.

Computing and Programming. Satisfied by the following:		
EECS 138	Introduction to Computing: _____ (Fortran preferred; C++ and Matlab accepted)	3
Scientific Principles of Environmental Studies. Satisfied by the following:		
EVRN 148	Scientific Principles of Environmental Studies	3
Calculus I. Satisfied by one of the following:		
MATH 125	Calculus I	4
or MATH 145	Calculus I, Honors	
Equivalent		
Calculus II. Satisfied by one of the following:		
MATH 126	Calculus II	4
or MATH 146	Calculus II, Honors	
Equivalent		
General Physics I. Satisfied by one of the following:		5-6
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	

PHSX 114	College Physics I	
& PHSX 201	and Calculus Supplement to College Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	
General Physics II. Satisfied by one of the following:		4-6
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 115	College Physics II	
& PHSX 202	and Calculus Supplement to College Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	
Foundations of Chemistry I. Satisfied by the following:		
CHEM 130	General Chemistry I	5
or CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Vector Calculus. Satisfied by the following:		
MATH 127	Calculus III	4
or MATH 147	Calculus III, Honors	
Elementary Linear Algebra. Satisfied by the following:		
MATH 290	Elementary Linear Algebra	2
or MATH 291	Elementary Linear Algebra, Honors	
Applied Differential Equation. Satisfied by the following:		
MATH 320	Elementary Differential Equations	3
or MATH 220	Applied Differential Equations	
Statistics. Satisfied by the following:		
MATH 526	Applied Mathematical Statistics I	3
or DSCI 202	Statistics	
Numerical Methods. Satisfied by the following:		
MATH 581	Numerical Methods	3
GEOG 358	Principles of Geographic Information Systems	4
Atmospheric Science Core Knowledge and Skills (30)		
Majors must complete all of the following:		
Introductory Meteorology. Satisfied by:		5
ATMO 105	Introductory Meteorology	
Climate and Climate Change. Satisfied by:		3
ATMO/GEOG 321	Climate and Climate Change	
Weather Forecasting. Satisfied by:		3
ATMO 505	Weather Forecasting	
Microclimatology. Satisfied by:		3
ATMO/GEOG 521	Microclimatology	
Synoptic Meteorology. Satisfied by:		3
ATMO 630	Synoptic Meteorology	
Dynamic Meteorology. Satisfied by:		3
ATMO 640	Dynamic Meteorology	
Remote Sensing. Satisfied by:		3
ATMO 642	Remote Sensing	
Advanced Dynamic Meteorology. Satisfied by:		3
ATMO 660	Advanced Dynamic Meteorology	
Physical Meteorology. Satisfied by:		3
ATMO 680	Physical Meteorology	
Seminar for Seniors. Satisfied by:		1
ATMO 697	Seminar for Seniors	
Total Hours		77-80

Meteorology Option

Students selecting this major must select one of the following options:

General Meteorology Option

This option satisfies all the traditional professional meteorology requirements for employment with the National Weather Service, airlines, or other agencies.

Air Pollution Meteorology. Satisfied by:		
ATMO 525	Air Pollution Meteorology	3
Operational Forecasting. Satisfied by:		
ATMO 605	Operational Forecasting	2
Advanced Synoptic Meteorology. Satisfied by:		
ATMO 650	Advanced Synoptic Meteorology	3

Air Pollution Meteorology Option

This option meets the need for trained specialists.

Air Pollution Meteorology. Satisfied by:

ATMO 525	Air Pollution Meteorology	3

Foundations of Chemistry II. Satisfied by:

CHEM 135	General Chemistry II	5
or CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	

Introduction to Environmental Engineering and Science. Satisfied by:

CE 477	Introduction to Environmental Engineering and Science	3

Hydrometeorology Option

This option may lead to a career as a meteorologist in one of the many water-related activities in private and governmental agencies.

Air Pollution Meteorology. Satisfied by:

ATMO 525	Air Pollution Meteorology	3

Operational Forecasting. Satisfied by:

ATMO 605	Operational Forecasting	2

Statics and Dynamics. Satisfied by:

CE 301	Statics and Dynamics	5

Fluid Mechanics. Satisfied by:

CE 330	Fluid Mechanics	3

Hydrology. Satisfied by:

CE 455	Hydrology	3

News Media Forecasting Option

This option can lead to a career forecasting the weather on television or radio.

Operational Forecasting. Satisfied by:

ATMO 605	Operational Forecasting	2

Advanced Synoptic Meteorology. Satisfied by:

ATMO 650	Advanced Synoptic Meteorology	3

Infomania: Information Management. Satisfied by:

JOUR 302	Infomania: Information Management	3

Writing for Media. Satisfied by:

JOUR 304	Media Writing	3

Multimedia Reporting. Satisfied by:

JOUR 415	Multimedia Reporting	3

Major Hours & Major GPA

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

Major Hours

Satisfied by 33 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 (300+) Hours

Satisfied by a minimum of 30 hours from junior/senior courses (300+) in the major.

Major Junior/Senior (300+) 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.

Rationale for proposal	Chemistry is changing CHEM 190 into lecture (190) and lab (191 sections). They are also changing CHEM 195 into lecture (195) and lab (196) sections.
Additional Information	
Supporting Documents	
Program Reviewer Comments	

Key: 381

Program Change Request

Date Submitted: 11/28/17 2:40 pm

Viewing: BIOL-BA : Biochemistry, B.A.

Last approved: 08/23/16 4:28 pm

Last edit: 11/28/17 2:40 pm

Changes proposed by: weghorst

Catalog Pages Using this Program	Bachelor of Arts in Biochemistry

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)

School(s)/College(s)
College of Lib Arts & Sciences

Consulting Department(s)

Department(s)
Microbiology

CIP Code	260202
Program Name	Biochemistry, B.A.

Do you intend to offer a track(s)?

Do you intend for this program to be offered online?

No

Effective Catalog **2018-2019**

In Workflow

A. CLAS Undergraduate Program and Course Coordinator

B. CUSA Subcommittee

C. CUSA Committee

D. CAC

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:18 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Feb 13, 2016 by Jennifer Weghorst (weghorst)

B. Feb 21, 2016 by Jennifer Weghorst (weghorst)

C. Aug 23, 2016 by Kim O'Bryon (kobryon)

Program Description

Degree Requirements

~~Majors and Concentrations Bachelor's degree requirements in biology are modified as necessary.Current requirements are available in the UBP office and online .Major programs are offered in biochemistry, biology, human biology, and microbiology.Students may choose to concentrate in a range of specialties in the biological sciences, such as botany, cellular biology, developmental biology, environmental biology, ecology, entomology, genetics, marine biology, molecular biology, neurobiology, paleontology, physiology, systematics, or zoology (invertebrate or vertebrate).~~Requirements for the B.A. Major in Biochemistry

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In addition to degree and major requirements for ~~Major Course Requirements Major Hours & Major GPA While completing~~ all **plans and subplans, all students** ~~required courses, majors~~ must **complete** ~~also meet each of~~ the **KU Core.** ~~following hour and grade point average minimum standards:~~

Major Course Requirements

General Science Requirements (33-36)

Majors must complete the following general science requirements that serve as foundational courses for this major. 33-36

Biology Orientation Seminar. Satisfied by:

BIOL 105	Biology Orientation Seminar

Chemistry I. Satisfied by one of the following:

CHEM 170	Chemistry for the Chemical Sciences I
CHEM 130	General Chemistry I
CHEM 190	Foundations of Chemistry I, Honors
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors

Chemistry II. Satisfied by one of the following:

CHEM 175	Chemistry for the Chemical Sciences II
CHEM 135	General Chemistry II
CHEM 195	Foundations of Chemistry II, Honors
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors

Organic Chemistry I. Satisfied by one of the following:

CHEM 330	Organic Chemistry I
CHEM 380	Organic Chemistry I, Honors

Organic Chemistry I Laboratory. Satisfied by:

CHEM 331	Organic Chemistry I Laboratory

Organic Chemistry II. Satisfied by:

CHEM 335	Organic Chemistry II

Calculus I and II. Students who plan to attend graduate school should enroll in MATH 125 and MATH 126. Satisfied by one of the following:

MATH 115	Calculus I
& MATH 116	and Calculus II
MATH 125	Calculus I
& MATH 126	and Calculus II

Physics. Satisfied by one of the following options:

Option 1: General Physics I & II

PHSX 211	General Physics I
& PHSX 216	and General Physics I Laboratory
PHSX 212	General Physics II
& PHSX 236	and General Physics II Laboratory

Option 2: College Physics I & II

PHSX 114	College Physics I
& PHSX 115	and College Physics II

Biochemistry Requirements (30)

Principles of Molecular & Cellular Biology. Satisfied by one of the following: 4

BIOL 150	Principles of Molecular and Cellular Biology
BIOL 151	Principles of Molecular and Cellular Biology, Honors

Principles of Organismal Biology. Satisfied by one of the following: 4

BIOL 152	Principles of Organismal Biology	
BIOL 153	Principles of Organismal Biology, Honors	
Principles of Genetics. Satisfied by one of the following:		4
BIOL 350	Principles of Genetics	
BIOL 360	Principles of Genetics, Honors	
Cell Structure & Function. Satisfied by:		
BIOL 416	Cell Structure and Function	3
Biochemistry I. Satisfied by:		
BIOL 636	Biochemistry I	4
Introductory Biochemistry Laboratory. Satisfied by:		
BIOL 637	Introductory Biochemistry Laboratory	2
Biochemistry II. Satisfied by:		
BIOL 638	Biochemistry II	3
Advanced Biochemistry Laboratory. Satisfied by:		
BIOL 639	Advanced Biochemistry Laboratory	2
Senior Seminar in Biochemistry. Satisfied by:		
BIOL 599	Senior Seminar: _____ (Must be taken in senior year.)	1
Biological Physical Chemistry. Satisfied by:		
CHEM 510	Biological Physical Chemistry	3
Biochemistry Electives (6)		
Satisfied by completing at least 6 hours of biology courses numbered 400 or higher. These courses must be selected in consultation with a biochemistry advisor. No more than 3 hours of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement.		6

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 12 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.

Rationale for proposal: 1) The descriptive text preceding the major requirements was out-of-date and relatively uninformative. We have added text regarding additional degree and KU Core requirements.

2) The Dept. of Chemistry has split CHEM 190 into CHEM 190 and 191, and CHEM 195 into CHEM 195 and 196, and we have updated our requirements accordingly.

Additional Information: ~~These changes were approved by CUSA 9/22/15 and by CAC 10/20/15.We are submitting these changes via CIM only for the 2016-17 catalog updates.BIOL 636 Biochemistry I was proposed to increase to 4 h in a separate proposal, and the current change only affects the Major Hours total (increasing to 36, up from 35).~~

Supporting Documents

Program Reviewer Comments

Key: 178

Program Change Request

Date Submitted: 11/28/17 3:07 pm

Viewing: BIOL-BS : Biochemistry, B.S.

Last approved: 10/24/17 12:30 pm

Last edit: 11/28/17 3:07 pm

Changes proposed by: weghorst

Catalog Pages Using this Program	Bachelor of Science in Biochemistry

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Biology
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Science - BS

Consulting School(s)/College(s)

School(s)/College(s)
College of Lib Arts & Sciences

Consulting Department(s)

Department(s)
Microbiology

CIP Code	260202
Program Name	Biochemistry, B.S.

Do you intend to offer a track(s)?

No

Do you intend for this program to be offered online?

No

Effective Catalog	2018-2019

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**
B. **CUSA Subcommittee**
C. **CUSA Committee**
D. **CAC**
E. CLAS Final Approval
F. Future Academic Catalog

Approval Path

A. 11/28/17 3:18 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee
C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Feb 13, 2016 by Jennifer Weghorst (weghorst)
B. Feb 21, 2016 by Jennifer Weghorst (weghorst)
C. Mar 6, 2017 by Jennifer Weghorst (weghorst)

D. Oct 24, 2017 by dgarens

Program Description

Degree Requirements

~~Majors and Concentrations Bachelor's degree requirements in biology are modified as necessary.Current requirements are available in the UBP office and online .Major programs are offered in biochemistry, biology, human biology, and microbiology.Students may choose to concentrate in a range of specialties in the biological sciences, such as botany, cellular biology, developmental biology, environmental biology, ecology, entomology, genetics, marine biology, molecular biology, neurobiology, paleontology, physiology, systematics, or zoology (invertebrate or vertebrate).~~Requirements for the B.S. Degree in Biochemistry ~~General Education Requirements~~

In addition to degree and major **requirements for** ~~requirements,~~ all **plans and subplans, all** students must complete the KU Core.

General Science Requirements (37-38)		
Majors must complete the following general science requirements that serve as foundational courses for this major.		
Biology Orientation Seminar. Satisfied by:		
BIOL 105	Biology Orientation Seminar	1
Chemistry I. Satisfied by one of the following:		5
CHEM 170	Chemistry for the Chemical Sciences I	
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Chemistry II. Satisfied by one of the following:		5
CHEM 175	Chemistry for the Chemical Sciences II	
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
Organic Chemistry I. Satisfied by one of the following:		3
CHEM 330	Organic Chemistry I	
CHEM 380	Organic Chemistry I, Honors	
Organic Chemistry I Laboratory. Satisfied by:		
CHEM 331	Organic Chemistry I Laboratory	2
Organic Chemistry II. Satisfied by one of the following:		3
CHEM 335	Organic Chemistry II	
CHEM 385	Organic Chemistry II, Honors	
Organic Chemistry II Laboratory. Satisfied by:		
CHEM 336	Organic Chemistry II Laboratory	2
Calculus I & II. Satisfied by:		
MATH 125	Calculus I	8
& MATH 126	and Calculus II	
Physics. Satisfied by one of the following options:		8-9
Option 1: General Physics I & II		
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
Option 2: College Physics I & II		
PHSX 114	College Physics I	
& PHSX 115	and College Physics II	
Biochemistry Course Requirements (35)		

Satisfied by completing 35 hours from courses below.

Principles of Molecular and Cellular Biology. Satisfied by one of the following:		4
BIOL 150	Principles of Molecular and Cellular Biology	
BIOL 151	Principles of Molecular and Cellular Biology, Honors	
Principles of Organismal Biology. Satisfied by one of the following:		4
BIOL 152	Principles of Organismal Biology	
BIOL 153	Principles of Organismal Biology, Honors	
Principles of Genetics. Satisfied by one of the following:		4
BIOL 350	Principles of Genetics	
BIOL 360	Principles of Genetics, Honors	
Cell Structure and Function. Satisfied by:		3
BIOL 416	Cell Structure and Function	
Biochemistry I. Satisfied by:		4
BIOL 636	Biochemistry I	
Introductory Biochemistry Laboratory. Satisfied by:		2
BIOL 637	Introductory Biochemistry Laboratory	
Biochemistry II. Satisfied by:		3
BIOL 638	Biochemistry II	
Advanced Biochemistry Laboratory. Satisfied by:		2
BIOL 639	Advanced Biochemistry Laboratory	
Senior Seminar in Biochemistry. Satisfied by:		1
BIOL 599	Senior Seminar: _____ (Must be taken in senior year)	
Analytical Chemistry. Satisfied by:		3
CHEM 400	Analytical Chemistry	
Analytical Chemistry Laboratory. Satisfied by:		2
CHEM 401	Analytical Chemistry Laboratory	
Physical Chemistry. Satisfied by one of the following:		3
CHEM 510	Biological Physical Chemistry	
CHEM 530	Physical Chemistry I	
Biochemistry Required Electives (12)		
Satisfied by completing 12 hours of BIOL courses numbered 400 or higher, which must be selected in consultation with a Biochemistry advisor. No more than 3 hours of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement.		12

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 47 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 12 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.

Rationale for proposal: 1) The descriptive text preceding the major requirements was out-of-date and relatively uninformative.

2) The Dept. of Chemistry has split CHEM 190 into CHEM 190 and 191, and CHEM 195 into CHEM 195 and 196, and we have updated our requirements accordingly.

Additional Information

Supporting Documents

Program Reviewer Comments

Key: 185

Program Change Request

Date Submitted: 11/28/17 2:55 pm

Viewing: BIOL-BAS : Biotechnology, B.A.S.

Last approved: 10/24/17 12:30 pm

Last edit: 11/28/17 2:55 pm

Changes proposed by: weghorst

Catalog Pages Using this Program	Bachelor of Applied Science in Biotechnology

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Biology
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Applied Science - BAS
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	261201
Program Name	Biotechnology, B.A.S.
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

Program Description

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 2:56 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Mar 14, 2016 by Kim O'Bryon (kobryon)

B. Jan 3, 2017 by Greg Burg (gburg)

C. Oct 24, 2017 by Greg Burg (gburg)

Requirements for the Bachelor of Applied Science Degree in Biotechnology

General Education Requirements

In addition to degree and major requirements for all plans and subplans, all students must complete the KU Core.

General Science Requirements

CHEM 130	General Chemistry I	10
& CHEM 135	and General Chemistry II	
CHEM 330	Organic Chemistry I	3
CHEM 331	Organic Chemistry I Laboratory	2
PHSX 114	College Physics I	1-4
BIOL 150	Principles of Molecular and Cellular Biology	4
or BIOL 151	Principles of Molecular and Cellular Biology, Honors	
BIOL 152	Principles of Organismal Biology	4
or BIOL 153	Principles of Organismal Biology, Honors	
BIOL 350	Principles of Genetics	4
BIOL 600	Introductory Biochemistry, Lectures	3
Biology Electives pick one of the following:		3
BIOL 416	Cell Structure and Function	3
BIOL 435	Introduction to Neurobiology	3
BIOL 480	Biology and Diversity of Parasites	3
BIOL 506	Bacterial Infectious Diseases	3
BIOL 512	General Virology	3
BIOL 546	**Mammalian Physiology**	**3**
BIOL 560	Histology	3
~~BIOL 646~~	~~Mammalian Physiology~~	~~4~~
BIOL 667	Chemical Communication in Sex, Feeding, and Fighting	3
BIOL 672	Gene Expression	3

Bachelor of Applied Science Core Curriculum

MATH 365	Elementary Statistics	3
or BIOL 570	Introduction to Biostatistics	
MGMT 305	Survey of Management and Leadership	3
or PUAD 607	Introduction to Project Management	
BTEC 310	Scientific Communications	3
or COMS 310	Introduction to Organizational Communication	
or COMS 330	Effective Business Communication	

Biotechnology Requirements.

BTEC 300	Introduction to Biotechnology	3
BTEC 305	Molecular and Microbiological Techniques	4
BTEC 400	Applied Immunology	3
BTEC 475	Applied Separation Science and Quantitative Analysis	6
BTEC 494	Selected Topics in Biotechnology Taken once in junior year and once in senior year for a total of 2 credits.	1
BTEC 501	Biotechnology Ethics and Responsible Conduct of Research	1
BTEC 540	Biotechnology Capstone I	3
BTEC 550	Applied Bioinformatics	2
BTEC 599	Biotechnology Internship	3
BTEC 630	Biotechnology, Regulation, Quality Control, and Quality Assurance	3
BTEC 640	Biotechnology Capstone II	3
BTEC or BIOL Jr/Sr electives		3

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 45 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 45 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.

Rationale for proposal	BIOL 646 Mammalian Physiology has been renumbered as BIOL 546, and it has been reduced from 4 to 3 credit hours.
Additional Information	~~The number of credit hours of BTEC 475 will change from 2 to 6.This change has been submitted.~~
Supporting Documents	
Program Reviewer Comments	

Key: 418

Program Change Request

Date Submitted: 10/26/17 9:00 am

Viewing: CHEM-BA : Chemistry, B.A.

Last approved: 10/24/17 12:31 pm

Last edit: 10/26/17 9:00 am

Changes proposed by: drb

Catalog Pages Using this Program	Bachelor of Arts in Chemistry

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Chemistry
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Arts - BA
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	400501
Program Name	Chemistry, B.A.
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:19 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Feb 13, 2016 by dgarens

B. Sep 2, 2016 by dgarens

C. Dec 27, 2016 by kkuczera

D. Mar 6, 2017 by dgarens

E. Oct 24, 2017 by dgarens

Program Description

Degree Requirements

Chemistry Programs

The B.A. degree is for the student who wants to understand the fundamental principles of chemistry and to study a number of other fields. The B.S. degree prepares students for graduate school and professional careers. Both are based on a high school background that includes at least 1½ years of algebra and 1 year of geometry. High school courses in chemistry and physics are desirable but are not required. Many chemistry majors are preparing for medical school or for graduate study in chemistry and related fields. For graduate school, the common body of knowledge in the B.A. program is the minimum prerequisite. For premedical students, much of the knowledge will be important in their careers. Even more important, however, is the training in logical thinking, drawing conclusions from experimental observations, and digesting and understanding scientific information.

First- and Second-Year Preparation

Because study in chemistry requires preparation in mathematics and physics as well as a structured series of courses in chemistry, students should begin meeting major requirements in the first year. Students planning to major in chemistry should consult a chemistry department major advisor during their first semester to develop a 4-year plan for degree completion. It is particularly important to take CHEM 170 (or CHEM 130 or **CHEM 190** ~~CHEM 190)~~ and **CHEM 191) and** CHEM 175 (or CHEM 135 or **CHEM 195 and CHEM 196)** ~~CHEM 195)~~ in the first year **and** ~~and~~ CHEM 330 or(CHEM 380) **and** ~~and~~ CHEM 331 in the second year. For those seeking a B.A. degree, it is also important to complete two semesters of calculus and two semesters of physics during the first two years. Minimum requirements in these subject areas for the B.A. degree are MATH 115, MATH 116, **PHSX 114 and** ~~PHSX 114,~~ PHSX 115.

Requirements for the B.A. Major

In addition to the common College requirements for the B.A., a minimum of 29 hours in chemistry (including 5 hours each of analytical, organic, and physical chemistry lecture and laboratory) and one year each of calculus and physics (prerequisites for physical chemistry) are required. These courses fulfill the requirements:

Chemistry Courses (40)		
Select one of the following:		5
CHEM 170	Chemistry for the Chemical Sciences I	
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Select one of the following:		5
CHEM 175	Chemistry for the Chemical Sciences II	
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
CHEM 180	Seminar I	0.5
CHEM 201	Laboratory Safety in the Chemical Sciences	1
Select one of the following:		3
CHEM 330	Organic Chemistry I	
or CHEM 380	Organic Chemistry I, Honors	
CHEM 331	Organic Chemistry I Laboratory	2
Select one of the following:		5
CHEM 335	Organic Chemistry II	
or CHEM 385	Organic Chemistry II, Honors	
CHEM 336	Organic Chemistry II Laboratory	2
Select one of the following: (CHEM 520 recommended)		5
CHEM 520	Biological Physical Chemistry with Laboratory	
CHEM 530	Physical Chemistry I	
& CHEM 535	and Physical Chemistry II	
& CHEM 537	and Physical Chemistry Laboratory	
CHEM 400	Analytical Chemistry	3
CHEM 401	Analytical Chemistry Laboratory	2
CHEM 695	Seminar II	0.5
Select one of the following: (Fulfills KU Core Goal 6)		3
CHEM 636	Instrumental Methods of Analysis Laboratory	3
or CHEM 698	Undergraduate Research Problems	
or CHEM 699	Undergraduate Honors Research	
Mathematics and Physics (14-20)		14-20
Mathematics: (choose one of the following (MATH 115 & MATH 116 recommended))		
MATH 115	Calculus I	
& MATH 116	and Calculus II	

MATH 125	Calculus I
& MATH 126	and Calculus II
& MATH 127	and Calculus III

Physics: (Choose one of the following (PHSX 114 & PHSX 115 recommended))

PHSX 114	College Physics I
& PHSX 115	and College Physics II
PHSX 211	General Physics I
& PHSX 216	and General Physics I Laboratory
& PHSX 212	and General Physics II
& PHSX 236	and General Physics II Laboratory

Courses that fulfill KU Core Goal 6 are CHEM 636 Instrumental Methods of Analysis Laboratory or 3 credits of CHEM 698 or CHEM 699. Students choosing CHEM 636 will be required to take CHEM 635 as the pre or co-requisite.

Biological Chemistry Option

This option is available to students interested in the biological applications of chemistry. The curriculum is compatible with many pre-health-professions programs and prepares the student for graduate study or career opportunities.

In addition to all of the requirements for the regular B.A. major, the following courses are required:

BIOL 636	Biochemistry I	4
BIOL 638	Biochemistry II	3

Plus 1 elective (3) (In consultation with a faculty major advisor, choose 1 course from those listed in the Biology Option Group in requirements for the B.S. degree in Chemistry: Biological Chemistry option.) 3

Biology Option Group

BIOL 350	Principles of Genetics
BIOL 400	Fundamentals of Microbiology
BIOL 416	Cell Structure and Function

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 40 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 23.5 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.

Rationale for proposal	This accompanies a course change proposal to split CHEM 190 into separate lecture and laboratory components (CHEM 190 and 191, respectively), and to do the same for CHEM 195 (CHEM 195 and 196, respectively).
Additional Information	
Supporting Documents	CHEM-BA.docx
Program Reviewer Comments	**Rachel Schwien (rschwien) (11/07/17 10:32 am):** Holding for CHEM 190/191 & CHEM 195/196

Key: 195

Program Change Request

Date Submitted: 10/26/17 9:10 am

Viewing: CHEM-BS : Chemistry, B.S.

Last approved: 10/24/17 12:31 pm

Last edit: 12/21/17 8:43 am

Changes proposed by: drb

Catalog Pages Using this Program	Bachelor of Science in Chemistry

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Chemistry
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Science - BS
Consulting School(s)/College(s)	

Consulting Department(s)

Department(s)
Mathematics

CIP Code	400501
Program Name	Chemistry, B.S.
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

Program Description

Degree Requirements

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:19 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Feb 13, 2016 by dgarens

B. Dec 27, 2016 by kkuczera

C. Oct 24, 2017 by dgarens

Chemistry Programs

The B.S. degree prepares students for graduate school and professional careers. The B.A. degree is for the student who wants to understand the fundamental principles of chemistry and to study a number of other fields. Both are based on a high school background that includes at least 1½ years of algebra and 1 year of geometry. High school courses in chemistry and physics are desirable but are not required. Many chemistry majors are preparing for medical school or for graduate study in chemistry and related fields. For graduate school, the common body of knowledge in the B.A. program is the minimum prerequisite. For premedical students, much of the knowledge will be important in their careers. Even more important, however, is the training in logical thinking, drawing conclusions from experimental observations, and digesting and understanding scientific information.

First- and Second-Year Preparation

Because study in chemistry requires preparation in mathematics and physics as well as a structured series of courses in chemistry, students should begin meeting major requirements in the first year. Students planning to major in chemistry should consult a chemistry department major advisor during their first semester to develop a 4-year plan for degree completion. It is particularly important to take CHEM 170 (or CHEM 130 or **CHEM 190 & CHEM 191)** ~~CHEM 190)~~ and CHEM 175 (or CHEM 135 or **CHEM 195 & CHEM 196)** ~~CHEM 195)~~ in the first year and **CHEM** ~~CHEM~~ 201, CHEM 330 (or CHEM 380) and CHEM 331 in the second year. For those seeking a B.S. degree it is also important to complete CHEM 335 (or CHEM 385) and CHEM 336 in the second year as well as their mathematics preparation (MATH 125, 126, 127 and CHEM 250) and physics preparation (PHSX 211 & PHSX 216, and PHSX 212 & PHSX 236) in the first 2 years.

Requirements for the B.S. Degree

General Education Requirements

All students must complete the KU Core.

Chemistry Prerequisite or Co-requisite Knowledge (27-28)

Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. These hours do not contribute to the minimum number of hours required for the major.

Calculus I. Satisfied by one of the following:		4
MATH 125	Calculus I	
or MATH 145	Calculus I, Honors	
Calculus II. Satisfied by one of the following:		4
MATH 126	Calculus II	
or MATH 146	Calculus II, Honors	
Calculus III. Satisfied by one of the following:		4
MATH 127	Calculus III	
or MATH 147	Calculus III, Honors	
Mathematical Methods for the Chemical Sciences. Satisfied by:		3
CHEM 250	Mathematical Methods for the Chemical Sciences	
General Physics I. Satisfied by one of the following:		5
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	
General Physics II. Satisfied by one of the following:		4
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	
Biochemistry. Satisfied by one of the following:		3-4
BIOL 600	Introductory Biochemistry, Lectures	
BIOL 636	Biochemistry I	

Chemistry Core Knowledge and Skills (47)

Majors must complete courses as indicated in the following areas:

Chemistry for the Chemical Sciences I. Satisfied by one of the following:		5
CHEM 170	Chemistry for the Chemical Sciences I	
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Chemistry for the Chemical Sciences II. Satisfied by one of the following:		5
CHEM 175	Chemistry for the Chemical Sciences II	
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
Seminar I. Satisfied by:		0.5
CHEM 180	Seminar I	

Laboratory Safety in the Chemical Sciences. Satisfied by:		1
CHEM 201	Laboratory Safety in the Chemical Sciences	
Organic Chemistry I (Lecture and Lab). Satisfied by:		5
CHEM 330	Organic Chemistry I	
or CHEM 380	Organic Chemistry I, Honors	
CHEM 331	Organic Chemistry I Laboratory	
Organic Chemistry II (Lecture and Lab). Satisfied by:		5
CHEM 335	Organic Chemistry II	
or CHEM 385	Organic Chemistry II, Honors	
CHEM 336	Organic Chemistry II Laboratory	
Analytical Chemistry (Lecture and Lab). Satisfied by:		5
CHEM 400	Analytical Chemistry	
& CHEM 401	and Analytical Chemistry Laboratory	
Physical Chemistry I Satisfied by:		4
CHEM 530	Physical Chemistry I	
Physical Chemistry II (Lecture and Lab). Satisfied by:		6
CHEM 535	Physical Chemistry II	
& CHEM 537	and Physical Chemistry Laboratory	
Instrumental Methods of Analysis, Satisfied by:		2
CHEM 635	Instrumental Methods of Analysis	
Systematic Inorganic Chemistry. Satisfied by:		3
CHEM 660	Systematic Inorganic Chemistry	
Advanced Inorganic Laboratory. Satisfied by:		2
CHEM 661	Advanced Inorganic Laboratory	
Seminar II. Satisfied by:		0.5
CHEM 695	Seminar II	
Select one of the following: (Fulfills KU Core Goal 6)		3
CHEM 636	Instrumental Methods of Analysis Laboratory	
or CHEM 698	Undergraduate Research Problems	
or CHEM 699	Undergraduate Honors Research	

Major Hours & Major GPA

KU Core Goal 6 is satisfied by either CHEM 636 Instrumental Methods of Analysis Laboratory, or 3 credit hours of CHEM 698 or CHEM 699. While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours

Satisfied by 47 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 35.5 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.

Biological Chemistry Option

This option is available to students interested in the biological applications of chemistry. The curriculum is compatible with many pre-health-professions programs and prepares the student for graduate study or career opportunities.

General Education Requirements

All students must complete the KU Core.

Chemistry Prerequisite or Co-requisite Knowledge (24)

Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. These hours do not contribute to the minimum number of hours required for the major.

Calculus I. Satisfied by one of the following:		4
MATH 125	Calculus I	
or MATH 145	Calculus I, Honors	
Calculus II. Satisfied by one of the following:		4
MATH 126	Calculus II	
or MATH 146	Calculus II, Honors	
Calculus III. Satisfied by one of the following:		4
MATH 127	Calculus III	
or MATH 147	Calculus III, Honors	
Mathematical Methods for the Chemical Sciences. Satisfied by:		3

CHEM 250	Mathematical Methods for the Chemical Sciences	
General Physics I. Satisfied by one of the following:		5
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	
General Physics II. Satisfied by one of the following:		4
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	
Chemistry Core Knowledge and Skills (47)		
Majors must complete courses as indicated in the following areas:		
Chemistry for the Chemical Sciences I. Satisfied by one of the following:		5
CHEM 170	Chemistry for the Chemical Sciences I	
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Chemistry for the Chemical Sciences II. Satisfied by one of the following:		5
CHEM 175	Chemistry for the Chemical Sciences II	
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
Seminar I. Satisfied by:		0.5
CHEM 180	Seminar I	
Laboratory Safety in the Chemical Sciences. Satisfied by:		1
CHEM 201	Laboratory Safety in the Chemical Sciences	
Organic Chemistry I (Lecture and Lab). Satisfied by:		5
CHEM 330	Organic Chemistry I	
or CHEM 380	Organic Chemistry I, Honors	
CHEM 331	Organic Chemistry I Laboratory	
Organic Chemistry II (Lecture and Lab). Satisfied by:		5
CHEM 335	Organic Chemistry II	
or CHEM 385	Organic Chemistry II, Honors	
CHEM 336	Organic Chemistry II Laboratory	
Analytical Chemistry (Lecture and Lab). Satisfied by:		5
CHEM 400	Analytical Chemistry	
& CHEM 401	and Analytical Chemistry Laboratory	
Physical Chemistry I Satisfied by:		4
CHEM 530	Physical Chemistry I	
Physical Chemistry II (Lecture and Lab). Satisfied by:		6
CHEM 535	Physical Chemistry II	
& CHEM 537	and Physical Chemistry Laboratory	
Instrumental Methods of Analysis Satisfied by:		2
CHEM 635	Instrumental Methods of Analysis	
Systematic Inorganic Chemistry. Satisfied by:		3
CHEM 660	Systematic Inorganic Chemistry	
Advanced Inorganic Laboratory. Satisfied by:		2
CHEM 661	Advanced Inorganic Laboratory	
Seminar II. Satisfied by:		0.5
CHEM 695	Seminar II	
Select one of the following: (Fulfills KU Core Goal 6)		3
CHEM 636	Instrumental Methods of Analysis Laboratory	
or CHEM 698	Undergraduate Research Problems	
or CHEM 699	Undergraduate Honors Research	
Biological Chemistry Core Knowledge and Skills (16)		
Principles of Molecular and Cellular Biology. Satisfied by:		4
BIOL 150	Principles of Molecular and Cellular Biology	
Biochemistry. Satisfied by:		7
BIOL 636	Biochemistry I	
BIOL 638	Biochemistry II	
Biochemistry Laboratory. Satisfied by:		2
BIOL 637	Introductory Biochemistry Laboratory	
Biological Chemistry Required Electives		
Majors choosing this option should select 1 elective (3 hours) from the following:		3
BIOL 350	Principles of Genetics	
BIOL 400	Fundamentals of Microbiology	

BIOL 416	Cell Structure and Function

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 47 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 35.5 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.

Chemical Physics Option

This option allows students to focus on the theoretical basis of chemistry. Students are prepared for graduate programs or employment.

General Education Requirements

All students must complete the KU Core.

Chemistry Prerequisite or Co-requisite Knowledge (29-30)

Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. These hours do not contribute to the minimum number of hours required for the major.

Calculus I. Satisfied by one of the following:		4
MATH 125	Calculus I	
or MATH 145	Calculus I, Honors	
Calculus II. Satisfied by one of the following:		4
MATH 126	Calculus II	
or MATH 146	Calculus II, Honors	
Calculus III. Satisfied by one of the following:		4
MATH 127	Calculus III	
or MATH 147	Calculus III, Honors	
Differential Equations. Satisfied by one of the following:		3
MATH 220	Applied Differential Equations	
MATH 320	Elementary Differential Equations	
Elementary Linear Algebra. Satisfied by:		2
MATH 290	Elementary Linear Algebra	
General Physics I. Satisfied by one of the following:		5
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	
General Physics II. Satisfied by one of the following:		4
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	
Biochemistry. Satisfied by one of the following:		3-4
BIOL 600	Introductory Biochemistry, Lectures	
BIOL 636	Biochemistry I	

Chemistry Core Knowledge and Skills (47)

Majors must complete courses as indicated in the following areas:

Chemistry for the Chemical Sciences I. Satisfied by one of the following:		5
CHEM 170	Chemistry for the Chemical Sciences I	
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Chemistry for the Chemical Sciences II. Satisfied by one of the following:		5
CHEM 175	Chemistry for the Chemical Sciences II	
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
Seminar I. Satisfied by:		0.5
CHEM 180	Seminar I	
Laboratory Safety in the Chemical Sciences. Satisfied by:		1
CHEM 201	Laboratory Safety in the Chemical Sciences	

Organic Chemistry I (Lecture and Lab). Satisfied by:		5
CHEM 330	Organic Chemistry I	
or CHEM 380	Organic Chemistry I, Honors	
CHEM 331	Organic Chemistry I Laboratory	
Organic Chemistry II (Lecture and Lab). Satisfied by:		5
CHEM 335	Organic Chemistry II	
or CHEM 385	Organic Chemistry II, Honors	
CHEM 336	Organic Chemistry II Laboratory	
Analytical Chemistry (Lecture and Lab). Satisfied by:		5
CHEM 400	Analytical Chemistry	
& CHEM 401	and Analytical Chemistry Laboratory	
Physical Chemistry I Satisfied by:		4
CHEM 530	Physical Chemistry I	
Physical Chemistry II (Lecture and Lab). Satisfied by:		6
CHEM 535	Physical Chemistry II	
& CHEM 537	and Physical Chemistry Laboratory	
Instrumental Methods of Analysis Satisfied by		2
CHEM 635	Instrumental Methods of Analysis	
Systematic Inorganic Chemistry. Satisfied by:		3
CHEM 660	Systematic Inorganic Chemistry	
Advanced Inorganic Laboratory. Satisfied by:		2
CHEM 661	Advanced Inorganic Laboratory	
Seminar II. Satisfied by:		0.5
CHEM 695	Seminar II	
Select one of the following: (Fulfills KU Core Goal 6)		3
CHEM 636	Instrumental Methods of Analysis Laboratory	
or CHEM 698	Undergraduate Research Problems	
or CHEM 699	Undergraduate Honors Research	
Chemical Physics Core Knowledge and Skills (12)		12
Majors must complete 2 courses from each of the following groups:		
Group I		
PHSX 313	General Physics III	
& PHSX 316	and Intermediate Physics Laboratory I (PHSX 313 and PHSX 316 should be taken concurrently)	
PHSX 518	Mathematical Physics	
PHSX 521	Mechanics I	
PHSX 615	Numerical and Computational Methods in Physics	
~~PHSX 623~~	~~Course PHSX 623 Not Found~~	
PHSX 655	Optics	
PHSX 681	Concepts in Solids	
Group II		
PHSX 531	Electricity and Magnetism	
PHSX 621	Mechanics II	
MATH 646	Complex Variable and Applications	
MATH 647	Applied Partial Differential Equations	
CHEM 698	Undergraduate Research Problems	
CHEM 750	Introduction to Quantum Mechanics	

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 47 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 35.5 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.

Rationale for proposal	This accompanies a course change proposal to split CHEM 190 into separate lecture and laboratory components (CHEM 190 and 191, respectively), and to do the same for CHEM 195 (CHEM 195 and 196, respectively).

Additional Information	
Supporting Documents	
Program Reviewer Comments	**Rachel Schwien (rschwien) (11/07/17 10:32 am):** Holding for CHEM 190/191 & CHEM 195/196

Key: 197

Program Change Request

Date Submitted: 11/28/17 11:23 am

Viewing: GEOG-BS : Geography, B.S.

Last approved: 10/24/17 12:33 pm

Last edit: 11/28/17 2:53 pm

Changes proposed by: koerner

Catalog Pages Using this Program	Bachelor of Science in Geography

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Geography
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Science - BS
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	450701
Program Name	Geography, B.S.
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

Program Description

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:19 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:48 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Nov 22, 2016 by Beverly Koerner (koerner)

B. Oct 24, 2017 by Beverly Koerner (koerner)

Degree Requirements

Geography Programs

The B.A., B.G.S., and B.S. in geography provide general liberal arts enrichment, preparation for graduate work, and training for careers in geography and related fields. Geography may be combined with another program as a double major, or courses in another area may simply be added to those in geography.

First- and Second-Year Preparation

Students should begin the major by meeting the core requirements and preparing for major courses.

Requirements for the B.S. Degree

Geography B.S. General Education Requirements

Written Communication – Core Skill and Critical Inquiry.

Composition (0)

Satisfied by one of the following. Requirement must be completed during initial term of admission at KU.

ENGL 101	Composition
ACT English score of 27 or above or SAT English score of 600 or above	
AP English Literature & Composition score of 3 or above	
Equivalent transfer course	

Critical Reading and Writing (0)

Satisfied by one of the following. Requirement must be completed during initial term of admission at KU.

ENGL 102	Critical Reading and Writing
or ENGL 105	Freshman Honors English
AP English Literature & Composition score of 4 or above	
Equivalent transfer course	

Sophomore Reading and Writing II (0)

Satisfied by one of the following:

ENGL 203	Topics in Reading and Writing: _____
or ENGL 205	Freshman-Sophomore Honors Proseminar: _____
ENGL 209	Introduction to Fiction
ENGL 210	Introduction to Poetry
ENGL 211	Introduction to the Drama
ENGL 362	Foundations of Technical Writing (recommended)
AP English Literature & Composition score of 5 or above	
Equivalent	

Communications. Satisfied by COMS 130 (COMS 230, PHIL 148, PHIL 310 or exemption).

History or philosophy of science.

Select one of the folloiwng or consult undergraduate committee for approval of alternatives: 3

HIST 103	Environment and History
HIST 136	Early Science to 1700
HIST 305	The Scientific Revolution
HIST 306	Science and Western Culture
HIST 311	Great Lives in Science
HIST 347	Environmental History of North America
HIST 360	Science and Religion
HIST 407	History of Science in the United States
PHIL 370	Moral Issues in Medicine
PHIL 375	Moral Issues in Computer Technology
PHIL 380	Environmental Ethics
PHIL 620	Philosophy of Natural Science
PHIL 622	Philosophy of Social Science

Humanities - Understanding the Human Condition. Satisfied by completing 2 principal courses in the humanities. Approved courses may be searched for availability through the Kyou portal.

Social and Behavioral Sciences - Understanding Society and Behavior. Satisfied by completing 2 principal courses in the social sciences. Approved courses may be searched for availability through the Kyou portal.

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 44 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 12 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.

Physical Geography Option

Geography Prerequisite or Co-requisite Knowledge (29-31)		
Calculus I. Satisfied by one of the following:		
MATH 125	Calculus I	
Calculus II. Satisfied by one of the following:		
MATH 126	Calculus II	
(MATH 220 and 320 are also recommended)		
Physics I. Satisfied by one of the following:		4-5
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory (recommended)	
PHSX 114	College Physics I	
& PHSX 201	and Calculus Supplement to College Physics I	
& PHSX 216	and General Physics I Laboratory	
Physics II. Satisfied by one of the following:		4-5
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 115	College Physics II	
& PHSX 202	and Calculus Supplement to College Physics II	
& PHSX 236	and General Physics II Laboratory	
Biology. Satisfied by:		
BIOL 150	Principles of Molecular and Cellular Biology	8
& BIOL 152	and Principles of Organismal Biology	
Chemistry. Satisfied by:		
CHEM 130	General Chemistry I	10
& CHEM 135	and General Chemistry II (or CHEM 190 and CHEM 191 and CHEM 195 and CHEM 196)	
Information Technology. Satisfied by:		
EECS 138	Introduction to Computing: _____	3
Geography Overview Courses (8)		
Principles of Physical Geography. Satisfied by:		
GEOG 104	Principles of Physical Geography	3
Introductory Laboratory in Physical Geography. Satisfied by:		
GEOG 105	Introductory Laboratory in Physical Geography	2
One course in Human or Regional Geography		3
Core System Courses (16)		
Climate:		
GEOG 321	Climate and Climate Change	3
Hydrology:		
GEOG 336	Introduction to Environmental Hydrology and Water Resources	3
or CE 455	Hydrology	
Soil Geography:		
GEOG 335	Introduction to Soil Geography	4
or GEOG 535	Soil Geography	
Glaciology:		
GEOG 332	Glaciers and Landscape	3
Biogeography:		
BIOL 414	Principles of Ecology	3
Geoinformatics Courses (11)		
Methods of Analyzing Geographical Data. Satisfied by:		
GEOG 316	Methods of Analyzing Geographical Data	4
Principles of Geographic Information Systems. Satisfied by:		
GEOG 358	Principles of Geographic Information Systems	4
One 500-level or above course from GIS Studies. (GEOG 526 Remote Sensing of Environment I recommended)		3
Senior Capstone (3)		
Satisfied by the following:		
GEOG 500	Senior Capstone in Geography	3
Elective Courses (6)		
Select two or more of the following:		6
Ecohydrology:		

GEOG 540	Ecohydrology	
Climate:		
GEOG 521	Microclimatology	
Geomorphology:		
GEOG 532	Geoarchaeology	
GEOG 541	Geomorphology	
Soil Geography:		
GEOG 538	Soil Chemistry	
GEOG 735	Soil Geomorphology	
Other advanced courses in Physical Geography		

Geographical Information and Analysis Option

Geography Prerequisite or Co-requisite Knowledge (20)		
Calculus I. Satisfied by one of the following:		
MATH 125	Calculus I	
or MATH 145	Calculus I, Honors	
Calculus II. Satisfied by one of the following:		
MATH 126	Calculus II	
or MATH 146	Calculus II, Honors	
General Physics I. Satisfied by one of the following:		
PHSX 211	General Physics I	4
PHSX 114	College Physics I	5
& PHSX 201	and Calculus Supplement to College Physics I	
General Physics II. Satisfied by one of the following:		
PHSX 212	General Physics II	3
PHSX 115	College Physics II	5
& PHSX 202	and Calculus Supplement to College Physics II	
Computing Fundamentals. Satisifed by:		
GEOG 360	Computer Programming for Mapping and Spatial Analysis	3
or EECS 138	Introduction to Computing: _____	
Overview Geography Courses (18)		18
Principles of Physical Geography or Scientific Principles of Environmental Studies. Satisfied by one of the following:		
GEOG 104	Principles of Physical Geography	
& GEOG 105	and Introductory Laboratory in Physical Geography	
GEOG 140	Global Environment I: The Discovery of Environmental Change	
Maps and Mapping or Computers, Maps, and Geographical Analysis. Satisfied by:		
GEOG 111	Mapping Our Changing World	
or GEOG 358	Principles of Geographic Information Systems	
Principles of Human Geography. Satisfied by:		
GEOG 102	People, Place, and Society	
or GEOG 103	Principles of Human Geography, Honors	
2 GEOG 300+ courses. One in Physical and one in Human and/or Regional Geography		
Core Geographic Information Science Courses (21)		21
Six courses, at least one from each category:		
Cartography and Visualization. Satisfied by:		
GEOG 311	Introductory Cartography and Geovisualization	
GEOG 512	Advanced Cartography and Geovisualization	
Geographical Information Systems. Satisfied by:		
GEOG 558	Intermediate Geographical Information Systems	
GEOG 560	GIS Application Programming	
GEOG 758	Geographic Information Science	
Remote Sensing. Satisfied by:		
GEOG 526	Remote Sensing of Environment I	
GEOG 726	Remote Sensing of Environment II	
Statistics. Satisfied by:		
GEOG 316	Methods of Analyzing Geographical Data	
GEOG 516	Applied Multivariate Analysis in Geography	
GEOG 716	Advanced Geostatistics	
Senior Capstone in Geography (3)		3
Satisfied by:		
GEOG 500	Senior Capstone in Geography	
Geographic Information Science Electives (6)		6
Two other courses from geographic information science		
Allied Field (9)		

Three courses and nine hours minimum in one field (or a minor) (area studies, atmospheric science, biology, computer science, design, environmental studies, engineering, geology, psychology, urban planning).	9
Electives (14-23)	
14-23 credit hours of any university courses.	14-23

Geography 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 (300+) Hours

Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.

Major Junior/Senior (300+) 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.

Rationale for proposal	CHEM 190 and CHEM 195 will now have separate lab sections (191 and 196)
Additional Information	
Supporting Documents	
Program Reviewer Comments	

Key: 175

Program Change Request

Date Submitted: 11/28/17 2:48 pm

Viewing: BIOL-BA : Microbiology, B.A.

Last approved: 03/06/17 11:57 am

Last edit: 11/28/17 2:48 pm

Changes proposed by: weghorst

Catalog Pages Using this Program	Bachelor of Arts in Microbiology

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	260502
Program Name	Microbiology, B.A.

Do you intend to offer a track(s)?

No

Do you intend for this program to be offered online?

No

Effective Catalog **2018-2019** ~~2017 - 2018~~

Program Description

Degree Requirements

In Workflow

A. CLAS Undergraduate Program and Course Coordinator

B. CUSA Subcommittee

C. CUSA Committee

D. CAC

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:18 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:49 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:06 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Mar 6, 2017 by Jennifer Weghorst (weghorst)

~~Majors and Concentrations Bachelor's degree requirements in biology are modified as necessary.Current requirements are available in the UBP office and online .Major programs are offered in biochemistry, biology, human biology, and microbiology.Students may choose to concentrate in a range of specialties in the biological sciences, such as botany, cellular biology, developmental biology, environmental biology, ecology, entomology, genetics, marine biology, molecular biology, neurobiology, paleontology, physiology, systematics, or zoology (invertebrate or vertebrate).~~Requirements for the B.A. Major in Microbiology

In addition ~~Course work allows students~~ to **degree** ~~study microbiology as part of their general education~~ and **major requirements** ~~provides a background~~ for **all plans and subplans, all students must complete the KU Core.** ~~teachers.~~

~~**It also prepares students for work in medical, public health, research, and industrial laboratories; for graduate, medical, or dental school; or for the clinical laboratory sciences program.For general requirements for the B.A.degree, see CLAS General Education Degree Requirements on the College of Liberal Arts and Sciences Degree Requirements page.**~~**General Science Requirements**

Microbiology General Science Requirements (39-42)		
Biology Orientation Seminar. Satisfied by:		
BIOL 105	Biology Orientation Seminar	1
Principles of Molecular & Cellular Biology. Satisfied by one of the following:		4
BIOL 150	Principles of Molecular and Cellular Biology	
BIOL 151	Principles of Molecular and Cellular Biology, Honors	
Principles of Genetics. Satisfied by one of the following:		4
BIOL 350	Principles of Genetics	
BIOL 360	Principles of Genetics, Honors	
Introductory Biochemistry. Satisfied by:		
BIOL 600	Introductory Biochemistry, Lectures	3
Chemistry I. Satisfied by one of the following:		5
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Chemistry II. Satisfied by one of the following:		5
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
Organic Chemistry I. Satisfied by one of the following:		3
CHEM 310	Fundamentals of Organic Chemistry	
CHEM 330	Organic Chemistry I	
Organic Chemistry I Laboratory. Satisfied by:		
CHEM 331	Organic Chemistry I Laboratory	2
Calculus. Satisfied by one of the following:		4-6
MATH 115	Calculus I	
& MATH 116	and Calculus II	
MATH 125	Calculus I	
MATH 145	Calculus I, Honors	
Physics I. Satisfied by one of the following:		4-5
PHSX 114	College Physics I	
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	
Physics II. Satisfied by one of the following:		4
PHSX 115	College Physics II	
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	

PHSX 214	General Physics II Honors	
Microbiology Core Knowledge & Skills (6-7)		
Fundamentals of Microbiology. Satisfied by one of the following:		3-4
BIOL 400	Fundamentals of Microbiology	
BIOL 401	Fundamentals of Microbiology, Honors	
Fundamentals of Microbiology Laboratory. Satisfied by:		
BIOL 402	Fundamentals of Microbiology Laboratory	2
Senior Seminar: Current Progress in Microbiology. Satisfied by:		
BIOL 599	Senior Seminar: _____ (Current Progress in Microbiology. Must be taken in senior year.)	1
Microbiology Electives and Laboratory Requirements (15)		
Satisfied by completing 15 hours of microbiology courses, including 3 lecture-lab pairings, selected from the following:		15
BIOL 503	Immunology	
BIOL 504	Immunology Laboratory	
BIOL 506	Bacterial Infectious Diseases	
BIOL 507	Bacterial Infectious Diseases Laboratory	
BIOL 512	General Virology	
BIOL 513	Virology Laboratory	
BIOL 518	Microbial Genetics	
BIOL 519	Microbial Genetics Laboratory	
Microbiology Elective (3)		
Satisfied by completing 3 additional hours of BIOL courses numbered 400 or higher; to be selected in consultation with a microbiology advisor.		3

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 24-25 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 12 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.

Rationale for proposal

1) The descriptive text preceding the major requirements was out-of-date and relatively uninformative. We have added text regarding potential additional degree and KU Core requirements.

2) The Dept. of Chemistry has split CHEM 190 into CHEM 190 and 191, and CHEM 195 into CHEM 195 and 196, and we have updated our requirements accordingly.

Additional Information

Supporting Documents

Program Reviewer Comments

Key: 182

Program Change Request

Date Submitted: 11/28/17 3:12 pm

Viewing: BIOL-BS : Microbiology, B.S.

Last approved: 03/06/17 11:58 am

Last edit: 11/28/17 3:12 pm

Changes proposed by: weghorst

Catalog Pages Using this Program	Bachelor of Science in Microbiology

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Biology
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Science - BS
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	260502
Program Name	Microbiology, B.S.
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	**2018-2019** ~~2017 - 2018~~

Program Description

Degree Requirements

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:18 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:49 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:07 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Mar 6, 2017 by Jennifer Weghorst (weghorst)

~~Majors and Concentrations Bachelor's degree requirements in biology are modified as necessary.Current requirements are available in the UBP office and online .Major programs are offered in biochemistry, biology, human biology, and microbiology.Students may choose to concentrate in a range of specialties in the biological sciences, such as botany, cellular biology, developmental biology, environmental biology, ecology, entomology, genetics, marine biology, molecular biology, neurobiology, paleontology, physiology, systematics, or zoology (invertebrate or vertebrate).~~Requirements for the B.S. Degree in Microbiology ~~General Education Requirements~~

In addition to degree and major requirements, all students must complete the KU Core. ~~Microbiology Course Requirements~~

General Science Requirements (51-55)

Majors must complete 51-55 hours of the following general science requirements that serve as foundational courses for this major.

Biology Orientation Seminar. Satisfied by:		
BIOL 105	Biology Orientation Seminar	1
Molecular & Cellular Biology. Satisfied by one of the following:		4
BIOL 150	Principles of Molecular and Cellular Biology	
BIOL 151	Principles of Molecular and Cellular Biology, Honors	
Principles of Genetics. Satisfied by one of the following:		4
BIOL 350	Principles of Genetics	
BIOL 360	Principles of Genetics, Honors	
Statistics. Satisfied by one of the following:		3-4
BIOL 570	Introduction to Biostatistics	
MATH 365	Elementary Statistics	
PSYC 210	Statistics in Psychological Research	
Biochemistry I. Satisfied by:		
BIOL 636	Biochemistry I	4
Biochemistry II. Satisfied by:		
BIOL 638	Biochemistry II	3
Chemistry I. Satisfied by one of the following:		5
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Chemistry II. Satisfied by one of the following:		5
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
Organic Chemistry I. Satisfied by one of the following:		3
CHEM 330	Organic Chemistry I	
CHEM 380	Organic Chemistry I, Honors	
Organic Chemistry I Laboratory. Satisfied by:		
CHEM 331	Organic Chemistry I Laboratory	2
Organic Chemistry II. Satisfied by one of the following:		3
CHEM 335	Organic Chemistry II	
CHEM 385	Organic Chemistry II, Honors	
Organic Chemistry II Laboratory. Satisfied by:		
CHEM 336	Organic Chemistry II Laboratory	2
Calculus. Satisfied by one of the following:		4-6
MATH 115	Calculus I	
& MATH 116	and Calculus II	
MATH 125	Calculus I	
Physics. Satisfied by one of the following:		8-9
Option 1: College Physics		
PHSX 114	College Physics I	
& PHSX 115	and College Physics II	
Option 2: General Physics		
PHSX 211	General Physics I	

& PHSX 216	and General Physics I Laboratory	
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
Microbiology Course Requirements (29-30)		
Satisfied by completing 29-30 hours from the following courses:		
Fundamentals of Microbiology. Satisfied by one of the following:		3-4
BIOL 400	Fundamentals of Microbiology	
BIOL 401	Fundamentals of Microbiology, Honors	
Fundamentals of Microbiology Laboratory. Satisfied by:		
BIOL 402	Fundamentals of Microbiology Laboratory	2
Cell Structure & Function. Satisfied by one of the following:		
BIOL 416	Cell Structure and Function	3
or BIOL 536	Cell Structure and Function (Honors)	
Immunology. Satisfied by:		
BIOL 503	Immunology	3
Immunology Laboratory. Satisfied by:		
BIOL 504	Immunology Laboratory	2
Bacterial Infectious Diseases. Satisfied by:		
BIOL 506	Bacterial Infectious Diseases	3
Bacterial Infectious Diseases Laboratory. Satisfied by:		
BIOL 507	Bacterial Infectious Diseases Laboratory	2
General Virology. Satisfied by:		
BIOL 512	General Virology	3
Virology Laboratory. Satisfied by:		
BIOL 513	Virology Laboratory	2
Microbial Genetics. Satisfied by:		
BIOL 518	Microbial Genetics	3
Microbial Genetics Laboratory. Satisfied by:		
BIOL 519	Microbial Genetics Laboratory	2
Senior Seminar - Current Progress in Microbiology. Satisfied by:		
BIOL 599	Senior Seminar: _____ (Must be taken in senior year)	1
Microbiology Required Electives (6)		
Satisfied by completing 6 hours of BIOL courses numbered 400 or higher, which must be selected in consultation with a microbiology advisor.		6

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 35-36 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 12 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.

Rationale for proposal: 1) The descriptive text preceding the major requirements was out-of-date and relatively uninformative.

2) The Dept. of Chemistry has split CHEM 190 into CHEM 190 and 191, and CHEM 195 into CHEM 195 and 196, and we have updated our requirements accordingly.

Additional Information

Supporting Documents

Program Reviewer Comments

Key: 189

Program Change Request

Date Submitted: 11/28/17 3:16 pm

Viewing: BIOL-BS : Molecular Biosciences, B.S.

Last approved: 10/24/17 12:30 pm

Last edit: 11/28/17 3:16 pm

Changes proposed by: weghorst

Catalog Pages Using this Program	Bachelor of Science in Molecular Biosciences

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Biology
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Science - BS
Consulting School(s)/College(s)	School(s)/College(s): College of Lib Arts & Sciences
Consulting Department(s)	
CIP Code	260204
Program Name	Molecular Biosciences, B.S.
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:18 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:49 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:07 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Feb 13, 2016 by Jennifer Weghorst (weghorst)

B. Mar 6, 2017 by Jennifer Weghorst (weghorst)

C. Oct 24, 2017 by Greg Burg (gburg)

Program Description

Degree Requirements

Molecular Biosciences

KU Edwards Campus

The undergraduate program in molecular biosciences is offered in its entirety only at the KU Edwards Campus, 12600 Quivira Rd., Overland Park, KS 66213. This program is designed for students who have earned an associate's degree or equivalent hours and wish to complete the upper-level courses necessary for a bachelor's degree.

Requirements for the B.S. Degree in Molecular Biosciences

The program offers students a strong background in genetics, microbiology, cell biology, and biochemistry, as well as laboratory skills in genetics and microbiology. Graduates have entered medical school, dental school, and graduate school with high success rates. Contact the CLAS undergraduate advisor on the Edwards Campus, Sandra Leppin, sandra.leppin@ku.edu, 913-897-8511, for more information.

General Education Requirements

In addition to degree and major **requirements for** ~~requirements,~~ all **plans and subplans, all** students must complete the KU Core.

General Science Requirements (33-37)		
Majors must complete the following general science requirements that serve as foundational courses for this major.		
Chemistry I. Satisfied by one of the following:		5
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Chemistry II. Satisfied by one of the following:		5
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
Organic Chemistry I. Satisfied by one of the following:		3
CHEM 330	Organic Chemistry I	
CHEM 380	Organic Chemistry I, Honors	
Organic Chemistry I Laboratory. Satisfied by:		
CHEM 331	Organic Chemistry I Laboratory	2
Organic Chemistry II. Satisfied by one of the following:		3
CHEM 335	Organic Chemistry II	
CHEM 385	Organic Chemistry II, Honors	
Calculus. Satisfied by one of the following:		4-6
MATH 115	Calculus I	
& MATH 116	and Calculus II	
MATH 125	Calculus I (Calculus I)	
Physics. Satisfied by one of the following:		8-9
Option 1: College Physics		
PHSX 114	College Physics I	
& PHSX 115	and College Physics II	
Option 2: General Physics		
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
Statistics. Satisfied by one of the following:		3-4
BIOL 570	Introduction to Biostatistics	
MATH 365	Elementary Statistics	
PSYC 210	Statistics in Psychological Research	
Molecular Biosciences Course Requirements (30-31)		
Molecular & Cellular Biology. Satisfied by:		
BIOL 150	Principles of Molecular and Cellular Biology	4
or BIOL 151	Principles of Molecular and Cellular Biology, Honors	

Principles of Organismal Biology. Satisfied by:		
BIOL 152	Principles of Organismal Biology	4
or BIOL 153	Principles of Organismal Biology, Honors	
Principles of Genetics. Satisfied by:		
BIOL 350	Principles of Genetics	4
or BIOL 360	Principles of Genetics, Honors	
Fundamentals of Microbiology. Satisfied by:		
BIOL 400	Fundamentals of Microbiology	3-4
or BIOL 401	Fundamentals of Microbiology, Honors	
Fundamentals of Microbiology Laboratory. Satisfied by:		
BIOL 402	Fundamentals of Microbiology Laboratory	2
Laboratory in Genetics. Satisfied by:		
BIOL 405	Laboratory in Genetics	2
Cell Structure & Function. Satisfied by:		
BIOL 416	Cell Structure and Function	3
or BIOL 536	Cell Structure and Function (Honors)	
Molecular Biology Laboratory. Satisfied by:		
BIOL 430	Laboratory in Molecular Biology	3
Introductory Biochemistry. Satisfied by:		
BIOL 600	Introductory Biochemistry, Lectures	3
Principles of Biochemistry Laboratory. Satisfied by:		
BIOL 601	Principles of Biochemistry Laboratory	2
Senior Seminar in Molecular Biosciences (1)		
Satisfied by:		
BIOL 599	Senior Seminar: _____ (Must be taken in senior year. Offered only at the Edwards Campus.)	1
Molecular Bioscience Required Electives (12)		
Satisfied by completing 12 hours of BIOL courses numbered 400 or higher or BTEC 300, 310, 400, 475, 494, or 550, including at least 2 hours of a seminar/topics course (BIOL 419, BIOL 420, BIOL 421, BIOL 701). No more than 3 hours of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement.		12
Seminar. Satisfied by completing at least 2 hours of the following seminar or topics courses:		
BIOL 419	Topics in: _____	
BIOL 421	Topics in Molecular Biosciences: _____	
BIOL 420	Seminar: _____	
BIOL 701	Topics in: _____	

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 43-44 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 12 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.

Rationale for proposal	The Dept. of Chemistry has split CHEM 190 into CHEM 190 and 191, and CHEM 195 into CHEM 195 and 196, and we have updated our requirements accordingly.
Additional Information	
Supporting Documents	
Program Reviewer Comments	

Key: 191

Program Change Request

Date Submitted: 11/16/17 11:44 am

Viewing: PHSX-BA : Physics, B.A.

Last approved: 01/31/17 10:29 am

Last edit: 12/01/17 10:03 am

Changes proposed by: shark

Catalog Pages Using this Program	Bachelor of Arts in Physics

Academic Career	Undergraduate, Lawrence
Program Type	Degree/Major
Department/ Program	Physics & Astronomy
School/College	College of Lib Arts & Sciences
Degree Code	Bachelor of Arts - BA
Consulting School(s)/College(s)	
Consulting Department(s)	
CIP Code	400801
Program Name	Physics, B.A.

Do you intend to offer a track(s)?

Do you intend for this program to be offered online?

No

Effective Catalog **2018-2019** ~~2017 - 2018~~

Program Description

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:19 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:49 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:07 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Sep 27, 2016 by Kristin Rennells (tatekris)

B. Jan 31, 2017 by Kristin Rennells (tatekris)

Degree Requirements

Requirements for the B.A. Major in Physics

All students pursuing the Bachelor of Arts in Physics must complete the KU Core requirements and the College BA specific requirements, listed in the KU Core and College sections of the catalog.

Bachelor of Arts in Physics Major Course Requirements

Foundational Physics and Mathematics (26.5)		
Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. All honors equivalents are also acceptable to fulfill PHSX major requirements.		
Seminar in Physics, Astronomy, & Engineering Physics. Satisfied by:		0
PHSX 150	Seminar in Physics, Astronomy and Engineering Physics	0.5
General Physics I. Satisfied by one of the following:		0
PHSX 211	General Physics I	5
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	5
General Physics II. Satisfied by one of the following:		0
PHSX 212	General Physics II	4
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	4
Calculus I. Satisfied by:		
MATH 125	Calculus I	4
or MATH 145	Calculus I, Honors	
Calculus II. Satisfied by:		
MATH 126	Calculus II	4
or MATH 146	Calculus II, Honors	
Advanced Math Requirement (6)		0
MATH 127	Calculus III	4
or MATH 147	Calculus III, Honors	
Elementary Linear Algebra. Satisfied by:		
MATH 290	Elementary Linear Algebra	2
or MATH 291	Elementary Linear Algebra, Honors	
~~Differential Equations. Satisfied by one of the following:~~		
Differential Equations. Satisfied by one of the following: (3)		**3**
MATH 220	Applied Differential Equations	
or MATH 221	Applied Differential Equations, Honors	
MATH 320	Elementary Differential Equations (recommended)	
Advance Physics Major Requirements (17)		
Majors must complete a course in each of the following areas:		
General Physics III. Satisfied by:		
PHSX 313	General Physics III	3
Intermediate Physics Lab. Satisfied by:		
PHSX 316	Intermediate Physics Laboratory I	1
Introductory Quantum Mechanics. Satisfied by:		
PHSX 511	Introductory Quantum Mechanics	3
Mechanics I. Satisfied by:		
PHSX 521	Mechanics I	3
Electricity and Magnetism. Satisfied by:		
PHSX 531	Electricity and Magnetism	3
Electronic Circuit Measurement and Design. Satisfied by:		
PHSX 536	Electronic Circuit Measurement and Design	4
or PHSX 516	Physical Measurements	
Physics Required Elective (3)		
Satisfied by any lecture or laboratory course numbered 500 or higher.		3

Physics Major Hours & Major GPA

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

Major Hours

Satisfied by 30 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 (300+) Hours

Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.

Major Junior/Senior (300+) 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.

Concentration in Computational Physics

Physics Prerequisite or Co-requisite Knowledge (27)

Majors must complete courses as specified in each of the following areas. Majors are advised to take honors courses when eligible. These hours do not contribute to the minimum number of hours required for the major.

Programming I. Satisfied by:		
EECS 168	Programming I	4
or EECS 169	Programming I: Honors	
Programming II. Satisfied by:		
EECS 268	Programming II	4
Elementary Linear Algebra. Satisfied by:		
MATH 290	Elementary Linear Algebra	2
or MATH 291	Elementary Linear Algebra, Honors	
or MATH 590	Linear Algebra	
Elementary or Applied Differential Equations. Satisfied by:		
MATH 220	Applied Differential Equations	3
or MATH 221	Applied Differential Equations, Honors	
or MATH 320	Elementary Differential Equations	
Foundations of Chemistry I. Satisfied by:		
CHEM 130	General Chemistry I	5
or CHEM 150	Chemistry for Engineers	
or CHEM 170	Chemistry for the Chemical Sciences I	
or CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Principles of Biology. Satisfied by:		
BIOL 100	Principles of Biology	3
Introduction to Symbolic Logic. Satisfied by:		
PHIL 310	Introduction to Symbolic Logic	3
Economics. Satisfied by:		
ECON 142	Principles of Microeconomics	3
or ECON 143	Principles of Microeconomics, Honors	
or ECON 144	Principles of Macroeconomics	
or ECON 145	Principles of Macroeconomics, Honors	

Physics Core Knowledge and Skills (27)

Majors must complete a course in each of the following areas:

Seminar in Physics, Astronomy, and Engineering Physics. Satisfied by:		
PHSX 150	Seminar in Physics, Astronomy and Engineering Physics	
General Physics I. Satisfied by one of the following:		5
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	
General Physics II. Satisfied by one of the following:		
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	
General Physics III and Intermediate Physics Laboratory. Satisfied by:		
PHSX 313	General Physics III	4
& PHSX 316	and Intermediate Physics Laboratory I	
Mechanics I. Satisfied by:		
PHSX 521	Mechanics I	3
Electricity and Magnetism. Satisfied by:		
PHSX 531	Electricity and Magnetism	3
Electronic Circuit Measurement and Design. Satisfied by:		
PHSX 536	Electronic Circuit Measurement and Design	4
or PHSX 516	Physical Measurements	
Special Problems. Satisfied by:		
PHSX 500	Special Problems	5
Numerical and Computational Methods in Physics. Satisfied by:		
PHSX 615	Numerical and Computational Methods in Physics	3

Rationale for proposal	Updating to reflect changes to honors courses.
Additional Information	The Physics and Astronomy Undergraduate Committee approved this measure at its September 2016 meeting.
Supporting Documents	
Program Reviewer Comments	

Key: 78

Program Change Request

Date Submitted: 11/20/17 10:48 am

Viewing: AAAS-MIN : African and African-American Studies, Minor

Last approved: 10/24/17 12:29 pm

Last edit: 11/21/17 8:42 am

Changes proposed by: roxie

Catalog Pages Using this Program	Minor in African and African-American Studies

Academic Career	Undergraduate, Lawrence
Program Type	Minor
Department/ Program	African & African-American St
School/College	College of Lib Arts & Sciences
Consulting School(s)/College(s)	
Consulting Department(s)	
Program Name	African and African-American Studies, Minor
Do you intend to offer a track(s)?	
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**
B. **CUSA Subcommittee**
C. **CUSA Committee**
D. **CAC**
E. CLAS Final Approval
F. Future Academic Catalog

Approval Path

A. 11/21/17 8:43 am
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
B. 12/12/17 8:49 am
Karen Ledom (kjh): Approved for CUSA Subcommittee
C. 12/13/17 1:07 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Oct 24, 2017 by Roxanna Lytle (roxie)

Program Description

Degree Requirements

Requirements for the Minor

For students whose programs make it attractive and feasible for them to focus on an African or American region, country, or topic, the department provides a minor in African and African-American studies. Minors must select 1 of the 4 tracks.

African-American Studies Track

AAAS 106	The Black Experience in the Americas	3
or AAAS 104	Introduction to African-American Studies	
AAAS 306	The Black Experience in the U.S. Since Emancipation	3
Select 12 additional hours of African-America (U.S.)-related AAAS courses at the 300 level or above		12

African and African-American Studies Track

AAAS 105	Introduction to African History	3
or AAAS 103	Introduction to Africa	
or AAAS 102	Arabic and Islamic Studies	
AAAS 106	The Black Experience in the Americas	3
or AAAS 104	Introduction to African-American Studies	
Select 12 additional hours of AAAS courses at the 300 level or above		12

African Studies Track

Students choosing this track must select 1 of 6 options.

Option 1: Advanced African Language Study

AAAS 103	Introduction to Africa	3
or AAAS 105/HIST 104	Introduction to African History	
or AAAS 102	Arabic and Islamic Studies	
Select one of the following:		12
ARAB 310	Advanced Arabic I	
& ARAB 320	and Advanced Arabic II	
& ARAB 401	and Readings in Arabic I	
& ARAB 402	and Readings in Arabic II	
KISW 310	Advanced KiSwahili I	
& KISW 320	and Advanced KiSwahili II	
& KISW 401	and Readings in KiSwahili I	
& KISW 402	and Readings in KiSwahili II	
HAUS 310	Advanced Hausa I	
& HAUS 320	and Advanced Hausa II	
& HAUS 401	and Readings in Hausa I	
& HAUS 402	and Readings in Hausa II	
WOLO 310	Advanced Wolof I	
& WOLO 320	and Advanced Wolof II	
& WOLO 401	and Readings in Wolof I	
& WOLO 402	and Readings in Wolof II	
OR two advanced language courses (AAAS 504 or AAAS 505) and a Language and Society course (LING 370/AAAS 370, LING 470/AAAS 470). Other languages may apply with consent of faculty.		
Select one of the following:		3
AAAS 550	Senior Seminar in: _____	
AAAS 690	Investigation and Conference	
AAAS 496	Field Experience	

Option 2: African Societies and Civilizations

AAAS 103	Introduction to Africa	3
or AAAS 105/HIST 104	Introduction to African History	
or AAAS 102	Arabic and Islamic Studies	
Select four of the following:		12
AAAS 300	African Traditional Religion and Thought	
ANTH 564	The Peoples of Africa	
AAAS 545	Unveiling the Veil	
WGSS 330/AAAS 340	Women in Contemporary African Literature	
AAAS 415	Women and Islam	
WGSS/AAAS 560	Race, Gender, and Post-Colonial Discourses	
AAAS 320	African Studies In: _____	
AAAS/REL 532	Studies in Islam	
AAAS 542/REL 535	The History of Islam in Africa	

HIST 300/AAAS 305	Modern Africa	
HIST/AAAS 598	Sexuality and Gender in African History	
~~HIST 599/AAAS 590~~	~~The Rise and Fall of Apartheid~~	
HIST 600/AAAS 520	West African History	
JOUR 500	Topics in Journalism: _____	
Select one of the following:		3
AAAS 550	Senior Seminar in: _____	
AAAS 690	Investigation and Conference	
AAAS 496	Field Experience	

Option 3: African Arts and Literature

AAAS 103	Introduction to Africa	3
or AAAS 105/HIST 104	Introduction to African History	
or AAAS 102	Arabic and Islamic Studies	
Select four of the following:		12
THR 302/AAAS 320	Undergraduate Seminar in: _____	
THR 326/AAAS 355	African Theatre and Drama	
THR/DANC/AAAS 334	Introduction to African Dance Theatre	
FMS 544/AAAS 555	African Film	
ENGL 324/AAAS 320	Contemporary Authors: _____	
ENGL 326/AAAS 332	Introduction to African Literature	
ENGL 479/AAAS 433	The Literature of: _____	
ENGL 479/AAAS 434	The Literature of: _____	
ENGL 674	African Literature: _____	
FREN/AAAS 432	Francophone African Literature	
HA/AAAS 376	West African Art	
HA/AAAS 578	Central African Art	
Select one of the following:		3
AAAS 550	Senior Seminar in: _____	
AAAS 690	Investigation and Conference	
AAAS 496	Field Experience	

Option 4: Political Economy of Health and Development in Africa

AAAS 103	Introduction to Africa	3
or AAAS 105/HIST 104	Introduction to African History	
or AAAS 102	Arabic and Islamic Studies	
Select four of the following:		12
ANTH 542	Biology of Human Nutrition	
ANTH 543	Nutrition Through the Life Cyle	
ANTH 650	Human Reproduction: Biology and Behavior	
ANTH 762	Human Growth and Development	
ANTH 461	Introduction to Medical Anthropology	
ANTH 540	Demographic Anthropology	
ANTH 783	Doing Ethnography	
ANTH 684	Anthropology and the Health Sciences	
ECON 587	Economic Development of Africa	
GEOG/AAAS 553	Geography of African Development	
POLS 665/AAAS 600	Politics in Africa	
POLS 667	Islam and Politics	
~~HIST 599/AAAS 590~~	~~The Rise and Fall of Apartheid~~	
AAAS 680	Introduction to Modern Africa	
ANTH 545/AAAS 554	Contemporary Health Issues in Africa	
Select one of the following:		3
AAAS 550	Senior Seminar in: _____	
AAAS 690	Investigation and Conference	
AAAS 496	Field Experience	

Option 5: People and Space in Africa

AAAS 103	Introduction to Africa	3
or AAAS 105/HIST 104	Introduction to African History	
or AAAS 102	Arabic and Islamic Studies	
Select four of the following:		12
GEOG/AAAS 351	Africa's Human Geographies	
GEOG/AAAS 553	Geography of African Development	

ANTH 564	The Peoples of Africa	
ANTH 549	Human Paleontology: Fossil Apes to Australopithecus	
ANTH 501/AAAS 520	Topics in Sociocultural Anthropology: _____	
~~HIST 599/AAAS 590~~	~~The Rise and Fall of Apartheid~~	
AAAS/WGSS 560	Race, Gender, and Post-Colonial Discourses	
GEOG 550/AAAS 551/EVRN 420	Environmental Issues in Africa	
Select one of the following:		3
AAAS 550	Senior Seminar in: _____	
AAAS 690	Investigation and Conference	
AAAS 496	Field Experience	

Option 6: Student-Designed Cluster

AAAS 103	Introduction to Africa	3
or AAAS 105/HIST 104	Introduction to African History	
or AAAS 102	Arabic and Islamic Studies	
Four courses created from a student's academic concentration		12
Select one of the following:		3
AAAS 550	Senior Seminar in: _____	
AAAS 690	Investigation and Conference	
AAAS 496	Field Experience	

Haitian Studies Track

HAIT 110	Elementary Haitian I	3
HAIT 120	Elementary Haitian II	3
HAIT 230	Intermediate Haitian I	3
HAIT 240	Intermediate Haitian II	3
12 additional hours of the language or related courses at the 300 level or above		12

Minor Hours & Minor GPA

While completing all required courses, minors must also meet each of the following hour and GPA minimum standards:

Minor Hours

Satisfied by a minimum of 18 hours of minor courses.

Minor Hours in Residence

Satisfied by a minimum of 9 hours of KU resident credit in the minor.

Minor Junior/Senior (300+) Hours

Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the minor.

Minor Graduation GPA

Satisfied by a minimum of a 2.0 KU GPA in all departmental courses in the minor. GPA calculations include all courses in the field of study including F's and repeated courses. See the Semester/Cumulative GPA Calculator.

Rationale for proposal	Course deactivated by HIST
Additional Information	
Supporting Documents	
Program Reviewer Comments	

Key: 361

Program Change Request

Date Submitted: 11/20/17 8:40 am

Viewing: PHSX-MIN : Astronomy, Minor

Last edit: 11/20/17 8:40 am

Changes proposed by: shark

Catalog Pages Using this Program	Minor in Astronomy

Academic Career	Undergraduate, Lawrence
Program Type	Minor
Department/ Program	Physics & Astronomy
School/College	College of Lib Arts & Sciences
Consulting School(s)/College(s)	
Consulting Department(s)	
Program Name	Astronomy, Minor
Do you intend to offer a track(s)?	**No**
Do you intend for this program to be offered online?	**No**
Effective Catalog	**2018-2019**

In Workflow

- **A. CLAS Undergraduate Program and Course Coordinator**
- **B. CUSA Subcommittee**
- **C. CUSA Committee**
- **D. CAC**
- E. CLAS Final Approval
- F. Future Academic Catalog

Approval Path

- A. 11/27/17 9:38 am Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
- B. 12/12/17 8:49 am Karen Ledom (kjh): Approved for CUSA Subcommittee
- C. 12/13/17 1:07 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Program Description

Degree Requirements

Requirements for the Minor in Astronomy

Astronomy Minor Course Requirements

Students selecting this minor must complete courses as specified in each of the following areas:

General Physics I (5)

Satisfied by one of the following: 5

PHSX 211	General Physics I
& PHSX 216	and General Physics I Laboratory

PHSX 210	**General Physics I for Engineers**	
& PHSX 216	**and General Physics I Laboratory**	
PHSX 213	General Physics I Honors	
PHSX 201	**Calculus Supplement to College Physics I**	
& PHSX 114	**and College Physics I**	
General Physics II (4)		
Satisfied by one of the following:		4
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	
PHSX 202	**Calculus Supplement to College Physics II**	
& PHSX 115	**and College Physics II**	
General Physics III and Intermediate Physics Laboratory (4)		
Satisfied by the following:		
PHSX 313	General Physics III	3
PHSX 316	Intermediate Physics Laboratory I	1
Physical Astronomy, Honors (3)		
Satisfied by the following:		
ASTR 391	Physical Astronomy, Honors	3

Astronomy Required Electives. Satisfied by at least 5 hours in any combination of ASTR courses numbered above 300.

Minor Hours & Minor GPA

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

Minor Hours

Satisfied by 20 hours of minor courses.

Minor Hours in Residence

Satisfied by a minimum of 9 junior/senior (300+) hours of KU resident credit in the minor.

Minor Junior/Senior Hours

Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the minor.

Minor Graduation GPA

Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the minor. GPA calculations include all junior/senior courses in the field of study including F's and repeated courses. See the Semester/Cumulative GPA Calculator.

Rationale for proposal	Updating to include all possible flavors of general physics I and II.
Additional Information	
Supporting Documents	
Program Reviewer Comments	

Key: 312

Program Change Request

Date Submitted: 11/09/17 9:37 am

Viewing: CHEM-MIN : Chemistry, Minor

Last approved: 10/24/17 12:32 pm

Last edit: 11/09/17 9:37 am

Changes proposed by: drb

Catalog Pages Using this Program	Minor in Chemistry

Academic Career	Undergraduate, Lawrence
Program Type	Minor
Department/ Program	Chemistry
School/College	College of Lib Arts & Sciences
Consulting School(s)/College(s)	
Consulting Department(s)	
Program Name	Chemistry, Minor
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

Program Description

Degree Requirements

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/28/17 3:19 pm
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:49 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:07 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Feb 13, 2016 by dgarens

B. May 22, 2017 by dgarens

C. Oct 24, 2017 by dgarens

Requirements for the Minor

The minor allows students outside the department to obtain a strong, distributed background in the discipline. It is particularly useful for students anticipating careers in medicine, health professions, biological sciences, environmental sciences, chemical engineering, business, law, secondary education, or any career in which a basic understanding of the molecular sciences is helpful. A total of 23 credit hours is required, including 13 hours of upper-division work and at least 2 upper-division laboratories. Students should see a chemistry department advisor early in the junior year.

Chemistry Minor Course Requirements

Students selecting this minor must complete the following:

Mathematics and Physics (14-21)		
Mathematics: (choose one of the following (MATH 115 & MATH 116 recommended))		6-12
MATH 115	Calculus I	
& MATH 116	and Calculus II	
MATH 125	Calculus I	
& MATH 126	and Calculus II	
& MATH 127	and Calculus III	
Physics: (Choose one of the following (PHSX 114 & PHSX 115 recommended))		8-9
PHSX 114	College Physics I	
& PHSX 115	and College Physics II	
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
& PHSX 212	and General Physics II	
& PHSX 236	and General Physics II Laboratory	
Chemistry Courses (15)		
Chemistry for the Chemical Sciences I. Satisfied by one of the following:		5
CHEM 170	Chemistry for the Chemical Sciences I	
CHEM 130	General Chemistry I	
CHEM 190	Foundations of Chemistry I, Honors	
& CHEM 191	and Foundations of Chemistry I Laboratory, Honors	
Chemistry for the Chemical Sciences II. Satisfied by one of the following:		5
CHEM 175	Chemistry for the Chemical Sciences II	
CHEM 135	General Chemistry II	
CHEM 195	Foundations of Chemistry II, Honors	
& CHEM 196	and Foundations of Chemistry II Laboratory, Honors	
Organic Chemistry I. Satisfied by one of the following:		3
CHEM 310	Fundamentals of Organic Chemistry	
CHEM 330	Organic Chemistry I	
CHEM 380	Organic Chemistry I, Honors	
Organic Chemistry Lab I. Satisfied by:		2
CHEM 331	Organic Chemistry I Laboratory	
Chemistry Required Elective Group I (10)		5
Students selecting this minor must complete one of the following:		
Analytical Chemistry Lecture and Laboratory. Satisfied by:		5
CHEM 400	Analytical Chemistry	
& CHEM 401	and Analytical Chemistry Laboratory	
Biological Physical Chemistry Lecture and Laboratory. Satisfied by:		
CHEM 520	Biological Physical Chemistry with Laboratory *	
Chemistry Required Elective Group II (3-4)		3-4
Students selecting this minor must complete one of the following:		
Biological Physical Chemistry. Satisfied by:		
CHEM 510	Biological Physical Chemistry	
Physical Chemistry I. Satisfied by:		
CHEM 530	Physical Chemistry I	
Systematic Inorganic Chemistry. Satisfied by:		
CHEM 660	Systematic Inorganic Chemistry	

*Students who elect to take CHEM 520 from Option Group 1 cannot take CHEM 510 or CHEM 530 from Option Group 2.

Minor Hours & Minor GPA

While completing all required courses, minors must also meet each of the following hour and GPA minimum standards:

Minor Hours

Satisfied by 23-24 hours of minor courses.

Minor Hours in Residence

Satisfied by a minimum of 9 hours of KU resident credit in the minor.

Minor Junior/Senior Hours

Satisfied by a minimum of 13 hours from junior/senior courses (300+) in the minor.

Minor Junior/Senior Graduation GPA

Satisfied by a minimum of a 2.0 KU GPA in all departmental courses (300+) in the minor. GPA calculations include all junior/senior courses in the field of study including F's and repeated courses. See the Semester/Cumulative GPA Calculator.

Rationale for proposal	This requests accompanies proposal to split CHEM 190 (and 195) into separate lecture and laboratory components.
Additional Information	Any student that has taken CHEM 530+535+537 will be allowed those courses and a minor substitution will be filled out.
Supporting Documents	
Program Reviewer Comments	

Key: 298

Program Change Request

Date Submitted: 11/21/17 11:31 am

Viewing: CLSX-MIN : Classics, Minor

Last edit: 11/27/17 9:28 am

Changes proposed by: tswelch

Catalog Pages Using this Program: Minor in Classics

Academic Career	Undergraduate, Lawrence
Program Type	Minor
Department/ Program	Classics
School/College	College of Lib Arts & Sciences

Consulting School(s)/College(s)

School(s)/College(s)
College of Lib Arts & Sciences

Consulting Department(s)

Department(s)
Classics

Program Name: Classics, Minor

Do you intend to offer a track(s)?

Yes

Please name the track(s)

Track Name(s)
Greek, Latin, Greek and Latin, Classical Antiquity

Do you intend for this program to be offered online?

No

Effective Catalog: **2017 - 2018**

In Workflow

- **A. CLAS Undergraduate Program and Course Coordinator**
- **B. CUSA Subcommittee**
- **C. CUSA Committee**
- **D. CAC**
- E. CLAS Final Approval
- F. Future Academic Catalog

Approval Path

- A. 11/27/17 9:28 am Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator
- B. 12/12/17 8:49 am Karen Ledom (kjh): Approved for CUSA Subcommittee
- C. 12/13/17 1:07 pm Rachel Schwien (rschwien): Approved for CUSA Committee

Program Description

The Classics minor allows students to explore a facet of ancient Greek and Roman culture at an advanced level, such as the Greek and/or Latin languages or ancient archaeology.

Degree Requirements

Requirements for the Minor

The minor requires 18 credit hours (12 hours at the junior/senior level) in courses in the Department of Classics (and other approved courses).

Minor Hours & GPA

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

Minor Hours
Satisfied by 18 hours of minor courses.
Minor Hours in Residence
Satisfied by a minimum of 9 hours of junior/senior (300+) hours of KU resident credit in the minor.
Minor Junior/Senior Hours
Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.
Minor Graduation GPA
Satisfied by a minimum of a 2.0 GPS in all departmental courses in the minor. GPA calculations include all departmental courses in the field of study including Fs and repeated courses. See the Semester/Cumulative GPA Calculator.

Greek

- 18 hours in ancient Greek and related courses. At least 6 of those hours must be in ancient Greek at the 300 level or above.
- In addition to courses in Greek, students may include **CLSX 515** ~~CLSX 317~~ or CLSX 526, any other CLSX courses at the 300 level or above (not including CLSX 340 or CLSX 501), and PHIL 608.

Latin

- 18 hours in Latin and/or related courses. At least 6 of those hours must be in Latin at the 300 level or above.
- In addition to Latin courses, students may include **CLSX 516 or** ~~CLSX 317 or~~ CLSX 527, any other CLSX courses at the 300 level or above (not including CLSX 330, CLSX 384, or CLSX 388), and PHIL 608.

Classical Antiquity

- 18 hours in classics and related courses. At least 12 hours must be in CLSX courses; 6 hours may be in Greek, Latin, ancient philosophy, or ancient history (excluding HIST 107).

Classical Languages

- 18 hours in Latin and/or Greek. At least 12 of those hours must be in ancient Greek or Latin at the 300 level or above.

Rationale for proposal	We are retiring CLSX 317 and have added 515 and 516 (Greek gender, Roman gender) to the curriculum.
Additional Information	**HA has been informed of the deletion of CLSX 317.**
Supporting Documents	
Program Reviewer Comments	**Kim O'Bryon (kobryon) (12/02/16 5:09 pm):** Rollback: Rollback per request from Tara Welch. **Karen Ledom (kjh) (11/27/17 11:06 am):** CLSX 317/HA/HWC 317 deactivation approved SP17

Key: 297

Program Change Request

Date Submitted: 11/20/17 8:43 am

Viewing: PHSX-MIN : Physics, Minor

Last approved: 10/24/17 12:38 pm

Last edit: 11/20/17 8:43 am

Changes proposed by: shark

Catalog Pages Using this Program	Minor in Physics

Academic Career	Undergraduate, Lawrence
Program Type	Minor
Department/ Program	Physics & Astronomy
School/College	College of Lib Arts & Sciences
Consulting School(s)/College(s)	
Consulting Department(s)	
Program Name	Physics, Minor
Do you intend to offer a track(s)?	No
Do you intend for this program to be offered online?	No
Effective Catalog	2018-2019

In Workflow

A. **CLAS Undergraduate Program and Course Coordinator**

B. **CUSA Subcommittee**

C. **CUSA Committee**

D. **CAC**

E. CLAS Final Approval

F. Future Academic Catalog

Approval Path

A. 11/27/17 9:38 am
Rachel Schwien (rschwien): Approved for CLAS Undergraduate Program and Course Coordinator

B. 12/12/17 8:49 am
Karen Ledom (kjh): Approved for CUSA Subcommittee

C. 12/13/17 1:07 pm
Rachel Schwien (rschwien): Approved for CUSA Committee

History

A. Oct 24, 2017 by Christopher Fischer (shark)

Program Description

Degree Requirements

Requirements for the Minor in Physics

Physics Minor Course Requirements

Student selecting this minor must complete courses as specified in each of the following areas:		
General Physics I. Satisfied by one of the following:		4-5
PHSX 201	Calculus Supplement to College Physics I	
& PHSX 114	and College Physics I	
PHSX 210	General Physics I for Engineers	
& PHSX 216	and General Physics I Laboratory	
PHSX 211	General Physics I	
& PHSX 216	and General Physics I Laboratory	
PHSX 213	General Physics I Honors	
General Physics II. Satisfied by one of the following:		4
PHSX 202	Calculus Supplement to College Physics II	
& PHSX 115	and College Physics II	
PHSX 212	General Physics II	
& PHSX 236	and General Physics II Laboratory	
PHSX 214	General Physics II Honors	
General Physics III and Intermediate Physics Laboratory. Satisfied by:		
PHSX 313	General Physics III	4
& PHSX 316	and Intermediate Physics Laboratory I	
Mechanics I. Satisfied by:		
PHSX 521	Mechanics I	3
or EPHX 521	Mechanics I	
Electricity and Magnetism. Satisfied by:		
PHSX 531	Electricity and Magnetism	3
or EPHX 531	Electricity and Magnetism	
Physics Required Elective. Satisfied by any 3 credit hour PHSX course numbered 500 or above.		3
Total Hours		21-22

Minor Hours & Minor GPA

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

Minor Hours

Satisfied by 21 hours of major courses.

Minor Hours in Residence

Satisfied by a minimum of 9 junior/senior (300+) hours of KU resident credit in the major.

Minor Junior/Senior (300+) Hours

Satisfied by a minimum of 13 hours from junior/senior courses (300+) in the minor.

Minor Graduation GPA

Satisfied by a minimum of a 2.0 KU GPA in the minor. GPA calculations include all courses in the field of study including F's and repeated courses. See the Semester/Cumulative GPA Calculator.

Rationale for proposal	Updating to include EPHX versions of 500 level courses.
Additional Information	~~The total hours for satisfying General Physics I should be '4 - 5'.I'm not sure how to fix that with this editor.Sorry about that.~~
Supporting Documents	
Program Reviewer Comments	

Key: 313

Course Change Request

New Course Proposal

Date Submitted: 11/08/17 12:18 pm

Viewing: LING 897 : M.A. Written Examinations

Last edit: 11/08/17 12:18 pm

Changes proposed by: cljohns

Academic Career	Graduate, Lawrence		
Subject Code	LING	Course Number	897
Academic Unit	Department	Linguistics	
	School/College	College of Lib Arts & Sciences	
Locations	Lawrence		

Do you intend to offer any portion of this course online?

No

Title	M.A. Written Examinations
Transcript Title	M.A. Written Examinations
Effective Term	Spring 2018

Catalog Description

A course for students to prepare for the M.A. written examination. Normally to be taken during the semester in which the student will complete the written examination. May be taken for a maximum of six credits. Does not count toward the minimum number of credits required for a graduate degree in linguistics. Graded satisfactory/unsatisfactory. RSH.

Prerequisites	None
Cross Listed Courses:	
Credits	1-6
Course Type	Individual Research (RSH)
Grading Basis	SUI (G21)
Typically Offered	Typically Every Semester
Repeatable for credit?	No

Does this course fulfill RSRS (Research Skills Responsible Scholarship)?

No

Will this course be required for a degree, major, minor, certificate, or concentration?

No

Rationale for Course Proposal

To offer M.A. graduate students a course to prepare them for the M.A. written exam and to make our course listing internally consistent and more transparent to the student.

Course Reviewer Comments

Rachel Schwien (rschwien) (11/16/17 2:44 pm): Intended for students choosing the written exam option

Key: 12376

In Workflow

1. **CLAS Graduate Program and Course Coordinator**
2. **CGS PCC Subcommittee**
3. **CGS Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/16/17 2:44 pm Rachel Schwien (rschwien): Approved for CLAS Graduate Program and Course Coordinator
2. 12/12/17 9:26 am Rachel Schwien (rschwien): Approved for CGS PCC Subcommittee
3. 12/18/17 11:44 am Rachel Schwien (rschwien): Approved for CGS Committee

Course Change Request

Date Submitted: 11/14/17 2:30 pm

Viewing: SOC 802 : Classical ~~Modern~~ Social Theory

Last edit: 11/14/17 2:30 pm

Changes proposed by: cleg

Programs referencing this course	SOC-PhD: Sociology, Ph.D.

Academic Career	Graduate, Lawrence		
Subject Code	SOC	Course Number	802
Academic Unit	Department	Sociology	
	School/College	College of Lib Arts & Sciences	

Do you intend to offer any portion of this course online?

No

Title	**Classical** ~~Modern~~ Social Theory
Transcript Title	**Classical** ~~Modern~~ Social Theory
Effective Term	**Fall 2017**

Catalog Description

This seminar will focus on the later 19th and early 20th century "theories of society," addressing the origins and developmental tendencies of Western modernity and their relation to premodern social orders. Primary texts of the major theorists **(e.g.** ~~(eg.~~ Marx, Durkheim, Nietzsche, Weber, Simmel, and Mead) will be studied in historical context. The tradition's analytical and critical resources and problematic features will also be explored. Finally, the connections between this tradition and contemporary sociological approaches will be explored.

Prerequisites	None
Cross Listed Courses:	

Credits	3
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Grading Basis	A-D(+/-)FI (G11)
Typically Offered	
Repeatable for credit?	No

Does this course fulfill RSRS (Research Skills Responsible Scholarship)?

No

Will this course be required for a degree, major, minor, certificate, or concentration?

Yes

Which Program(s)?

Program Code - Name
(SOC-PhD) Sociology, Ph.D.

Describe how: **This course fulfills a theory course requirement.**

Rationale for Course Proposal

The topics and theorists covered in the course are widely known in the discipline as "classical theory;" we are changing the title to reflect this.

In Workflow

1. **CLAS Graduate Program and Course Coordinator**
2. **CGS PCC Subcommittee**
3. **CGS Committee**
4. **CAC**
5. CLAS Final Approval
6. Registrar
7. PeopleSoft

Approval Path

1. 11/14/17 3:37 pm Rachel Schwien (rschwien): Approved for CLAS Graduate Program and Course Coordinator
2. 12/12/17 9:26 am Rachel Schwien (rschwien): Approved for CGS PCC Subcommittee
3. 12/18/17 11:44 am Rachel Schwien (rschwien): Approved for CGS Committee

Course Reviewer Comments

Key: 6813

Program Change Request

Date Submitted: 11/20/17 10:44 am

Viewing: LING-PhD : Linguistics, Ph.D.

Last approved: 11/11/16 6:17 am

Last edit: 11/20/17 10:44 am

Changes proposed by: cljohns

Catalog Pages Using this Program	Doctor of Philosophy in Linguistics

Academic Career	Graduate, Lawrence
Program Type	Degree/Major
Department/ Program	Linguistics
School/College	College of Lib Arts & Sciences
Degree Code	Doctor of Philosophy - PhD
Consulting School(s)/College(s)	School(s)/College(s): College of Lib Arts & Sciences
Consulting Department(s)	Department(s): Linguistics
CIP Code	160102
Program Name	Linguistics, Ph.D.
Do you intend to offer a track(s)?	
Do you intend for this program to be offered online?	No
Effective Catalog	**2018-2019** ~~2017 - 2018~~

In Workflow

- **A. CLAS Graduate Program and Course Coordinator**
- **B. CGS PCC Subcommittee**
- **C. CGS Committee**
- **D. CAC**
- E. CLAS Final Approval
- F. Future Academic Catalog

Approval Path

- A. 11/20/17 12:28 pm Rachel Schwien (rschwien): Approved for CLAS Graduate Program and Course Coordinator
- B. 12/12/17 9:26 am Rachel Schwien (rschwien): Approved for CGS PCC Subcommittee
- C. 12/18/17 11:44 am Rachel Schwien (rschwien): Approved for CGS Committee

History

- A. Jan 22, 2016 by cynthia
- B. Nov 11, 2016 by Corinna Johnson (cljohns)

Program Description

Degree Requirements

Ph.D. Degree Requirements

The Ph.D. is structured as a five year program. Students will earn an M.A. en route to the Ph.D.

Prerequisites

(1) 3 hours of **LING 700 Introduction to Linguistic Science** ~~LING 700 Introduction to Linguistic Science~~
(2) The ability to read in a foreign language (not English) with a significant linguistic literature.
Students who do not meet these prerequisites, but have an undergraduate major in a related field (such as a foreign language, English, speech, anthropology or psychology) may be accepted with the provision that they make up their deficiencies as soon as possible.

Degree Requirements

Residence

2 semesters, which may include 1 summer session, must be spent in full-time resident study at KU. Normally, an enrollment of 9 credit hours is considered full-time during the semester. See Doctoral Degree Requirements, 2. Program Time Constraints, in the Graduate Studies section of the online catalog.

Research Skills and Responsible Scholarship

A. Language requirement: Reading ability in a foreign language (not English) demonstrated through one of the following ways:

A. Pass a language examination devised and administered by the Linguistics Department.

B. Complete ~~DANE 101~~, ~~DTCH 101~~, FREN 100, GERM 101, ITAL 100, RUSS 101, or SPAN 100 with a grade of C or higher, or LAT 104 with a grade of B or higher.

C. Have a KU professor qualified in a given language certify that the student has the fourth level of competence in reading, comprehension, and speaking.

D. Complete 16 hours (or 4 semesters) in a single language at KU or another university as a graduate or undergraduate student.

B. Research skills requirement: 1 of the following:

- A course in statistics with a grade of B or above.
- A course in a computer programming language with a grade of B or above.
- **LING 783 Computational Linguistics** ~~LING 783 Computational Linguistics~~ with a grade of B or above.

C. Responsible Scholarship: The university requires that every doctoral student have training in responsible scholarship pertinent to the field of research and appropriate to the doctoral level. This requirement must be met before taking the comprehensive oral exam. **LING 794 Proseminar** ~~LING 794 Proseminar~~ fulfills the requirements for responsible scholarship.

Minimum Course Requirements

57 credit hours consisting of 33 credit hours at the M.A. level and 24 hours at the Ph.D. level.

M.A. Level Course Requirements (33)

LING 794	Proseminar	3
LING 705	Phonetics I	3
LING 712	Phonological Theory I	3
LING 725	Syntax I	3
Select 1 course		3
LING 709	First Language Acquisition (or)	
LING 715	Second Language Acquisition I	
Select 1 course		3
LING 735	Psycholinguistics I	
LING 738	Neurolinguistics I	
Select 1 of the following research methods courses:		3
LING 720	Research Methods in Linguistics (or)	
LING 741	Field Methods in Linguistic Description (or)	
LING 782	Research Methods in Child Language	
12 credit hours of electives to be determined by the student and the student's advisor, excluding LING 998 Independent Study; Topics in Empirical Research in Linguistics; LING 850 Topics in Empirical Research in Linguistics; LING 851 Research in Language Acquisition and Processing; LING 852 Research in Field Linguistics.		12

Ph.D. Level Course Requirements (24)

Methods requirement		3
LING 741	Field Methods in Linguistic Description	
If already taken for M.A., replace with 1 of the following:		
LING 720	Research Methods in Linguistics (or)	
LING 782	Research Methods in Child Language	
Second-level courses		9
Select 3 of the following second-level courses:		
LING 707	Phonetics II	
LING 714	Phonological Theory II	
LING 716	Second Language Acquisition II	
LING 726	Syntax II	
LING 731	Semantics	

LING 737	Psycholinguistics II
LING 739	First Language Acquisition II
LING 742	Neurolinguistics II
LING 791	Topics in Linguistics: _____ (Morphology)

1 advanced seminar in Linguistics (LING 998 Independent Study, LING 850 Research in Experimental Linguistics, LING 851 Research in Acquisition and Processing, and LING 852 Research in Field Linguistics do not count toward this requirement.) 3

Elective courses in linguistics 9

Select 3 elective courses in linguistics. (LING 998 Independent Study, LING 850 Research in Experimental Linguistics, LING 851 Research in Acquisition and Processing, and LING 852 Research in Field Linguistics do not count toward this requirement.)

Research Presentation Requirement

Students must give 1 research presentation each semester beginning in their second year of the program. For students who are just beginning their independent research projects, this presentation may involve the discussion of published research relevant to the student's research interests. This requirement may be satisfied through a presentation in one of the empirical research seminars (LING 850, LING 851, LING 852), a presentation at a local, regional, or international conference, a presentation in the Linguistics colloquy series, or a presentation at any other relevant forum as determined by the faculty adviser. Students must include the titles and dates of these presentations in their annual report each year.

M.A. Research Project

The Master's research project should consist of a detailed research proposal and include pilot results and/or preliminary analyses. Students in the Ph.D. program should be able to continue working on the project with the aim of submitting it as a qualifying paper for the Ph.D. program.

An M.A. candidate in residence who has begun work on a research project must enroll for at least 1 credit hour of LING 899 Master's Research Project each semester (summer session excluded) until the thesis is completed.

The research project must be defended successfully in an oral examination. The oral exam is scheduled when all 3 committee members have indicated in writing their approval or disapproval of the research project for defense and at least 2 (including the chair) have approved scheduling the exam.

Following the oral examination, the student's performance will be evaluated by the project committee and reported by a Progress-to-Degree form to Graduate Studies as the outcome of the Master's oral examination. The committee will evaluate the M.A. research project with the following grades: 0-fail, 1-pass but cannot continue to the Ph.D. program, 2-pass and can continue to the Ph.D. program.

Qualifying Papers

The student needs to write 2 qualifying papers -- a major paper in the area of specialization and a minor paper in a different area. Both papers should represent original work. The major paper may be an expanded version of the M.A. research project and should be of publishable quality. The minimum lengths of the major and minor papers are 25 pages and 15 pages, respectively.

The major and minor papers are developed in close consultation with an Advisory Committee (3 faculty members) and the 2 papers should be supervised by different faculty members when possible. The adequacy of the papers is evaluated on the quality of the literature review, theoretical contribution, and research integration as well as the basis of their logical coherence and organization. The student does not need to orally defend the qualifying papers.

Dissertation Proposal and the Oral Comprehensive Exam

When the major and minor qualifying papers have been approved by the Advisory Committee, the student may form a Ph.D. committee (4 inside members, 1 outside member), which helps the student work on the dissertation, starting from the dissertation proposal. The proposal should clearly identify the research questions that the dissertation will address, include a comprehensive literature review, lay out the methodology for the research, discuss preliminary data and results, if any, and present a timetable for the dissertation research. The minimum length for the dissertation proposal is 10 pages.

The Oral Comprehensive Exam is the official exam required by Graduate Studies and consists of an oral defense of the dissertation proposal and the answering of any other questions related to the fields of study of the dissertation research. It must be taken within 2 months (excluding summer) after the student has turned in the dissertation proposal. The oral exam will typically last 2 to 3 hours.

Post-Comprehensive Enrollment

After passing the comprehensive oral examination the candidate must be continuously enrolled — including summer sessions — in at least 1 credit of **LING 999 Doctoral Dissertation** ~~LING 999 Doctoral Dissertation~~ until the degree is completed; each enrollment shall reflect as accurately as possible the candidate's demands on faculty time and University facilities. Students must also enroll in either **LING 850** ~~LING 850~~ Research in Experimental Linguistics, **LING 851 Research in Language Acquisition and Processing,** ~~LING 851 Research in Language Acquisition and Processing,~~ or **LING 852 Research in Field Linguistics** ~~LING 852 Research in Field Linguistics~~ at least once following their comprehensive exam. During this time, until the degree is completed or until 18 post-comprehensive hours have been completed (whichever comes first), the candidate shall enroll for a minimum of 6 hours a semester and 3 hours a summer session. Post-comprehensive enrollment may include enrollment of **LING 999 Doctoral Dissertation** ~~LING 999 Doctoral Dissertation~~ during the semester or summer session in which the comprehensive oral examination has been passed. If after 18 hours of post-comprehensive enrollment the degree is not completed, the candidate shall continue to enroll each semester and each summer session until the final oral examination has been passed; the number of hours of each enrollment shall be determined by the candidate's adviser and must as accurately as possible reflect the candidate's demands on faculty time and University facilities.

Dissertation and Dissertation Defense

The dissertation is developed in consultation with the Ph.D. committee. The dissertation must be orally defended in front of the Ph.D. committee. The student will be asked first to summarize his/her dissertation and evidence, and then will be questioned by the committee. The defense will normally last 1 to 1 and 1/2 hours.

Rationale for proposal	DANE 101 is being deactivated; therefore, we are removing it from the language requirement list of approved courses.
Additional Information	
Supporting Documents	
Program Reviewer Comments	

Key: 112