Course Inventory Change Request

New Course Proposal

Date Submitted: 03/01/17 11:19 am

Viewing. GEOG 586: Sustainable Food Systems and Food Security in the Global South

Last edit: 04/26/17 2:08 pm

Changes proposed by: koerner

Academic Career: Undergraduate, Lawrence
Subject Code: GEOG
Course Number: 586
Academic Unit: Department of Geography
School/College: College of Lib Arts & Sciences

Locations: Lawrence

Do you intend to offer any portion of this course online? No

Title: Sustainable Food Systems and Food Security in the Global South
Transcript Title: Sus Food Systs & Food Security
Effective Term: Fall 2017

Catalog Description: The course adopts an interdisciplinary approach to study food systems and food security in the Global South. It incorporates multiple perspectives ranging from the local to the global level to explore the cultural, ecological/environmental, economic, sociopolitical, and ethical dimensions connected to the global food system. It also examines several dimensions of food insecurity. Students will also examine the impact of food insecurity on health as well as racial and economic disparities in access to food. The course will also examine the research and conceptualization of food systems and analyze concepts such as “food deserts,” “food oases,” “food swamps,” and “food grasslands.” We will examine food production and food acquisition strategies in low-income areas. Case studies will be drawn on experiences from diverse regions particularly Southern Africa even though other regions such as Latin America and Southeast Asia will be considered.

Prerequisites: GEOG 102 or consent of instructor.

Are you proposing this course for KU Core? No

Typically Offered: Once a Year, Usually Fall

Principal Course Designator: S - Social 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

Rationale for Course Proposal: The global population is projected to exceed 9 billion by 2050, which raises the need to feed the growing population in a sustainable manner. This makes it necessary to train a new generation of scholars who understand the current challenges to the global food system.
(such as climate change) and are in position to offer practical solutions to improve the global food system.

Course Reviewer: Rachel Schwien (rschwien) (03/01/17 11:37 am): AAAS approves of new course

Comments: Rachel Schwien (rschwien) (03/14/17 12:27 pm): Dept (T. Bolden) advised of additional changes to title and description. Proposal tabled for further edits.
Course Inventory Change Request

New Course Proposal

Date Submitted: 04/26/17 4:06 pm

Viewing: TIB 301 : Advanced Tibetan I

Last edit: 05/04/17 8:10 am

Changes proposed by: mgchilds

Academic Career: Undergraduate, Lawrence
Subject Code: TIB
Course Number: 301
Academic Unit: Department of East Asian Languages & Cultures
School/College: College of Liberal Arts & Sciences
Locations: Lawrence

Do you intend to offer any portion of this course online?
No

Title: Advanced Tibetan I
Transcript Title: Advanced Tibetan I
Effective Term: Fall 2017

Catalog Description: This course focuses on developing reading fluency in classical and modern Tibetan with continued practice in the spoken language as well.

Prerequisites: Tibetan 202 or permission of the instructor.

Cross Listed Courses:

Credits: 1-3
Course Type: Lecture (Regularly scheduled academic course) (LEC)
Grading Basis: A-D/F/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: H - Humanities

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

Rationale for Course Proposal: We have had a few students studying Tibetan for a third year and using EALC Studies in: 3. Creating a unique number will make it easier to keep track of this course.

Course Reviewer Comments: Maggie Childs (mgchilds) (04/26/17 4:10 pm): I meant to give this course the title Advanced Tibetan I, instead of just Advanced Tibetan.
# New Course Proposal

**TIB 302: Advanced Tibetan II**

**Title:** Advanced Tibetan II

**Effective Term:** Spring 2018

**Catalog Description:** This course focuses on more advanced reading fluency in classical and modern Tibetan with continued practice in the spoken language as well.

**Prerequisites:** TIB 301 or permission of the instructor.

**Course Inventory Change Request**

Date Submitted: 04/26/17 4:09 pm

Viewing: TIB 302: Advanced Tibetan II

Last edit: 05/04/17 8:11 am

Changes proposed by: mgchihds

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Subject Code</td>
<td>TIB</td>
</tr>
<tr>
<td>Academic Unit</td>
<td>East Asian Languages &amp; Cultures</td>
</tr>
<tr>
<td>School/College</td>
<td>College of Lib Arts &amp; Sciences</td>
</tr>
<tr>
<td>Locations</td>
<td>Lawrence</td>
</tr>
<tr>
<td>Do you intend to offer any portion of this course online?</td>
<td>No</td>
</tr>
</tbody>
</table>

**Credits:** 1-3

**Course Type:** Lecture (Regularly scheduled academic course) (LEC)

**Grading Basis:** A-D(+/F) (G11)

**Are you proposing this course for KU Core?** No

**Typically Offered:** Once a Year, Usually Spring

**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?** No

**Will this course be required for a degree, major, minor, certificate, or concentration?** No

**Rationale for Course Proposal:** We have been using EALC 331 Studies in ___ for this course but it would be better for it to have its own discreet name and number.

**Course Reviewer Comments:**

**Key:** 12/10
Course Inventory Change Request

Viewing: BIOL 544 644: Comparative Animal Physiology

Formerly known as: BIOL 644

Changes proposed by: gburg

Academic Career Undergraduate, Lawrence
Subject Code BIOL Course Number 544 644
Academic Unit Department Biology
School/College College of Lib Arts & Sciences
Do you intend to offer any portion of this course online? No
Title Comparative Animal Physiology
Transcript Title Comparative Animal Physiology
Effective Term Fall 2018

Catalog Description
An intermediate physiology course with lectures and discussions of the structures, functions, mechanisms, and interactions of vertebrate and invertebrate organ systems with a focus on the different ways in which animals adapt to their environments. Topics include digestion and nutrition, metabolism, gas exchange, circulation, excretion, neurophysiology, endocrinology, and muscle physiology. Lecture and discussion of the basic mechanism of organic maintenance and integration; a comparative treatment of the uniformities and diversity of animal function; emphasis on environmental adaptations and evolutionary relationships.

Prerequisites
BIOL 152 or BIOL 153, and CHEM 330, a course in organic chemistry, or consent of instructor. A college physics course is recommended but not required.

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 Only Fall Semester Not Typically Offered
Repealable 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)?

<table>
<thead>
<tr>
<th>Program Code - Name</th>
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</thead>
<tbody>
<tr>
<td>(BIOL-BA) Biology, B.A.</td>
</tr>
<tr>
<td>(BIOL-BS) Biology, B.S.</td>
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</tbody>
</table>

Describe how: BIOL 544 will replace BIOL 408 as an option for "choose two of the following" as part of the B.A. Biology degree (BIOL-BA) and will replace the BIOL 408
Rationale for Course Proposal

The new description is more detailed to better clarify the course content. Changing the catalog number to a 500 level brings the course more in line with other 500 level courses.

Course Reviewer Comments

Key 2016
Course Inventory Change Request

Date Submitted: 04/27/17 3:17 pm

Viewing: **BIOL 546 646: Mammalian Physiology**
Formerly known as: BIOL 646

Last edit: 04/27/17 3:17 pm

Changes proposed by: gburg

- Academic Career: Undergraduate, Lawrence
- Subject Code: BIOL
- Course Number: 546 646
- Academic Unit: Department of Biology
- School/College: College of Liberal Arts & Sciences

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

- No

Title: Mammalian Physiology

Transcript Title: Mammalian Physiology

Effective Term: Spring 2018

Catalog Description: Lectures and demonstrations. An intermediate course in the structures, functions, mechanisms, mechanisms and interactions of mammalian organ systems. Discussions span topics from molecular to whole animal functions. Required for pharmacy students and strongly recommended for students planning advanced work in any area of physiology. The student is assumed to have the knowledge and ability to utilize their math and science background.

Prerequisites: BIOL 150; BIOL 152 or BIOL 240; CHEM 330; and PHSX 114, or consent of instructor. Five hours of organic chemistry, a course of college physics.

Cross Listed

Courses:

- Credits: 3 4
- Course Type: Lecture (Regularly scheduled academic course) (LEC)
- Grading Basis: A-D(+)F(F11)
- Is this course part of the University Honors Program?
- No
- Are you proposing this course for KU Core?
- No
- Typically Offered: Not Taught in Summer
- 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

Rationale for Course Proposal: The change to 3 credit hours is due to 1) more up-front background information required with prerequisite change and 2) better streamlining and shortening of some content by improving coordination of topics. Changing to 500 level brings this course more in line with other 500 level biology courses.

Course Reviewer Comments

Key: 2017
Course Inventory Change Request

Date Submitted: 04/12/17 12:38 pm

Viewing: CHIN 106: Elementary Chinese for Advanced Beginners

Last edit: 05/09/17 2:15 pm

Changes proposed by: mgchilds

Academic Career: Undergraduate, Lawrence
Subject Code: CHIN
Course Number: 106
Academic Unit: Department East Asian Languages & Cultures
School/College: College of Lib Arts & Sciences

Do you intend to offer any portion of this course online?
No

Title: Elementary Chinese for Advanced Beginners
Transcript Title: Elem Chinese for Adv Beginners
Effective Term: Fall 2017

Catalog Description:
This course is designed for students who have already acquired some elementary Chinese language abilities (in high school or from family), but cannot be placed in CHIN 108, Elementary Chinese II. The course focuses on perfecting listening, speaking, reading and writing skills, and prepares students for CHIN 108. For admission to the class, students must take the EALC Chinese placement exam, be interviewed by designated instructors, and approved.

Prerequisites: None

Cross Listed Courses:

Credits: 3
Course Type: Lecture (Regularly scheduled academic course) (LEC)
Associated Components: 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?
Yes

Typically Offered: Once a Year, Usually Fall
Repeatable for credit?
No

Principal Course Designator: U - Undesignated elective

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

Rationale for Course Proposal:
See below.

KU Core Information

Has the department approved the nomination of this course to KU Core?
No

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.

Selected Learning Outcome(s):

**Goal 4, Learning Outcome 2**

State what assignments, readings, class discussions, and lectures will devote a majority of your course or educational experience to raising student awareness of, engagement with, and analysis of various elements of other-cultural understanding of communities outside the United States. (Please limit responses to 1000 characters.)

Explain how your course or educational experience will develop the ability of students to discuss, debate, and analyze non-US cultures in relation to the students' own value assumptions. (Please limit responses to 1000 characters.)

Detail how your course or educational experience will sensitize students to various cultural beliefs, behaviors, and practices through other-cultural readings and academic research on cultural competency so that students may be better prepared to negotiate cross-cultural situations. (Please limit responses to 1000 characters.)

State what assignments, readings, class discussion, and lectures will be used to evaluate students' work that documents and measures their grasp of global cultures and value systems through reflective written or oral analysis. (Please limit responses to 1000 characters.)

KU Core Documents

Course Reviewer Comments

Rachel Schwien (rschwien) (04/25/17 1:06 pm): CUSA approved course change. Denied KU Core proposal

Rachel Schwien (rschwien) (09/09/17 2:14 pm): CUSA did not approve KU Core proposal
## Course Inventory Change Request

**Date Submitted:** 04/24/17 1:49 pm

**Viewing:** CHIN 251: Reading and Writing Chinese I

**Last edit:** 05/02/17 11:47 am

Changes proposed by: mgchilds

### Catalog Pages referencing this course
- College of Liberal Arts & Sciences
- Department of East Asian Languages and Cultures

### Other Courses In The Catalog
- In The Catalog

### Academic Career
- Undergraduate, Lawrence

### Subject Code
<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Course Number</th>
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<tbody>
<tr>
<td>CHIN</td>
<td>251</td>
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</tbody>
</table>

### Academic Unit
- Department: East Asian Languages & Cultures
- School/College: College of Lib Arts & Sciences

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

#### Please Explain
- The entire course, include all the lectures, quizzes, tests will be conducted online

### Title
- Reading and Writing Chinese I

### Transcript Title
- Reading and Writing Chinese I

### Effective Term
- Fall 2017

### Catalog Description
- Designed for students, those who speak modern standard (Mandarin) Chinese heritage speakers as well as second-language Chinese learners, who wish to learn or improve their abilities in reading and writing Chinese characters. Focuses on acquiring knowledge of the 500 most commonly used Chinese characters writing system and the major concepts essential preparing students for reading and writing Chinese characters, possible entry into advanced courses in Chinese, e.g. Chinese culture, customs and history that are reflected in Chinese characters will also be introduced. CHIN 504 (Advanced Modern Chinese I), or, after appropriate testing, for possible exemption from the College of Liberal Arts and Sciences foreign language requirement. Students should take the online Chinese placement exam and consult with the Chinese Language Program Coordinator. Enrollment by permission of the Chinese Language Program Coordinator only.

### Prerequisites
- None

### Cross Listed Courses:
- None

### 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
- Once a Year, Usually Fall

### Repeatable for credit?
- No

### Principal Course Designator
- H - Humanities

### 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?

---

1 of 2 8/24/17, 2:30 PM
According to the National Survey on teaching Chinese as a Heritage Language in the U.S. done by Han Luo from Lafayette College, 20.7% of the 51 college programs that participated in the survey have separate classes for Chinese heritage students. Chinese heritage students have needs that differ from those of non-heritage students: fluent Chinese heritage students mainly need to learn how to read and w
### Course Inventory Change Request

**Viewing:** CHIN 252: Reading and Writing Chinese II

**Last edit:** 04/25/17 8:08 am

Changes proposed by: mgchilds

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<tr>
<th>Academic Career</th>
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<tr>
<td>Subject Code</td>
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<tr>
<td>Academic Unit</td>
<td>East Asian Languages&amp;Cultures</td>
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<tr>
<td>School/College</td>
<td>College of Lib Arts &amp; Sciences</td>
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</table>

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

- **Yes**

**Please Explain**
The entire course, include all the lectures, quizzes, tests will be conducted online

<table>
<thead>
<tr>
<th><strong>Title</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Transcript Title</strong></td>
<td>Reading and Writing Chinese II</td>
</tr>
<tr>
<td><strong>Effective Term</strong></td>
<td>Spring 2018</td>
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</tbody>
</table>

**Catalog Description**
Continuation of CHIN 251. Focuses on another 500 most commonly used Chinese characters and the major concepts essential for learning to read and write Chinese characters, preparing students for possible entry into advanced courses in Chinese, e.g. CHIN 504 (Advanced Modern Chinese I), or, after appropriate testing, for possible exemption from the College of Liberal Arts and Sciences foreign language requirement.

**Prerequisites**
CHIN 251 or permission of the instructor.

**Cross Listed Courses:**

<table>
<thead>
<tr>
<th>Credits</th>
<th>3</th>
<th>1-3</th>
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</thead>
</table>

**Course Type**
Lecture (Regularly scheduled academic course) (LEC)

**Grading Basis**
A-D(+/-)FI (G11)

**Are you proposing this course for KU Core?**
No

**Typically Offered**
Once a Year, Usually Spring

**Repeatable for credit?**
No

**Principal Course Designator**
H - Humanities

**Are you proposing that the course count towards the CLAS BA degree specific requirements?**
No

**Rationale for Course Proposal**
Same as for CHIN 251: According the National Survey on teaching Chinese as a Heritage Language in the U.S. done by Han Luo from Lafayette College, 20.7% of the 51 college programs that participated in the survey have separate classes for Chinese heritage students. Chinese heritage students have needs that differ from those of non-heritage students: fluent Chinese heritage students mainly need to l

**Supporting Documents**
CHIN 252.docx

**Course Reviewer Comments**

**Date Submitted:** 04/24/17 2:01 pm

**Viewing:** CHIN 252 : Reading and Writing Chinese II

**Last edit:** 04/25/17 8:08 am

Changes proposed by: mgchilds

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<th><strong>In Workflow</strong></th>
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<tbody>
<tr>
<td>1. CLAS</td>
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<tr>
<td>Undergraduate</td>
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<tr>
<td>Program and</td>
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<tr>
<td>Course</td>
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<tr>
<td>Coordinator</td>
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<td>2. CUSA</td>
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<tr>
<td>Subcommittee</td>
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<tr>
<td>3. CUSA Committee</td>
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<tr>
<td>4. CAC</td>
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<tr>
<td>5. CLAS Final</td>
</tr>
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<td>Approval</td>
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<tr>
<td>6. Registrar</td>
</tr>
<tr>
<td>7. PeopleSoft</td>
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</table>

**Approval Path**

1. 04/25/17 8:09 am
   Rachel Shwien (rschwien):
   Approved for
   CLAS
   Undergraduate Program and Course Coordinator
2. 05/02/17 11:45 am
   Rachel Shwien (rschwien):
   Approved for
   CUSA Subcommittee
3. 05/09/17 2:12 pm
   Rachel Shwien (rschwien):
   Approved for
   CUSA Committee
**Course Inventory Change Request**

Date Submitted: 03/28/17 10:37 am

**Viewing: ENGL 400 : Teaching and Tutoring Writing**

Also listed as: LA&S 400

Last edit: 04/28/17 11:54 am

Changes proposed by: lydia

| Catalog Pages referencing this course | College of Liberal Arts & Sciences  
Department of English |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Other Courses</td>
<td>In The Catalog</td>
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</table>

<table>
<thead>
<tr>
<th>Academic Career</th>
<th>Undergraduate, Lawrence</th>
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</table>
| Subject Code    | ENGL  
Course Number   | 400 |
| Academic Unit   | Department English  
School/College   | College of Lib Arts & Sciences |

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

Please Explain

Reading, writing, and interaction will be offered online

<table>
<thead>
<tr>
<th>Title</th>
<th>Teaching and Tutoring Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcript Title</td>
<td>Teaching and Tutoring Writing</td>
</tr>
<tr>
<td>Effective Term</td>
<td>Fall 2017</td>
</tr>
</tbody>
</table>

Catalog Description

Students explore theories and strategies of teaching and tutoring writing across academic disciplines. They learn more about themselves as writers as they build a repertoire of writing techniques useful in their studies, in the workplace, and in their personal lives. By observing and consulting in the writing center, they understand how reflection leads to **responsive, ethical, responsible/responsive** and engaged practice.

Prerequisites

ENGL 102 or equivalent. None

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>LA&amp;S 400</td>
<td>Teaching and Tutoring Writing</td>
</tr>
</tbody>
</table>

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 Once a Year, Usually Spring

Repeatable for credit? No

Principal Course Designator U - Undesignated elective

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?
ENGL 400: Teaching and Tutoring Writing

Rationale for Course Proposal
The course fulfills Core Goal 5.2—connecting knowledge and experience, applying ethical and socially responsible behavior to consulting at the KU and Haskell Indian Nations Writing Centers. It explores theories of writing instruction; how cooperative peer relationships are created; how identity shapes interactions; and how identifying writers' strengths fosters socially responsible learning.

Supporting Documents
- Sessions.pdf
- Syllabus.pdf
- Integrated Learning Value Rubric.pdf
- GS Rubric.pdf
- Learning Theories and Social Responsibility.pdf

Course Reviewer Comments
Rachel Schwien (rschwien) (04/12/17 10:57 am): emailed dept with online question 04/12
Rachel Schwien (rschwien) (04/28/17 11:23 am): emailed dept regarding need for prerequisite 04/28
### Course Inventory Change Request

**Date Submitted:** 04/03/17 4:03 pm

**Viewing:** GIST 376: Immigrants, Refugees, and Diasporas

**Also listed as:** HIST 376

**Last approved:** 04/13/16 4:31 am

**Last edit:** 04/03/17 4:03 pm

**Changes proposed by:** acon

<table>
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<th>Catalog Pages referencing this course</th>
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<tbody>
<tr>
<td>College of Liberal Arts &amp; Sciences</td>
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<tr>
<td>Department of History</td>
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<table>
<thead>
<tr>
<th>Programs</th>
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<tbody>
<tr>
<td>GIST-BA: Global and International Studies, B.A.</td>
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<table>
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<tr>
<th>Academic Unit</th>
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<tr>
<td>Department</td>
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| Global & International Studies |
| College of Lib Arts & Sciences |

<table>
<thead>
<tr>
<th>Do you intend to offer any portion of this course online?</th>
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<tbody>
<tr>
<td>No</td>
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<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Immigrants, Refugees, and Diasporas</td>
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<table>
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<th>Transcript Title</th>
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<tr>
<td>Immigrants, Refugees, Diasporas</td>
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<table>
<thead>
<tr>
<th>Effective Term</th>
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<tr>
<td>Fall 2016</td>
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</table>

**Catalog Description:**
This course looks at people who choose to cross political borders, are forced to flee beyond them, or constitute ethnic minorities living outside a homeland. Examining these groups from a global historical perspective, this course explores how ethical debates about the rights of non-citizens and ethnic outsiders have evolved in the modern age. Students learn about important issues that have affected the lives of immigrants, refugees, and diasporas, including citizenship, mobility, cultural representation, asylum policies, and the concept of human rights. The course concludes with a look at contemporary manifestations of these issues, from debates over the place of Muslims in Europe to discussions about immigration policy in the United States.

<table>
<thead>
<tr>
<th>Prerequisites</th>
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<tbody>
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<td>None</td>
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<table>
<thead>
<tr>
<th>Cross Listed Courses:</th>
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<tbody>
<tr>
<td>Code</td>
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<tr>
<td>HIST 376</td>
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<th>Credits</th>
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<table>
<thead>
<tr>
<th>Course Type</th>
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<tr>
<td>Lecture (Regularly scheduled academic course) (LEC)</td>
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<td>A-D(+/-)/FI (G11)</td>
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<table>
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<tr>
<th>Is this course part of the University Honors Program?</th>
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<tr>
<th>Are you proposing this course for KU Core?</th>
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<tr>
<th>Typically Offered</th>
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<tbody>
<tr>
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<td>H - Humanities</td>
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<th>Are you proposing that the course count towards the CLAS BA degree specific requirements?</th>
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<tbody>
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<td>No</td>
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**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 Vot ing Outcome
11. SIS KU Core Contact
12. Registrar
13. PeopleSoft

**Approval Path**

1. 04/04/17 10:31 am
   - Rachel Schwien (rschwien)
   - Approved for CLAS Undergraduate Program and Course Coordinator
2. 04/18/17 12:24 pm
   - Rachel Schwien (rschwien)
   - Approved for CUSA Subcommittee
3. 05/09/17 2:13 pm
   - Rachel Schwien (rschwien)
   - Approved for CUSA Committee

**History**

1. Apr 13, 2016 by Mike Wuthrich (f09w960)
Rationale for Course Proposal

Submitting this course for the KU core

KU Core Information

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

Yes  No

Name of person giving departmental approval: Eric Rath
Date of Departmental Approval: 4/3/2017

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.

This course looks at immigrants who choose to cross political borders, refugees who are forced to flee beyond them, and diasporas of ethnic minorities who permanently reside outside their homelands. Throughout history, such groups have found themselves at the center of impassioned discussion about who has rights and who belongs in a society. Examining these groups from a global historical perspective, this course explores how ethical debates about the rights of migrants have evolved in the modern age. In examining the history of immigrants, refugees, and diasporas, students will explore and engage the ethical frameworks used to explain why people have rights and what these rights are. While the course’s focus is historical, it also employs ethical theories and historical context to look at contemporary manifestations of these issues, from debates over the place of Muslims in Europe to discussions about immigration policy in the United States.

Selected Learning Outcome(s):

Goal 5, Learning Outcome 1

State how your course or educational experience will present and apply distinct and competing ethics theories, each of which articulates at least one principle for ethical decision-making. (Please limit responses to 1000 characters.)

The course introduces students to two main ethical theories. The first theory argues that people have rights as members of a political community—whether as citizens, subjects, or guests—and appeals to a nationalist sense of belonging. The second theory argues that people have inherent rights as human beings, and appeals to cosmopolitan values. The course does not endorse one ethical perspective over the other but instead asks students to give serious consideration to the history and reasoning behind both. Part I (“Who Has Rights?”) of the course introduces students to the main ethical theories regarding rights, their historical origins, and their relationship to the way people talk about and treat migrants. Part II (“Who Belongs?”) of the course looks at different types of political communities in modern history and the borders that have defined them, sometimes including and other times excluding migrants and ethnic outsiders.

Indicate and elaborate on how your course or educational experience will present and apply ethical decision-making processes. (Please limit responses to 1000 characters.)

By analyzing specific case studies drawn from history, students will then have the opportunity to apply these ethical theories. Part III (“Who Should Get In? Who Should Leave?”) of the course encourages students to learn about and apply ethical decision-making processes through an in-depth examination of debates about migration and border policies. These policies must balance between the particular rights of community members and more universalist human rights.

State what assignments, readings, class discussions, and lectures will present and apply particular ethics codes. (Please limit responses to 1000 characters.)

This is a new course designed to meet KU Core Goal 5.1. Readings and lectures will acquaint students with the history of immigrants, refugees, and diasporas and use the topic of international migration to examine the two distinctive ethical frameworks discussed above. Book reviews will ensure that students grasp the main ethical arguments presented in the readings. An in-class debate will encourage students to take both ethical frameworks seriously. The two longer papers require students to look at ethical issues surrounding migration in their historical context.

Detail how students taking your course or participating in your educational experience will apply principles, decision-making
processes, and, as appropriate, ethics codes to specific ethical dilemmas (such as case studies) in which important values conflict. (Please limit responses to 1000 characters.)

The course culminates in two longer papers and presentations that require students to apply principles, decision-making processes, and ethics codes. The first, an oral history paper, asks students to analyze an oral testimony of an immigrant, refugee, or member of a diaspora community (primarily using one of the recorded interviews available on the course website). The paper will examine the experiences of the interview subject, the ethical issues she faced, and the ethical issues raised by her story. The second paper asks students to analyze the ethical issues involved in a historical case of migration and diaspora in which important values come into conflict. Students may either choose a case from the list provided or select a case on their own with the consent of the instructor. At the end of the semester, students will use the knowledge they have gained about the history and ethics of migration to analyze contemporary issues facing immigrants, refugees, and diasporas.
Course Inventory Change Request

Date Submitted: 03/07/17 2:29 pm

Covering: LWS 330: Introduction to Law & Society

Last approved: 03/01/16 4:31 am
Last edit: 04/06/17 8:11 am
Changes proposed by: dianak

Catalog Pages referencing this course:
- BA in Law and Society
- BGS in Law and Society
- College of Liberal Arts & Sciences
- School of Public Affairs and Administration
- PUAD-BA/BGS: Law and Society

Academic Career: Undergraduate, Lawrence
Subject Code: LWS
Course Number: 330
Academic Unit: Public Affairs & Adm, School of Lib Arts & Sciences
School/College: College of Lib Arts & Sciences

Do you intend to offer any portion of this course online? No

Title: Introduction to Law & Society
Transcript Title: Introduction to Law & Society
Effective Term: Fall 2016

Catalog Description:
Offers an introduction to the interdisciplinary field of law and society. Surveys the role of law in social processes and the influence of these processes on law, and introduces alternative theoretical perspectives on these processes.

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? Yes
Typically Offered: Typically Every Semester
Repeatable for credit? No

Principal Course Designator: S - Social Sciences
Course Designator:

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)?
- (PUAD-BA/BGS) Law and Society

Describe how: part of law and society major

In Workflow
1. CLAS
   Undergraduate Program and Course Coordinator
2. CUSA
   Subcommittee
3. CUSA Committee
4. CAC

Approval Path
1. 03/08/17 11:16 am
   Rachel Schwien (rschwien):
   Approved for CLAS Undergraduate Program and Course Coordinator
2. 04/18/17 12:25 pm
   Rachel Schwien (rschwien):
   Approved for CUSA Subcommittee
3. 05/09/17 2:13 pm
   Rachel Schwien (rschwien):
   Approved for CUSA Committee

History
1. Mar 1, 2016 by
   Kemi Obadare (o093207)
Rationale for Course Proposal
Nominating LWS 330 for KU Core (Goal 3)

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

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</table>

Name of person giving departmental approval: Shannon Portillo
Date of Departmental Approval: 01/09/2017

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.

This course exposes students to the interdisciplinary study of law and society. Specifically, the course focuses on the law as an institution, and provides students with background knowledge of how the law functions in contemporary society as well as analytic frameworks to discuss how the law helps shape society. While much of the focus is on contemporary issues, the course provides insight into how history has shaped the law and how the law continues to exert influence on contemporary policy and social issues. In this course, students will learn about:

Selected Learning Outcome(s):

Goal 3 - Social 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.)

This course first provides students with an in-depth foundation in legal systems and types of law. The focus is on developing students understanding of law as a social institution, encouraging them to see how the law helps shape, maintain, and reinforce issues of equality and inequality. The course focuses on historical as well as contemporary social issues in the United States and globally to help students see how law functions as a social institution in society.

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.)

Students scaffold their knowledge, starting with assignments that explore legal systems and types of law. They are provided with a foundation of theories of law and society as field and then see these theories in application via a variety of historical and contemporary policy and social issues. Ultimately, students apply their knowledge of theories of the field via writing assignments and exams.

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.)

The course is small and largely discussion based, providing space for students to engage and analyze material collectively. Throughout the course students apply the major theories of the field to contemporary social, legal, and policy issues. The variety of analytic methods employed relate to the interdisciplinary nature of the field which draws on theories and methods from history, cultural studies, political science, sociology, and public administration.

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.)

There are two main types of evaluative assignments – in class writing and exams. In class writing activities relate to readings to current events being discussed as part of the course. The mid-term and final exams are cumulative, allowing space for students to demonstrate how their learning has developed throughout the course. In addition to the formal evaluative assignments, students participate in discussions in large and small groups throughout the semester that are factored into their participate grade.

KU Core Documents
LWS330Syllabus_Final (1).pdf
| Course Reviewer   | Rachel Schwien (rschwien) (04/04/17 1:24 pm): subcommittee requested sample assignments | Key: 1/043 |
Course Inventory Change Request

Date Submitted: 03/07/17 2:41 pm

Viewing: LWS 332 : Methods in Law and Society

Last approved: 03/01/16 4:30 am
Last edit: 04/06/17 8:12 am
Changes proposed by: dianak

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<th>Catalog Pages referencing this course</th>
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<tr>
<td>BA in Law and Society</td>
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<tr>
<td>BGS in Law and Society</td>
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<tr>
<td>College of Liberal Arts &amp; Sciences</td>
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<tr>
<td>School of Public Affairs and Administraion</td>
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<tr>
<td>PUAD-BA/BGS; Law and Society</td>
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| Academic Career | Undergraduate, Lawrence |
| Subject Code    | LWS                      |
| Academic Unit   | Department Public Affairs & Adm, School |
| School/College  | College of Lib Arts & Sciences |
| Do you intend to offer any portion of this course online? | No |
| Title           | Methods in Law and Society |
| Transcript Title| Methods in Law and Society |
| Effective Term  | Fall 2016                |

| Catalog Description | Surveys the various methods used in law & society research and prepares students to be sophisticated readers of basic socio-legal research, capable of evaluating the quality of the research design and methods. Prepares students to participate as research assistants in original studies. |
| 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? | Yes |
| Typically Offered   | Typically Every Semester |
| Repeatable for credit? | No |
| Principal Course Designator | S - Social Sciences |

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<td>2. 04/18/17 12:25 pm</td>
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<td>3. 05/09/17 2:13 pm</td>
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<td>1. Mar 1, 2016 by Kemi Obidare (o0930207)</td>
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<th>Which Program(s)?</th>
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<tr>
<td>Program Code - Name</td>
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<tr>
<td>(PUAD-BA/BGS) Law and Society</td>
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Describe how: Part of Law and Society major
Rationale for Course Proposal

Nominating LWS 332 for KU core (Goal 1, Outcome 1)

KU Core Information

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

Yes No

Name of person giving departmental approval
Shannon Portillo

Date of Departmental Approval 01/09/2017

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.

This course focuses on the historical and contemporary research themes and methods in law and society. Specifically, it engages research methods employed by social scientists studying legal issues. Students will critically analyze scientific evidence, scientific methods, and effective social science research design. By the end of the course students will have a better understanding of how to design, implement, and critically analyze social science research.

Selected Learning Outcome(s):

Goal 1, Learning Outcome 1

State what assignments, readings, class discussion, and/or lecture topics instruct students how to analyze and evaluate assumptions, claims, evidence, arguments, and forms of expression; select and apply appropriate interpretive tools. (Please limit responses to 1000 characters).

This course combines instruction on methods and the history of research in the field with a practical project design component. Each week there will be an assignment posted in the “Assignments” folder on Blackboard. These assignments will help familiarize students with the use of various research methods, or in the design of research projects. Written assignments are due at the beginning of class. Readings will include instructional texts on methods, as well as recent examples of Law and Society research employing those methods. The final project for the course will be a complete proposal for a law and society-related research project. The project will include an overview of your chosen topic and relevant existing research, as well as your specific research questions, proposed sources of data, and methods.

List and discuss the assignments, projects and/or tests that will require students to form judgments about the assumptions or claims presented, analyze and synthesize information, and make evidence-based arguments to support conclusions. (Please limit responses to 1000 characters.) *

Students scaffold their knowledge starting with readings and weekly assignments that expose them to the types of research methodology in law and society as field. They are provided with a foundation of methods from the field and asked to evaluate and apply these methods through short-term assignments. Ultimately, students apply their knowledge through a research proposal assignment asking them to design a project related to the field.

Indicate the weight of the evidence (e.g., exams, projects, assignments) that will be used to document student performance in these tasks and how this evidence will determine a supermajority (greater than or equal to 60%) of the final grade. *

There are two main types of evaluative assignments – weekly assignments and an end of the semester research proposal. Weekly assignments expose students to various methodologies and evaluative techniques and engage students’ analytical and critical thinking skills. The end of the semester research proposal requires students to use the skills they developed throughout the semester to design a research project around a question related to the field of law and society. Each type of assignment is worth 35% of the students’ grade. Combined they account for 70% of the students’ final grade.

KU Core Documents

LWS332Syllabus_Final (1).pdf
LWS332Assignment1.pdf
LWS332Assignment4.pdf
LWS332Assignment6.pdf
Course Reviewer Comments

Rachel Schwien (rschwien) (04/04/17 1:24 pm): subcommittee requested sample assignments
# Course Inventory Change Request

**Date Submitted:** 04/12/17 5:22 pm

**Viewing:** PHSX 213: General Physics I Honors

**Last edit:** 04/12/17 5:22 pm

Changes proposed by: shark

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<td>BS in Physics with concentration in Interdisciplinary Physics</td>
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<tr>
<td>BS in Physics with concentration in Pre-Professional Physics</td>
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<tr>
<td>Bachelor of Arts in Astronomy</td>
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<td>Bachelor of Arts in Physics</td>
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<td>Academic Unit</td>
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<td>School/College</td>
<td>College of Lib Arts &amp; Sciences</td>
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**Do you intend to offer any portion of this course online?**

No

<table>
<thead>
<tr>
<th>Title</th>
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<tr>
<td>Transcript Title</td>
<td>General Physics I Honors</td>
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<tr>
<td>Effective Term</td>
<td>Spring 2018</td>
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**Catalog Description**

An honors section of PHSX 211 and PHSX 216. Credit for fewer than five hours requires permission of the department. Recommended for students with a strong math background who are either in the University Honors Program or intending to major in a physical science. Courses in high school physics and chemistry are strongly recommended. MATH 125 or MATH 145; MATH 126 or MATH 146; and permission of instructor.

**Prerequisites**

MATH 125 or MATH 145; MATH 126 or MATH 146; and permission of instructor.

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<tr>
<th>Associated Components (Optional)</th>
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<th>Grading Basis</th>
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**Is this course part of the University Honors Program?**

No

<table>
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<th>Are you proposing this course for KU Core?</th>
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**Typically Offered**

Twice a Year, Fall and Spring

**Repeatable for credit?**

No

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<tr>
<td>N - Natural Sciences</td>
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**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
Which Program(s)?

(PHSX-BA) Astronomy, B.A.

Describe how:
This course is the honors version of PHSX 211. PHSX 211 is a requirement for all majors in our department. PHSX 211 or the sister course PHSX 210 is a requirement of many majors in CLAS and in the school of engineering. We aren't changing the content here, just updated the math pre-reqs to include the honors courses as an option.

We forgot to include the honors versions of the math courses.

KU Core Information

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

Name of person giving departmental approval

Date of Departmental Approval

Selected Goal(s)

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

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

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

Selected Learning Outcome(s):

Goal 1, Learning Outcome 1
State what assignments, readings, class discussion, and/or lecture topics instruct students how to analyze and evaluate assumptions, claims, evidence, arguments, and forms of expression; select and apply appropriate interpretive tools. (Please limit responses to 1000 characters), already in the core.

List and discuss the assignments, projects and/or tests that will require students to form judgments about the assumptions or claims presented, analyze and synthesize information, and make evidence-based arguments to support conclusions. (Please limit responses to 1000 characters) * already in the core.

Indicate the weight of the evidence (e.g., exams, projects, assignments) that will be used to document student performance in these tasks and how this evidence will determine a supermajority (greater than or equal to 60%) of the final grade. * already in the core.

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), already in the core.

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) * already in the core.

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) * already in the core.
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 80%) of the final course grade. (Please limit responses to 1000 characters.)

**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 in the core.

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 in the core.

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 in the core.

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 in the core.
**Course Inventory Change Request**

Date Submitted: 04/12/17 5:26 pm

**Viewing:** **PHSX 214: General Physics II Honors**

Last edit: 04/12/17 5:26 pm

Changes proposed by: shark

<table>
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<tr>
<th>Catalog Pages referencing this course</th>
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<tr>
<td>BA in Physics with concentration in Computational Physics</td>
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<tr>
<td>BS in Physics with concentration in Computational Physics</td>
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<tr>
<td>BS in Physics with concentration in Interdisciplinary Physics</td>
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<td>BS in Physics with concentration in Pre-Professional Physics</td>
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<tr>
<td>Bachelor of Arts in Astronomy</td>
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<td>Bachelor of Arts in Physics</td>
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| Academic Career | Undergraduate, Lawrence |
| Academic Unit | Department, Physics & Astronomy |
| School/College | College of Lib Arts & Sciences |

**Effective Term:** Spring 2018

**Catalog Description:**
An honors section of PHSX 212 and PHSX 236. Credit for fewer than four hours requires permission of the department. Recommended for students with a strong math background who are either in the University Honors Program or intending to major in a physical science.

**Prerequisites:**
PHSX 216 together with either PHSX 211 or PHSX 210; or PHSX 213, and permission of instructor. Co-requisite: MATH 127 or MATH 147.

**Course Type:** Lecture (Regularly scheduled academic course) (LEC)

**Associated Components:** Laboratory - Associated with a main component

**Grading Basis:** A-D(+/-)FI (G11)

**Is this course part of the University Honors Program?**
No

**Typically Offered:** Once a Year, Usually Fall

**Repeatable for credit?**
No

**Principal Course Designator**

N - Natural Sciences

**Are you proposing this course for KU Core?**
No

**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)?**

![Image](https://next.catalog.ku.edu/courseleaf/courseleaf.cgi?page=/courseadmin...)

1 of 2 8/24/17, 2:36 PM
PHSX 214: General Physics II Honors

(PHSX-BA) Astronomy, B.A.

Describe how: This course is the honors version of PHSX 212. PHSX 212 is a requirement for all majors in our department. PHSX 212 is a requirement of many majors in CLAS and in the school of engineering. We aren't changing the content here, just updated the math pre-reqs to include the honors courses as an option.

Rationale for Course Proposal
We forgot to include the honors version of the math course in the pre-req.

Course Reviewer Comments

Key: 5/13
Course Inventory Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 04/27/17 3:08 pm

Viewing: BIOL 409 : Physiology of Organisms, Laboratory

Last edit: 04/27/17 3:08 pm

Changes proposed by: gburg

Academic Career: Undergraduate, Lawrence
Subject Code: BIOL
Academic Unit: Biology
School/College: College of Lib Arts & Sciences
Title: Physiology of Organisms, Laboratory
Transcript Title: Physiology of Organisms, Labrt
Last Term Offered: Summer 2017

Catalog Description: The laboratory exposes the students to the structure and function of the major groups of animals and plants. Students use basic techniques of biological observation, such as microscopy and dissection, and experimental techniques to analyze plant and animal function.

Prerequisites: Concurrent or prior enrollment in BIOL 408, or consent of the instructor.

Cross Listed Courses:

Credits: 2
Course Type: Laboratory Main (Laboratory that is a main component) (LAB)
Grading Basis: A-D(+/-)F (G11)
Is this course part of the University Honors Program? No
Are you proposing this course for KU Core? No
Typically Offered: Only Spring Semester
Repeatable for credit? No

Principal Course Designator: U - Undesignated elective

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 combination plant and animal physiology course will no longer be offered.

Course Reviewer Comments

Key 2741
**Program Change Request**

**Date Submitted:** 03/13/17 1:26 pm

**Viewing:** GEOL-BS : Geology, B.S.

**Last edit:** 07/20/17 1:21 pm

**Changes proposed by:** olcott

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**Catalog Pages**

<table>
<thead>
<tr>
<th>Catalog Pages</th>
<th>Using this Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Science in Geology</td>
<td></td>
</tr>
</tbody>
</table>

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**Academic Career**

Undergraduate, Lawrence

**Program Type**

Degree/Major

**Department/Program**

Geology

**School/College**

College of Lib Arts & Sciences

**Degree Code**

Bachelor of Science - BS

**Consulting School(s)/College(s)**

**Consulting Department(s)**

**CIP Code**

400601

**Program Name**

Geology, 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

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**Program Description**

**Geology Programs**

The B.S. program provides intensive training in geology and other sciences. B.S. majors may emphasize traditional geology, environmental geology (with a specialized track in hydrogeology), engineering geology, geophysics, or earth and space science licensure. The hydrogeology track, the engineering geology option, and the geophysics option combine basic training in geology with training in mathematics, engineering, physics, and geophysics. The environmental geology option combines training in geology with many different sciences.

Degree requirements may be altered to suit particular needs of a student upon petition to the undergraduate studies committee and in consultation with a geology faculty advisor. Special consideration is given to students with strong backgrounds in supporting sciences and students with superior records who
decide to major in geology late in their programs.

First- and Second-Year Preparation

Students interested in geology, especially in the B.S. degree, should see a department advisor as soon as possible. They should enroll in mathematics, chemistry, and English in addition to Introduction to Geology and electives. Students should take GEOL 360 as soon as possible.

Advising

Developing a strong relationship with a faculty advisor helps students get the most out of their educational programs in the shortest time. Most courses for majors are offered in only one semester each year. Advisors can guide the student through complexities of the curriculum or into a specialized program.

Requirements for the B.S. Degree

The B.S. program provides intensive training in geology and other sciences. B.S. majors may emphasize traditional geology, environmental geology (with a specialized track in hydrogeology), engineering geology, geophysics, or earth and space science licensure. The hydrogeology track, the engineering geology option, and the geophysics option combine basic training in geology with training in mathematics, engineering, physics, and geophysics. The environmental geology option combines training in geology with many different sciences.

Degree requirements may be altered to suit particular needs of a student upon petition to the undergraduate studies committee and in consultation with a geology faculty advisor. Special consideration is given to students with strong backgrounds in supporting sciences and students with superior records who decide to major in geology late in their programs.

General Geology Option

Written Communication - Core Skill and Critical Inquiry.

Composition (3)
Satisfied by one of the following. Requirement must be completed during initial term of admission at KU.

ENGL 101 Composition 3
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 (3)
Satisfied by one of the following. Requirement must be completed during initial term of admission at KU.

ENGL 102 Critical Reading and Writing 3
or ENGL 105 Freshman Honors English 3
AP English Literature & Composition score of 4 or above
Equivalent transfer course

Sophomore Reading and Writing II (15)
Satisfied by one of the following:

ENGL 203 Topics in Reading and Writing: _____ 3
or ENGL 205 Freshman-Sophomore Honors Proseminar: _____
ENGL 209 Introduction to Fiction 3
ENGL 210 Introduction to Poetry 3
ENGL 211 Introduction to the Drama 3
ENGL 362 Foundations of Technical Writing 3
AP English Literature & Composition score of 5 or above
Equivalent

Communications.
Satisfied by:

COMS 130 Speaker-Audience Communication 3
or COMS 150 Personal Communication 3

Humanities - Understanding the Human Condition. Satisfied by completing 2 courses (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 2 courses (requirement code S). Approved courses may be searched for availability through the Kyou portal. An introductory course in economics is recommended.

Geology Prerequisite or Co-requisite Knowledge (34-39)

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:

MATH 121 Calculus I (Prerequisite: MATH 104; or MATH 103; or three years of college preparatory mathematics including trigonometry and a score of 28 or higher on ACT mathematics or 640 or higher on the SAT; or a qualifying score on the mathematics placement test. Students may complete MATH 115 and MATH 116 prior to completing MATH 121.) 5

Calculus II. Satisfied by:

MATH 122 Calculus II 5

Chemistry. Satisfied by:

CHEM 130 General Chemistry I 10
& CHEM 135 and General Chemistry II
General Physics I and General Physics I Laboratory

PHSX 216
General Physics II and General Physics II Laboratory

Biology. Satisfied by BIOL:

BIOL 150 Principles of Molecular and Cellular Biology

Information Technology. Satisfied by one of the following:

EECS 138 Introduction to Computing:

CAPE 121 Introduction to Computers in Engineering

Geology Core Knowledge and Skills (32)

Majors must complete the following core courses:

Introduction to Geology. Satisfied by:

GEOL 101 The Way The Earth Works

Geology Fundamentals Laboratory. Satisfied by:

GEOL 103 Geology Fundamentals Laboratory

Historical Geology. Satisfied by:

GEOL 304 Historical Geology

Mineralogy and Structure of the Earth. Satisfied by:

GEOL 311 Mineralogy and Structure of the Earth

Mineral Structures and Equilibria Laboratory. Satisfied by:

GEOL 312 Mineral Structures and Equilibria Laboratory

Sedimentology and Stratigraphy. Satisfied by:

GEOL 331 Sedimentology and Stratigraphy

Field Investigation. Satisfied by:

GEOL 360 Field Investigation

Igneous and Metamorphic Petrology. Satisfied by:

GEOL 512 Igneous and Metamorphic Petrology

Petroleum Laboratory. Satisfied by:

GEOL 513 Petroleum Laboratory

Introductory Field Geology. Satisfied by:

GEOL 560 Introductory Field Geology

Field Geology. Satisfied by:

GEOL 561 Field Geology

Structural Geology. Satisfied by:

GEOL 562 Structural Geology

Geology Required Electives (18)

At least one course from each of the three categories listed below: Life; Water & Climate; Rocks. Additional elective credit requirements fulfilled by 500 level and above geology courses, although only one geology course fulfilling KU Core Goal 4 or 5 may count towards these 9 hours. Additionally, 3 hours of GEOL 121, if taken before the student has completed 60 hrs, GEOL 391 or GEOL 399 can also count towards these 9 credit hours.

Life

GEOL 316 Geochemistry

GEOL 521 Paleontology

GEOL 524 Paleontology

& GEOL 523 and Paleontology Laboratory

GEOL 525 Geobiology: The Coevolution of Life and Rocks

GEOL 591 Topics in Geology: ( Geobiology)

Rocks

GEOL 535 Petroleum and Subsurface Geology

GEOL 572 Geophysics

Water and Climate

GEOL 552 Introduction to Hydrogeology

GEOL 591 Topics in Geology: (Climate: Past, Present and Future)

**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 50 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 18 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.

**Engineering Geology Option**
Written Communication - Core Skill and Critical Inquiry.
Composition (3)
Satisfied by one of the following. Requirement must be completed during initial term of admission at KU.
ENGL 101 Composition 3
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 (3)
Satisfied by one of the following. Requirement must be completed within the first academic year at KU.
ENGL 102 Critical Reading and Writing 3
or ENGL 105 Freshman Honors English
AP English Literature & Composition score of 4 or above
Equivalent transfer course
Sophomore Reading and Writing II (3)
Satisfied by one of the following:
ENGL 362 Foundations of Technical Writing 3
AP English Literature & Composition score of 5 or above
Equivalent
Communications.
Satisfied by:
COMS 130 Speaker-Audience Communication 3
or COMS 150 Personal Communication
Humanities - Understanding the Human Condition. Satisfied by completing 2 courses (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 2 courses (requirement code S). Approved courses may be searched for availability through the Kyou portal. An introductory course in economics is recommended.
Geology Prerequisite or Co-requisite Knowledge (54-59)
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.
Mathematics. Satisfied by:
MATH 121 Calculus I (Prerequisite: MATH 104; or MATH 103; or 3 years of college preparatory mathematics including trigonometry and a score of 28 or higher on ACT mathematics or 640 or higher on the SAT, or a qualifying score on the mathematics placement test.) 5
MATH 122 Calculus II 5
MATH 220 Applied Differential Equations 3
MATH 290 Elementary Linear Algebra 2
Chemistry. Satisfied by:
CHEM 130 & CHEM 135 and General Chemistry II 10
Physics. Satisfied by:
PHSX 211 & PHSX 216 and General Physics I Laboratory 2-5
PHSX 212 & PHSX 236 and General Physics II Laboratory 2-4
Information Technology. Satisfied by one of the following:
EECS 138 Introduction to Computing: _____ 3
CPE 121 Introduction to Computers in Engineering 3
Statics. Satisfied by:
CE 201 Statics 2
Dynamics. Satisfied by:
CE 300 Dynamics 3
Strength of Materials. Satisfied by:
CE 311 Strength of Materials 3
Fluid Mechanics. Satisfied by:
CE 330 Fluid Mechanics 6
Hydrology. Satisfied by:
CE 455 Hydrology 3
Soil Mechanics. Satisfied by:
CE 487 Soil Mechanics 4
Geology Core Knowledge and Skills (42)
Majors must complete the following core courses:
Introduction to Geology. Satisfied by one of the following:
GEOL 101 The Way The Earth Works 3
GEOL 103 Geology Fundamentals Laboratory 2
GEOL 304 Historical Geology 3
Mineralogy and Structure of the Earth. Satisfied by:
GEOL 311 Mineralogy and Structure of the Earth 3
Mineral Structures and Equilibria Laboratory. Satisfied by:
GEOL 312  Mineral Structures and Equilibria Laboratory
Sedimentology and Stratigraphy. Satisfied by:
GEOL 331  Sedimentology and Stratigraphy
Environmental Geology. Satisfied by:
GEOL 351  Environmental Geology
Field Investigation. Satisfied by:
GEOL 360  Field Investigation
Igneous and Metamorphic Petrology. Satisfied by:
GEOL 512  Igneous and Metamorphic Petrology
Petrology Laboratory. Satisfied by:
GEOL 513  Petrology Laboratory
Geomorphology. Satisfied by:
GEOL 541  Geomorphology
Introductory Field Geology. Satisfied by:
GEOL 560  Introductory Field Geology
Field Geology. Satisfied by:
GEOL 561  Field Geology
Structural Geology. Satisfied by:
GEOL 562  Structural Geology
Geophysics or Geodynamics and Plate Tectonics. Satisfied by one of the following:
GEOL 572  Geophysics
Geology or Civil Engineering Required Electives (19)
Majors must complete three additional geology or civil engineering courses, at least two of which must be from the following:
GEOL 521  Paleontology
GEOL 635  Petroleum and Subsurface Geology
GEOL 715  Geochemistry
GEOL 751  Physical Hydrogeology
CE 770  Concepts of Environmental Chemistry
CE 771  Environmental Chemical Analysis
Electives may include an upper-division course in statistics:
MATH 365  Elementary Statistics
or BIOL 570  Introduction to Biostatistics

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 18 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.

Environmental Geology Option

Written Communication - Core Skill and Critical Inquiry.
Composition (3)
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 (3)
Satisfied by one of the following. Requirement must be completed within the first academic year at KU.
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 (15)
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
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 211</td>
<td>Introduction to the Drama</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 362</td>
<td>Foundations of Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>AP English Literature &amp; Composition score of 5 or above</td>
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<tr>
<td></td>
<td>Equivalent</td>
<td></td>
</tr>
<tr>
<td>COMS 130</td>
<td>Speaker-Audience Communication</td>
<td>3</td>
</tr>
<tr>
<td>or COMS 150</td>
<td>Personal Communication</td>
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<tr>
<td></td>
<td>Communications</td>
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<td></td>
<td>Satisfied by:</td>
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<td></td>
<td>Humanities - Understanding the Human Condition</td>
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<td></td>
<td>Satisfied by completing 2 courses (requirement code H). Approved courses may be searched for availability through the Kyou portal.</td>
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<tr>
<td></td>
<td>Social and Behavioral Sciences - Understanding Society and Behavior</td>
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<td></td>
<td>Satisfied by completing 2 courses (requirement code S). Approved courses may be searched for availability through the Kyou portal. An introductory course in economics is recommended.</td>
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<td></td>
<td>Geology Prerequisite or Co-requisite Knowledge</td>
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<td>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.</td>
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<td></td>
<td>Calculus I. Satisfied by:</td>
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<tr>
<td>MATH 121</td>
<td>Calculus I (Prerequisite: MATH 104; or MATH 103; or three years of college preparatory mathematics including trigonometry and a score of 28 or higher on ACT mathematics or 640 or higher on the SAT; or a qualifying score on the mathematics placement test. Students may complete MATH 115 and MATH 116 prior to completing MATH 122.)</td>
<td>5</td>
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<td>Calculus II. Satisfied by:</td>
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<td>MATH 122</td>
<td>Calculus II</td>
<td>5</td>
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<td>Chemistry. Satisfied by:</td>
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<tr>
<td>CHEM 130</td>
<td>General Chemistry I</td>
<td>10</td>
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<tr>
<td>&amp; CHEM 135</td>
<td>and General Chemistry II</td>
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<td>Physics. Satisfied by:</td>
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<td></td>
<td>Selected one of the following:</td>
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<td>PHSX 211</td>
<td>General Physics I</td>
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<tr>
<td>&amp; PHSX 216</td>
<td>and General Physics I Laboratory</td>
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<tr>
<td>PHSX 212</td>
<td>General Physics II</td>
<td>4</td>
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<td>&amp; PHSX 236</td>
<td>and General Physics II Laboratory</td>
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<td>PHSX 114</td>
<td>College Physics I</td>
<td>2-8</td>
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<td>&amp; PHSX 115</td>
<td>and College Physics II</td>
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<td>Biology. Satisfied by:</td>
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<tr>
<td>BIOL 150</td>
<td>Principles of Molecular and Cellular Biology</td>
<td>8</td>
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<tr>
<td>&amp; BIOL 152</td>
<td>and Principles of Organismal Biology</td>
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<td></td>
<td>Information Technology. Satisfied by one of the following:</td>
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<tr>
<td>ECECS 138</td>
<td>Introduction to Computing:</td>
<td>3</td>
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<tr>
<td>&amp; CAPE 121</td>
<td>Introduction to Computers in Engineering</td>
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<tr>
<td>Geology Core Knowledge and Skills (40)</td>
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<td>Majors must complete the following core courses:</td>
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<td></td>
<td>Introduction to Geology. Satisfied by:</td>
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<tr>
<td>GEOL 101</td>
<td>The Way The Earth Works</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 103</td>
<td>Geology Fundamentals Laboratory</td>
<td>2</td>
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<tr>
<td>GEOL 304</td>
<td>Historical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 311</td>
<td>Mineralogy and Structure of the Earth</td>
<td>3</td>
</tr>
<tr>
<td>Sedimentology and Stratigraphy. Satisfied by:</td>
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<tr>
<td>GEOL 331</td>
<td>Sedimentology and Stratigraphy</td>
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<td>Environmental Geology. Satisfied by:</td>
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<tr>
<td>GEOL 351</td>
<td>Environmental Geology</td>
<td>3</td>
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<tr>
<td>Field Investigation. Satisfied by:</td>
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<tr>
<td>GEOL 360</td>
<td>Field Investigation</td>
<td>2</td>
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<tr>
<td>Paleontology. Satisfied by:</td>
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<tr>
<td>GEOL 521</td>
<td>Paleontology</td>
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<td>Geomorphology. Satisfied by:</td>
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<td>GEOL 541</td>
<td>Geomorphology</td>
<td>4</td>
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<td>Introduction to Hydrogeology. Satisfied by:</td>
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<tr>
<td>GEOL 560</td>
<td>Introductory Field Geology</td>
<td>3</td>
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<tr>
<td>Structural Geology. Satisfied by:</td>
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<td>GEOL 562</td>
<td>Structural Geology</td>
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<tr>
<td>Geophysics. Satisfied by:</td>
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<tr>
<td>GEOL 567</td>
<td>Geophysics</td>
<td>3</td>
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<tr>
<td>Geology Required Electives (38-43)</td>
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</tbody>
</table>
Majors must complete additional courses to total at least nine hours numbered 500 or above. The following are recommended:

GEOL 391 Special Studies in Geology 1-6
GEOL 535 Petroleum and Subsurface Geology 4
GEOL 715 Geochemistry 3
GEOL 751 Physical Hydrogeology 3
CE 770 Concepts of Environmental Chemistry 3
& CE 771 and Environmental Chemical Analysis
GEOG 535 Soil Geography 4
GEOG 558 Intermediate Geographical Information Systems 4
GEOL 753 Chemical and Microbial Hydrogeology 4
BIOL 400 Fundamentals of Microbiology 3

Environmental Hydrogeology Track

Besides the general program above, a specialized track in hydrogeology satisfies degree requirements. In addition to College, supporting science, and geology courses, the environmental hydrogeology track requires the following mathematics and civil engineering/physics courses:

MATH 220 Applied Differential Equations 3
MATH 290 Elementary Linear Algebra 2
CE 330 Fluid Mechanics 4
or PHSX 623 Physics of Fluids

In addition, Technical Electives (9 hours). These normally are chosen from courses numbered 500 or above in geology, physics, mathematics, chemistry, engineering or computer science. Courses numbered below 500 must be approved by a geology advisor.

Geophysics Option

Written Communication - Core Skill and Critical Inquiry.

Composition (3)

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

ENGL 101 Composition 3
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 (3)

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

ENGL 102 Critical Reading and Writing 3
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AP English Literature & Composition score of 4 or above
Equivalent transfer course

Sophomore Reading and Writing II (15)

Satisfied by one of the following:

ENGL 203 Topics in Reading and Writing: _____ 3
or ENGL 205 Freshman-Sophomore Honors Proseminar: _____
ENGL 209 Introduction to Fiction 3
ENGL 210 Introduction to Poetry 3
ENGL 211 Introduction to the Drama 3
ENGL 362 Foundations of Technical Writing 3
AP English Literature & Composition score of 5 or above
Equivalent

Humanities - Understanding the Human Condition. Satisfied by completing 2 courses (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 2 courses (requirement code S). Approved courses may be searched for availability through the Kyou portal. An introductory course in economics is recommended.

Geology Prerequisite or Co-requisite Knowledge (44-49)

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.

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 49 hours of major courses.

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

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Satisfied by a minimum of 45 hours from junior/senior courses (300+) in the major.

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

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Calculus II. Satisfied by:

MATH 122 Calculus II

Vector Calculus and Elementary Linear Algebra. Satisfied by:

MATH 223 Vector Calculus
MATH 290 Elementary Linear Algebra

Elementary Differential Equations. Satisfied by:

MATH 320 Elementary Differential Equations

Chemistry. Satisfied by:

CHEM 130 General Chemistry I
& CHEM 136 and General Chemistry II

Physics. Satisfied by:

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

PHSX 212 General Physics II
& PHSX 236 and General Physics II Laboratory

PHSX 313 General Physics III
PHSX 521 Mechanics I
PHSX 531 Electricity and Magnetism
or EECS 220 Electromagnetics I

Intro to Computing. Satisfied by one of the following:

EECS 138 Introduction to Computing: _____

Demonstrate equivalent programming skills

Geology Core Knowledge and Skills (30)

Majors must complete the following core courses:

Introduction to Geology. Satisfied by:

GEOL 101 The Way The Earth Works

Geology Fundamentals Laboratory. Satisfied by:

GEOL 103 Geology Fundamentals Laboratory

Historical Geology. Satisfied by:

GEOL 304 Historical Geology

Mineralogy and Structure of the Earth. Satisfied by:

GEOL 311 Mineralogy and Structure of the Earth

Sedimentology and Stratigraphy. Satisfied by:

GEOL 331 Sedimentology and Stratigraphy

Field Investigation. Satisfied by:

GEOL 360 Field Investigation

Igneous and Metamorphic Petrology. Satisfied by:

GEOL 512 Igneous and Metamorphic Petrology

Introductory Field Geology. Satisfied by:

GEOL 560 Introductory Field Geology

Structural Geology. Satisfied by:

GEOL 562 Structural Geology

Geophysics. Satisfied by one of the following:

GEOL 572 Geophysics

Additional Geology Courses (9)

Geophysics elective 500 and above (at least 9 hours)

GEOL 575 Seismic Exploration
GEOL 577 Environmental Geophysics
GEOL 578 Seismic Data Analysis and Interpretation
GEOL 772 Geophysical Data Analysis
GEOL 776 Ground Penetrating Radar

Technical Required Electives (6)

At least 6 hours from the list below or other 500 and above Geology, Physics, Mathematics, Engineering, or Computer Science.

GEOL 535 Petroleum and Subsurface Geology
GEOL 536 Geological Log Analysis
GEOL 552 Introduction to Hydrogeology
MATH 581 Numerical Methods

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 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.

Earth and Space Science Licensure Option

This program fulfills the requirements for a Bachelor of Science degree in geology. The program also meets course requirements necessary to gain state licensure eligibility in earth and space science to become a secondary teacher in Kansas, but completion of the program does not guarantee the student's licensure. This list is a guideline. Contact the geology department for further information about meeting degree and additional licensure requirements. You may also contact the UKanTeach Office for information about similar tracks resulting in eligibility for licensure in this and other science and mathematics fields.

Written Communication - Core Skill and Critical Inquiry.
Composition (3)
Satisfied by one of the following. Requirement must be completed during initial term of admission at KU.

ENGL 101 Composition 3
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 (3)
Satisfied by one of the following. Requirement must be completed within the first academic year at KU.

ENGL 102 Critical Reading and Writing 3
or ENGL 105 Freshman Honors English
AP English Literature & Composition score of 4 or above
Equivalent transfer course

Sophomore Reading and Writing II (15)
Satisfied by one of the following:

ENGL 203 Topics in Reading and Writing: ______ 3
or ENGL 205 Freshman-Sophomore Honors Proseminar: ______
ENGL 209 Introduction to Fiction 3
ENGL 210 Introduction to Poetry 3
ENGL 211 Introduction to the Drama 3
ENGL 362 Foundations of Technical Writing 3

AP English Literature & Composition score of 5 or above
Equivalent

Communications.
Satisfied by:

COMS 130 Speaker-Audience Communication 3
or COMS 150 Personal Communication

Humanities - Understanding the Human Condition. Satisfied by completing 2 courses (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 2 courses (requirement code S). Approved courses may be searched for availability through the Kyou portal. An introductory course in economics is recommended.

Geology Prerequisite or Co-requisite Knowledge (32-37)
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:
MATH 121 Calculus I (Prerequisite: MATH 104; or MATH 103; or three years of college preparatory mathematics including trigonometry and a score of 28 or higher on ACT mathematics or 640 or higher on the SAT; or a qualifying score on the mathematics placement test. Students may complete MATH 115 and MATH 116 prior to completing MATH 122)

Calculus II. Satisfied by:
MATH 122 Calculus II 5

Chemistry. Satisfied by:
CHEM 130 General Chemistry I 10
& CHEM 135 and General Chemistry II

Physics. Satisfied by:
PHSX 211 General Physics I 2
& PHSX 216 and General Physics I Laboratory

& PHSX 212 General Physics II 2
& PHSX 236 and General Physics II Laboratory

Biology. Satisfied by:
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
Rationale for proposal
The department is in the process of diversifying our course options by adding Geol courses that fulfill Core Goals 4 and 5, and we wanted to clarify how these courses would count towards the major. This has been updated for the General BS track alone, as that is where the majority of our students are, and the other tracks are more specialized and have proscribed electives.

Additional Information

Geology Core Knowledge and Skills (31)
Majors must complete the following core courses:

Introduction to Geology. Satisfied by:

- **GEOL 101** The Way The Earth Works 3

Geology Fundamentals Laboratory. Satisfied by:

- **GEOL 103** Geology Fundamentals Laboratory 2

Historical Geology. Satisfied by:

- **GEOL 304** Historical Geology 3

Mineralogy and Structure of the Earth. Satisfied by:

- **GEOL 311** Mineralogy and Structure of the Earth 3

Sedimentology and Stratigraphy. Satisfied by:

- **GEOL 331** Sedimentology and Stratigraphy 4

Field Investigation. Satisfied by:

- **GEOL 360** Field Investigation 2

Paleontology. Satisfied by:

- **GEOL 521** Paleontology 4

& **GEOL 523** and Paleontology Laboratory

Introduction to Hydrogeology. Satisfied by:

- **GEOL 552** Introduction to Hydrogeology 3

Introductory Field Geology. Satisfied by:

- **GEOL 560** Introductory Field Geology 3

Structural Geology. Satisfied by:

- **GEOL 562** Structural Geology 4

Space Science Core Knowledge and Skills (8)
Majors must complete the following core courses:

Introductory Meteorology. Satisfied by:

- **ATMO 105** Introductory Meteorology 5

Contemporary Astronomy. Satisfied by:

- **ASTR 191** Contemporary Astronomy 3

Earth and Space Required Electives (0)
Majors must complete one of the areas below:

Geology Focus. Satisfied by 4 hours in a geology course numbered 300 or above.

Astronomy Focus. Satisfied by 4 hours in astronomy courses numbered 300 or above. This can include three hours of **GEOL 121** (if taken before the completion of 60 hours), or **ASTR 390** or **GEOL 399**.

Research Methods (3)
Satisfied by:

- **CHEM 598** Research Methods 3

Professional Development Course Work (2)
A minimum grade of C is required in all courses.

Liberal Arts and Sciences. Satisfied by:

- **LA&S 290** Approaches to Teaching Science and Mathematics I 1
- **LA&S 291** Approaches to Teaching Science and Mathematics II 1

Curriculum and Teaching (19 hours). Satisfied by:

- **C&T 448** Reading and Writing across the Curriculum and 16 hours of courses approved by UKanTeach in curriculum and teaching. These should include courses such as Classroom Interactions (3), Knowing and Learning (3), Project Based Instruction (3), Student Teaching (6), and Special Topics Seminar (1).

**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 46 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 34 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.

The department is in the process of diversifying our course options by adding Geol courses that fulfill Core Goals 4 and 5, and we wanted to clarify how these courses would count towards the major. This has been updated for the General BS track alone, as that is where the majority of our students are, and the other tracks are more specialized and have proscribed electives.
Mathematics Programs

Separate programs lead to the B.A. in mathematics and the B.S. in mathematics. The B.A. has fewer mathematics course requirements and more general education requirements. The B.S. requires more mathematics courses, an applied mathematics concentration, and fewer general education courses. Students wishing to attend graduate school in mathematics or to pursue a career that makes substantial use of mathematics (as an actuary, for example) should get a B.S. in mathematics. Many students majoring in mathematics are interested in a liberal arts degree; such students may want to consider the B.A. in mathematics. Students who wish to teach mathematics in high school should pursue a B.A. or B.S. in mathematics while participating in the UKanTeach program.
Requirements for the B.S. Degree

First- and Second-Year Preparation (17)

MATH 125 Calculus I 4
or MATH 145 Calculus I, Honors
MATH 126 Calculus II 4
or MATH 146 Calculus II, Honors
MATH 127 Calculus III 4
or MATH 147 Calculus III, Honors
MATH 290 Elementary Linear Algebra 2
or MATH 291 Elementary Linear Algebra, Honors
Select one of the following: 3
MATH 320 Elementary Differential Equations
MATH 220 Applied Differential Equations
MATH 221 Applied Differential Equations, Honors

Core Requirements (12)

MATH 590 Linear Algebra 3
or MATH 790 Linear Algebra II
MATH 500 Intermediate Analysis 3
or MATH 765 Mathematical Analysis I
MATH 558 Introductory Modern Algebra 3
or MATH 791 Modern Algebra
Select one of the following: 3
MATH 526 Applied Mathematical Statistics I
MATH 628 Mathematical Theory of Statistics
MATH 728 Statistical Theory

Mathematics Concentration/Sequence Requirements (6-12)
Select one 2-course sequence from List A and a second 2-course sequence from either List A or List B 6-12

Electives (0-6)
Select up to 2 additional 3-credit-hour courses to complete a total of 24 credit hours of mathematics courses numbered MATH 450 and above. 0-6

Applied Concentration (8)
3 courses, totaling at least 8 credit hours, that make significant use of mathematics. At least 2 courses must be in the same area. Courses from List C have been approved for this requirement. Other upper-division courses making significant use of mathematics can be used for the applied concentration with the approval of a mathematics department advisor.

Note: Many of these courses have prerequisites that do not count toward the mathematics major.

Minimum Major Requirements

42 hours

Applied Concentration: 8 hours

General Education Requirements: 46-50 hours (Actual credit hours may be less because of overlap of Core Curriculum and degree-specific requirements.)

Completion of the University Core Curriculum

Writing (6)
ENGL 101 Composition (or exemption) 3
Select one of the following: 3
ENGL 102 Critical Reading and Writing (or exemption)
ENGL 105 Freshman Honors English (or exemption)

Computer Science (3-4)
Select one of the following: 3-4
EECS 138 Introduction to Computing: _____
EECS 168 Programming I
EECS 169 Programming I: Honors

Natural Science (7-10)
Select one course with laboratory 4-5
Select one additional course in a natural science other than mathematics 3-5

List A Sequences

MATH 627 Probability 6
& MATH 628 and Mathematical Theory of Statistics
MATH 660 Geometry I 6
& MATH 661 and Geometry II
MATH 727 Probability Theory 6
& MATH 728 and Statistical Theory
MATH 765 Mathematical Analysis I 6
& MATH 766 and Mathematical Analysis II
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<tr>
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<th>Course Title</th>
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<tr>
<td>MATH 781 &amp; MATH 782</td>
<td>Numerical Analysis I and Numerical Analysis II</td>
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<tr>
<td>MATH 790 &amp; MATH 791</td>
<td>Linear Algebra II and Modern Algebra</td>
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**List B Sequences**

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<td>Intermediate Analysis and Complex Variable and Applications</td>
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<td>MATH 526 &amp; MATH 605</td>
<td>Applied Mathematical Statistics I and Applied Regression Analysis</td>
<td>6</td>
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<tr>
<td>MATH 526 &amp; MATH 611</td>
<td>Applied Mathematical Statistics I and Time Series Analysis</td>
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<td>MATH 540 &amp; MATH 558</td>
<td>Elementary Number Theory and Introductory Modern Algebra</td>
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<td>MATH 558 &amp; MATH 601</td>
<td>Introductory Modern Algebra and Algebraic Coding Theory</td>
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<td>MATH 540 &amp; MATH 791</td>
<td>Elementary Number Theory and Modern Algebra</td>
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<td>MATH 581 &amp; MATH 591</td>
<td>Numerical Methods and Applied Numerical Linear Algebra</td>
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<tr>
<td>MATH 590 &amp; MATH 790</td>
<td>Linear Algebra and Linear Algebra II</td>
<td>6</td>
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<td>MATH 601 &amp; MATH 791</td>
<td>Algebraic Coding Theory and Modern Algebra</td>
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<td>MATH 605 &amp; MATH 611</td>
<td>Applied Regression Analysis and Time Series Analysis</td>
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<tr>
<td>MATH 646 &amp; MATH 647</td>
<td>Complex Variable and Applications and Applied Partial Differential Equations</td>
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<tr>
<td>MATH 646 &amp; MATH 765</td>
<td>Complex Variable and Applications and Mathematical Analysis I</td>
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<td>MATH 647 &amp; MATH 648</td>
<td>Applied Partial Differential Equations and Calculus of Variations and Integral Equations</td>
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<td>MATH 647 &amp; MATH 650</td>
<td>Applied Partial Differential Equations and Nonlinear Dynamical Systems</td>
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<tr>
<td>MATH 648 &amp; MATH 650</td>
<td>Calculus of Variations and Integral Equations and Nonlinear Dynamical Systems</td>
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<tr>
<td>MATH 724 &amp; MATH 725</td>
<td>Combinatorial Mathematics and Graph Theory</td>
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**List C Applied Concentration Courses**

Statistics (15)

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<td>MATH 611</td>
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<td>MATH 624</td>
<td>Discrete Probability</td>
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<td>ECON 817</td>
<td>Econometrics I</td>
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Economics and Finance (45)

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<td>ECON 620</td>
<td>Elements of Mathematical Economics</td>
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<td>ECON 700</td>
<td>Survey of Microeconomics</td>
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<td>ECON 701</td>
<td>Survey of Macroeconomics</td>
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<td>ECON 715</td>
<td>Elementary Econometrics</td>
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<td>ECON 716</td>
<td>Econometric Forecasting</td>
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<td>FIN 310</td>
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<td>FIN 311</td>
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<td>FIN 410</td>
<td>Investment Theory and Applications</td>
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<td>FIN 415</td>
<td>Corporate Finance</td>
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<td>FIN 420</td>
<td>International Finance</td>
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<td>FIN 425</td>
<td>Futures and Options</td>
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<td>MATH 630</td>
<td>Actuarial Mathematics</td>
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<td>SCM 310</td>
<td>Management Science and Operations Management</td>
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Biology (21)

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<td>BIOL 412</td>
<td>Evolutionary Biology</td>
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<td>BINF 701</td>
<td>Bioinformatics I</td>
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<td>Electricity and Magnetism</td>
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<td>ASTR 591</td>
<td>Stellar Astronomy</td>
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<td>Synoptic Meteorology</td>
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<td>Remote Sensing</td>
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<td>ATMO 650</td>
<td>Advanced Synoptic Meteorology</td>
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<td>Aerospace Structures I</td>
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<td>Material and Energy Balances</td>
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<td>EECS 562</td>
<td>Introduction to Communication Systems</td>
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<td>EECS 636</td>
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<td>EECS 644</td>
<td>Introduction to Digital Signal Processing</td>
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<td>EECS 649</td>
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<td>EECS 660</td>
<td>Fundamentals of Computer Algorithms</td>
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<td>EECS 662</td>
<td>Programming Languages</td>
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<td>Introduction to Computer Graphics</td>
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<td>EECS 718</td>
<td>Graph Algorithms</td>
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<td>ME 311</td>
<td>Mechanics of Materials</td>
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<td>ME 312</td>
<td>Basic Engineering Thermodynamics</td>
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<td>ME 508</td>
<td>Numerical Analysis of Mechanical Engineering Problems</td>
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<td>ME 510</td>
<td>Fluid Mechanics</td>
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<td>ME 612</td>
<td>Heat Transfer</td>
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<td>ME 682</td>
<td>System Dynamics and Control Systems</td>
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<td>Knowing and Learning in Mathematics and Science</td>
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<td>C&amp;T 460</td>
<td>Project Based Instruction in Mathematics and Science</td>
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**Notes:** A student using at least 2 statistics courses for the applied concentration must complete MATH 627 and MATH 628 (or MATH 727 and MATH 728) as a List A sequence. MATH 627, MATH 628, MATH 727, and MATH 728 do not count for the applied concentration. A student using at least 2 curriculum & instruction courses for the applied concentration must complete PHSX 211 as one of the natural science courses and must complete at least 1 of the geometry courses MATH 559, MATH 660, or MATH 661. Courses used to satisfy the core requirements can also be used to complete List A and List B sequences. However, no course can be used for 2 List A or B sequences, and courses used for the Applied Concentration requirement cannot also be counted toward the 24 credit hours of advanced mathematics courses for the B.S. degree.

Some courses satisfying the sequence requirements are taught infrequently. More advanced courses can be substituted for lower level courses in many cases. Consult the mathematics department for expected course offerings and substitutions.

Rationale for proposal

Courses PHSX 655, AE 750, CE 311, CE 730 and ME 201 are being removed, because they are not taught any more. We are adding the following: FIN 311, an honors version of a course already on the list; C&PE 778 which we learned of when a particular student inquired about it; EECS 212, a sequel to a course on the list. In addition, Atmospheric Science students take a lot of math, and a few have expressed interest in double-majoring. These atmo courses have significant math content.

The proposed changes are to update the list of courses approved for the Applied Concentration list. We have communicated with Atmospheric Science, Finance, and C&PE about adding their courses to our list.
Course Inventory Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 05/01/17 11:11 am

Viewing: ATMO 727: Atmospheric Storms

Last approved: 10/23/15 4:31 am
Last edit: 05/01/17 11:11 am
Changes proposed by: koerner

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<td>Last Term Offered</td>
<td>Summer 2017</td>
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<td></td>
<td>Spring 2016</td>
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Catalog Description: The physical processes and operating principles involved in the development and life cycles of extreme or unusual weather events including tornadoes, blizzards, lightning displays, and tropical storms.

Prerequisites: Consent of instructor.

Credits: 3

Course Type: Lecture (Regularly scheduled academic course) (LEC)

Grading Basis: A-D(+/-)FI (G11)

Typically Offered: Not Typically Offered

Repeatable for credit?: No

Will this course be required for a degree, major, minor, certificate, or concentration? No

Rationale for Course Proposal:

Justification for this request: Course has not been offered since fall 2003.

Course Reviewer Comments

Key: 2016
Course Inventory Change Request

Course Deactivation Proposal

Date Submitted: 05/01/17 11:12 am

Viewing: ATMO 825: Seminar in Climatology

Last edit: 05/01/17 11:12 am

Changes proposed by: koerner

Academic Career: Graduate, Lawrence
Subject Code: ATMO
Academic Unit: Department, Geography
School/College: College of Lib Arts & Sciences
Title: Seminar in Climatology
Transcript Title: Seminar in Climatology
Last Term Offered: Summer 2017

Catalog Description
Prerequisites
Cross Listed Courses:

Credits: 2-3
Course Type: Lecture (Regularly scheduled academic course) (LEC)
Grading Basis: A-D(+)F(I)(G11)
Typically Offered: Not Typically Offered
Repeatable for credit?: No

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

Rationale for Course Proposal

Justification for this request: Course has not been offered since fall 2003.

Course Reviewer Comments

Key: 3031
**Course Inventory Change Request**

A deleted record cannot be edited

**Course Deactivation Proposal**

Date Submitted: 05/01/17 11:12 am

Viewing: **ATMO 827 : Seminar in Atmospheric Science**

Last edit: 05/01/17 11:12 am

Changes proposed by: koerner

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Catalog Description

Prerequisites

Cross Listed Courses:

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<td>Repeatable for credit?</td>
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Will this course be required for a degree, major, minor, certificate, or concentration?

**Rationale for Course Proposal**

Justification for this request: Course has not been offered since fall 2003.

Course Reviewer Comments

Key 2013

**In Workflow**

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

**Approval Path**

1. 05/01/17 11:14 am
   Rachel Schwien (rschwien):
   Approved for CLAS Graduate Program and Course Coordinator

2. 05/04/17 11:25 am
   Rachel Schwien (rschwien):
   Approved for CGS PCC Subcommittee

3. 05/11/17 11:58 am
   Rachel Schwien (rschwien):
   Approved for CGS Committee
Course Inventory Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 05/01/17 11:00 am

Viewing: GEOG 806: Basic Seminar

Last edit: 05/01/17 11:00 am

Changes proposed by: koerner

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<td>Last Term Offered</td>
<td>Summer 2017</td>
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Catalog Description: The second of two courses required of M.A. students designed to provide experience in the development of research proposals and exposure to methodologies in geography. This course deals with approaches to geographic problems, and involves individual examination of special topics which require preparation, presentation, and critical evaluation of research proposals.

Prerequisites: None

Cross Listed Courses:

Credits: 2

Course Type: Lecture (Regularly scheduled academic course) (LEC)

Grading Basis: A-D(+/-)FI (G11)

Typically Offered: Once a Year, Usually Spring

Repeatability: No

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

Rationale for Course Proposal

Justification for this request: Course has not been offered since spring 2011.

Course Reviewer Comments

In Workflow
1. CLAS Graduate Program and Course Coordinator
2. CGS PCC Subcommittee
3. CGS Committee
4. CAC
5. Registrar
6. PeopleSoft

Approval Path
1. 05/01/17 11:15 am Rachel Schwen (rshwen): Approved for CLAS Graduate Program and Course Coordinator
2. 05/04/17 11:25 am Rachel Schwen (rshwen): Approved for CGS PCC Subcommittee
3. 05/11/17 11:58 am Rachel Schwen (rshwen): Approved for CGS Committee
Course Inventory Change Request

Course Deactivation Proposal

Date Submitted: 05/01/17 11:04 am
Viewing: GEOG 818: Problems in Production Cartography
Last edit: 05/01/17 11:04 am
Changes proposed by: koerner

Academic Career: Graduate, Lawrence
Subject Code: GEOG
Academic Unit: Geography
School/College: College of Lib Arts & Sciences
Title: Problems in Production Cartography
Transcript Title: Prims in Productn Cartography
Last Term Offered: Spring 2018

Catalog Description:
Advanced instruction in the theory and practice of producing maps and other related graphics for classroom instruction and research projects. Emphasis will be on current photo-mechanical and automated techniques.

Prerequisites:
By appointment. Consent of instructor.

Cross Listed Courses:

Credits: 1-3
Course Type: Lecture (Regularly scheduled academic course) (LEC)
Grading Basis: A-D(+/-)F (G11)
Typically Offered: Not Typically Offered
Repeatable for credit?: No

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

Rationale for Course Proposal

Justification for this request: Course has not been offered since fall 2011.

Course Reviewer Comments

Key: 4038
Course Inventory Change Request

Course Deactivation Proposal

Date Submitted: 05/01/17 11:07 am

Viewing: GEOG 958 : Seminar in Geographic Information Systems

Last edit: 05/01/17 11:07 am

Changes proposed by: koerner

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<td>Last Term Offered</td>
<td>Summer 2017</td>
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Catalog Description
Study of selected topics in analysis of digital geographic data. May include research and/or developmental work.

Prerequisites
GEOG 758 or equivalent, or consent of instructor.

Cross Listed Courses:

Credits
2-4

Course Type
Lecture (Regularly scheduled academic course) (LEC)

Grading Basis
A-D(+)F (G11)

Typically Offered
Not Typically Offered

Repeatable for credit?
No

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

Rationale for Course Proposal
Course has not been offered since fall 2006.

Justification for this request

Course Reviewer Comments