

Course Inventory Change Request

Date Submitted: 08/31/17 11:17 am

Viewing: **GEOG 711 : Advanced Topics in Geovisualization Advanced**

Cartography:=====

Last edit: 08/31/17 11:17 am

Changes proposed by: koerner

In Workflow

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

Programs referencing this course

- [EECS-BS: Interdisciplinary Computing, B.S.](#)
- [GEOG-BA/BGS: Geography, B.A./B.G.S.](#)
- [GEOG-CRTU: Geographic Information Science](#)

Academic Career Graduate, Lawrence

Subject Code GEOG Course Number 711

Academic Unit Department Geography

School/College College of Lib Arts & Sciences

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

No

Title **Advanced Topics in Geovisualization Advanced** ~~Cartography:=====~~

Transcript Title **Adv. Topics in Geovisualization Advanced** ~~Cartography:~~

Effective Term **Spring 2018**

Approval Path

- 1. 09/06/17 11:02 am Rachel Schwien (rschwien): Approved for CLAS Graduate Program and Course Coordinator
- 2. 09/21/17 12:40 pm Rachel Schwien (rschwien): Approved for CGS PCC Subcommittee

Catalog Description **This course is an An** investigation of special topics in **cartography and geovisualization. cartography-**It takes the fundamentals learned in GEOG 311 and 512 and expands them in several aspects such as techniques and applications of web mapping, interactive web maps, virtual environments, volunteered geographic information (VGI), and uncertainty visualization. ~~Can be repeated for different topics.~~

Prerequisites **GEOG 311 and GEOG 512** ~~Consent of instructor.~~

Cross Listed Courses:

Credits **4 3**

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

Associated Components (Optional) Laboratory - Associated with a main component

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

Typically Offered **Every Three Years** ~~Not Typically Offered~~

Repeatable for credit? Yes

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

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

No ~~Yes~~

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

No

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

No

[Rationale for Course Proposal](#)

This is an update on the title and contents of the existing course GEOG 711. Some of the previous contents in GEOG 711 have been moved to our new course GEOG 512. As web mapping technologies continue evolving, this updated GEOG 711 offers a comprehensive overview and guide for designing aesthetic and effective web maps.

[Course Reviewer Comments](#)

Key: 4061

Course Inventory Change Request

Date Submitted: 08/31/17 11:24 am

Viewing: **GEOG 911 : Seminar in Geovisualization Cartography: _____**

Last edit: 08/31/17 11:24 am

Changes proposed by: koerner

In Workflow

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

Programs referencing this course

[GEOG-MA: Geography, M.A.](#)

Academic Career Graduate, Lawrence

Subject Code GEOG Course Number 911

Academic Unit Department Geography

School/College College of Lib Arts & Sciences

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

No

Title Seminar in **Geovisualization Cartography: _____**

Transcript Title Seminar in **Geovisualization Cartography:**

Effective Term **Spring 2018**

Catalog Description **Students will explore current opportunities and challenges in geovisualization. This research seminar is devoted to topics of geospatial technology, cartographic visualization and communication, the history of cartography, and new perspectives and methodologies in geovisualization. Study of selected topics in cartography. Can be repeated for different topics.**

Prerequisites **GEOG 311 and GEOG 512** ~~GEOG 513 or consent of instructor.~~

Cross Listed Courses:

Credits **3-4**

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

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

Typically Offered **Every Three Years** ~~Not Typically Offered~~

Repeatable for credit? Yes

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

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

No ~~Yes~~

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

No

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

No

Rationale for Course Proposal This is an update on the title and contents of the existing course GEOG 911. While cartography is a fundamental component in geovisualization, current geovisualization techniques have extended traditional cartography to embrace multi-dimensional representation of data sources using animation and interactive 3D methods that may be integrated with new technologies and platforms.

Course Reviewer Comments

Approval Path

- 1. 09/06/17 11:01 am Rachel Schwien (rschwien): Approved for CLAS Graduate Program and Course Coordinator
- 2. 09/21/17 12:40 pm Rachel Schwien (rschwien): Approved for CGS PCC Subcommittee

Course Inventory Change Request

Date Submitted: 09/12/17 11:35 am

Viewing: **SPLH 874 : Master's Research Practicum**

Last edit: 09/12/17 11:35 am

Changes proposed by: kgrosche

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. 09/15/17 4:28 pm
Rachel Schwien (rschwien):
Approved for CLAS Graduate Program and Course Coordinator
2. 09/21/17 12:40 pm
Rachel Schwien (rschwien):
Approved for CGS PCC Subcommittee

Academic Career	Graduate, Lawrence		
Subject Code	SPLH	Course Number	874
Academic Unit	Department	Speech-Language-Hearing	
	School/College	College of Lib Arts & Sciences	
Do you intend to offer any portion of this course online?			
	No		
Title	Master's Research Practicum		
Transcript Title	Master's Research Practicum		
Effective Term	Spring 2018		

Catalog Description	This course is designed to give students experience in conducting research. Students apply and extend their knowledge and skills by participating in a research project under the supervision of a mentor. Application of research methodology in a laboratory situation. Students may assist with Emphasis is on direct participation in designing and conducting an experimental investigation in speech, language, or hearing. May be repeated for up to a maximum of 3 credits. independently conduct research in speech, language, or hearing.
Prerequisites	SPLH 660 or equivalent research methods course.
Cross Listed Courses:	

Credits	1-3
Course Type	Individual Research (RSH)
Grading Basis	A-D(+/-)FI (G11)

Typically Offered	Typically Every Semester
Repeatable for credit?	Yes

How many times may this course be taken	3	- AND/OR -	For how many maximum credits	3
Can a student be enrolled in multiple sections in the same semester?				
No				

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

No

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

No

Rationale for Course Proposal	Both SPLH 874 and 974 are titled Research Practicum. 874 is meant for master's students and 974 is meant for Doctoral students; however, students are not always enrolling in the correct course. We feel clarifying in the title will help students enroll in the appropriate course. Also, the course description is not accurate and the new one better describes what we want our students to accomplish.
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Course Reviewer Comments

Course Inventory Change Request

Date Submitted: 09/11/17 1:42 pm

Viewing: **SPLH 998 : Investigation and Conference (For Doctoral Candidates)**

Last edit: 09/11/17 1:42 pm

Changes proposed by: hstorkel

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. 09/15/17 4:29 pm
Rachel Schwien (rschwien):
Approved for CLAS Graduate Program and Course Coordinator
- 2. 09/21/17 12:40 pm
Rachel Schwien (rschwien):
Approved for CGS PCC Subcommittee

Academic Career	Graduate, Lawrence		
Subject Code	SPLH	Course Number	998
Academic Unit	Department	Speech-Language-Hearing	
	School/College	College of Lib Arts & Sciences	
Do you intend to offer any portion of this course online?			
	No		
Title	Investigation and Conference (For Doctoral Candidates)		
Transcript Title	Investign&Confernc (Doctoral)		
Effective Term	Spring 2018		

Catalog Description (Limited to eight hours credit towards the Ph.D. **degree.**) **Readings, critical thinking, and scientific writing in preparation for the oral comprehensive exam.** ~~degree.) Directed research and experimentation for Ph.D. students in some phase of speech science.~~

Prerequisites None

Cross Listed Courses:

Credits	1-8
Course Type	Individual Research (RSH)
Grading Basis	A-D(+/-)FI (G11)

Typically Offered Typically Every Semester

Repeatable for credit? No

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

No

Rationale for Course Proposal The prior description did not accurately reflect the actual activities for the enrollment. Students enroll in this while they prepare for the oral comprehensive exam so that they meet enrollment requirements for full-time status.

Course Reviewer Comments

Course Inventory Change Request

New Course Proposal

Date Submitted: 08/07/17 10:05 am

Viewing: **GIST 751 : Human Rights and U.S. National Security**

Last edit: 09/06/17 11:22 am

Changes proposed by: f409w960

In Workflow

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

Academic Career	Graduate, Lawrence		
Subject Code	GIST	Course Number	751
Academic Unit	Department	Global & International Studies	
	School/College	College of Lib Arts & Sciences	
Locations	Lawrence		
Other	<div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p>Describe Other Location Leavenworth</p> </div>		
Do you intend to offer any portion of this course online?			
	No		
Title	Human Rights and U.S. National Security		
Transcript Title	Human Rights & US Nat. Sec.		
Effective Term	Spring 2018		

Approval Path

1. 09/06/17 11:22 am
Rachel Schwien (rschwien):
Approved for CLAS Graduate Program and Course Coordinator
2. 09/21/17 12:39 pm
Rachel Schwien (rschwien):
Approved for CGS PCC Subcommittee

Catalog Description This course explores the history, debates, and contemporary issues related to human rights and U.S. national security policy. Through lecture, practical exercises, and class-led discussions, the course will cover relevant and timely issues such as human rights and counter-terrorism, security assistance and cooperation, peacekeeping and protection of civilians, and global criminal accountability.

Prerequisites Graduate standing or consent of instructor

Cross Listed Courses:

Credits	3
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Grading Basis	A-D(+/-)FI (G11)

Typically Offered Only Spring Semester

Repeatable for credit? No

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

No

Rationale for Course Proposal	This course will be an elective offered to MA students in our one-year concentration and offered primarily for KU students at Fort Leavenworth.
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Course Reviewer Comments

Course Inventory Change Request

New Course Proposal

Date Submitted: 09/05/17 9:43 am

Viewing: **PHSX 703 : Proposal Writing**

Last edit: 09/05/17 9:43 am

Changes proposed by: tatekris

Academic Career	Graduate, Lawrence		
Subject Code	PHSX	Course Number	703
Academic Unit	Department	Physics & Astronomy	
	School/College	College of Lib Arts & Sciences	
Locations	Lawrence		
Do you intend to offer any portion of this course online?			
No			
Title	Proposal Writing		
Transcript Title	Proposal Writing		
Effective Term	Spring 2018		

Catalog Description Means and methods for preparing a successful proposal. This course will discuss how to find funding and other award opportunities. Students will learn how to develop an effective application and will complete an application. Intended for early career graduate students and advanced undergraduate students.

Prerequisites None

Cross Listed Courses:

Credits	1
Course Type	Lecture (Regularly scheduled academic course) (LEC)
Grading Basis	A-D(+/-)FIP (G09)

Typically Offered Only Spring Semester

Repeatable for credit? No

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

Rationale for Course Proposal This course will improve our students' chances at obtaining external graduate fellowships, e.g. from the NSF. Students will produce a submittable proposal as part of this course.

Supporting Documents [Microsoft Word - example_syllabus - PHSX 703.pdf](#)

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. 09/19/17 10:04 am
Rachel Schwien (rschwien): Approved for CLAS Graduate Program and Course Coordinator
2. 09/21/17 12:39 pm
Rachel Schwien (rschwien): Approved for CGS PCC Subcommittee

Program Change Request

Date Submitted: 09/08/17 3:33 pm

Viewing: **PHSX-MS : Physics, M.S.**

Last approved: 11/29/16 12:04 pm

Last edit: 09/08/17 3:33 pm

Changes proposed by: tatekris

Catalog Pages Using this Program [Master of Science in Physics](#)

Academic Career Graduate, Lawrence
 Program Type Degree/Major
 Department/Program Physics & Astronomy
 School/College College of Lib Arts & Sciences
 Degree Code Master of Science - MS
 Consulting School(s)/College(s)
 Consulting Department(s)
 CIP Code 400801
 Program Name Physics, M.S.
 Do you intend to offer a track(s)?

Do you intend for this program to be offered online?
 No

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

In Workflow

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

Approval Path

- A. 09/11/17 8:40 am
Rachel Schvien (rschwien): Approved for CLAS Graduate Program and Course Coordinator
- B. 09/21/17 12:41 pm
Rachel Schvien (rschwien): Approved for CGS PCC Subcommittee

History

- A. Mar 11, 2016
by Kristin Rennells (tatekris)
- B. Nov 29, 2016
by Kristin Rennells (tatekris)

Program Description

Graduate Program in Physics and Astronomy

The department offers three primary graduate programs: (i) an M.S. degree program in Computational Physics and Astronomy, (ii) an M.S. degree in Physics, and (iii) a Ph.D. degree in Physics. The M.S. degree in Computational Physics and Astronomy requires a thesis, as does one of the M.S.-Physics options. The department does not offer a graduate-level degree in Astronomy, although students have obtained M.S. degrees in Physics by doing astronomy projects. Also, the department has added flexibility in its course offerings to allow a student to obtain a Ph.D. in Physics while working on an astronomy or astrophysics multidisciplinary plan of study.

Degree Requirements

M.S. Degree in Physics

Candidates must complete a minimum of 30 credit hours of advanced lecture courses (numbered 500 or above) in physics and related subjects within a period of 7 years. Credit toward the 30 required hours is not given to students who take courses at a lower level after having completed similar upper level courses (as determined by the department) with a grade of B- or higher.

Program requirements include

A. Within 12 months of entering the program the student must fulfill [the requirements of the individualized plan of study](#) for all graduate degrees to certify an undergraduate knowledge of Physics. Visit the Department's website for more information on these requirements and the process of certification.

B. 4 basic courses:

PHSX 711	Quantum Mechanics I	3
PHSX 718	Mathematical Methods in Physical Sciences	3
PHSX 821	Classical Mechanics	3
PHSX 831	Electrodynamics I	3

C. 2 additional courses chosen from:

PHSX 721	Chaotic Dynamics	3
PHSX 731	Molecular Biophysics	3
PHSX 741	Nuclear Physics I	3
PHSX 761	Elementary Particles I	3
PHSX 781	Solid State Physics I	3
PHSX 792	Topics in Advanced Astrophysics	3
PHSX 793	Physical Cosmology	3
PHSX 795	Space Plasma Physics	3
PHSX 815	Computational Methods in Physical Sciences	3

D. A minimum of 2 hours in [PHSX 899](#) Master's Research/Thesis is required, with a maximum of 6 hours that count toward the master's degree. No more than 3 hours will be allowed unless directed towards completion of a thesis on original research or a written report. Students must consult with the research advisor before enrolling in more than 3 credit hours.

E. The remaining 6 to 10 hours of advanced electives must be either advanced lecture courses or advanced undergraduate laboratory courses. (This proviso excludes seminars and special problems courses.)

F. All graduate students, after their first semester, will deliver at least 1 oral presentation per semester.

G. General Examination: Candidates must pass a general oral examination in physics. The examination is given shortly before completion of other work for the degree. A master's thesis is not required but may be submitted if the candidate and the director of the candidate's research believe it to be appropriate.

The departmental web page with some additional information, e.g., milestones, can be found at <http://www.physics.ku.edu/~physics/graduate/about.shtml>

Please go to this website to see the University's policy on time limits: https://documents.ku.edu/policies/Graduate_Studies/maprogramtimeconstraints.htm

M.S. with emphasis ~~Subspecialty~~ in Computational Physics and Astronomy

This degree is a subspecialty program for students ~~with with~~ a background ~~in physics, in physics,~~ astronomy, computer science, mathematics, or engineering ~~who wish who wish~~ to become familiar ~~with with~~ computer-based approaches to problems ~~in these in these~~ fields. **This degree is intended as a terminal MS that can be completed in two years.** Minimum preparation expected includes a year's course ~~in general in general~~ physics, mathematics through differential equations, and ~~a knowledge a knowledge~~ of python, FORTRAN, ~~C++ C++~~, or another programming ~~language suited to scientific applications. language.~~ **Students pursuing this degree with an applied mathematics emphasis may wish to consider also earning a [Graduate Certificate in Applied Mathematics](#).**

Degree Requirements

A total of ~~at least 33 30~~ hours of ~~credits including 30 hours of~~ graduate credit is ~~required for the degree. required.~~ **At least 50% No more than the required 6 hours of these hours must** ~~PHSX 899 Master's Research/Thesis may be at the 700 level or above. counted toward the degree.~~ **Courses numbered 500 or above count for graduate credit. The 33 hours listed below under 2 and 3 may include certain undergraduate level electrical engineering and computer science courses. Some of the (Only) courses listed below are undergraduate level EECS courses that do not numbered 500 and above count as graduate credit. credit.)** ~~Students entering the program may have satisfied several of these requirements, but a total of 30 hours of graduate credit is still required.~~ **Students entering the program may have satisfied several of these requirements but a total of 30 hours of graduate credit is still required. No more than the required 6 hours of [PHSX 899](#) (Master's Research/Thesis) may be counted toward the degree.**

A. ~~No more than the required 6 hours of PHSX 899 Master's Research/Thesis may be counted toward the degree.~~ **Degree requirements include** Within 12 months of entering the program the student must fulfill [the requirements of the individualized plan of study](#) for all graduate degrees to certify an undergraduate knowledge of Physics. Visit the Department's website for more information on these requirements and the process of certification.

B. Required Courses (~~24~~ **24** credit hours)

PHSX/ASTR 815	Computational Methods in Physical Sciences	3
PHSX 718	Mathematical Methods in Physical Sciences	3
MATH/EECS 781 or EECS 639	Numerical Analysis I Introduction to Scientific Computing	3
EECS — 1 course at the 300 level or above (in addition to EECS 781) (Note: courses below the 500 level will not count towards the required 30 hours of graduate credit.)		
1 additional PHSX/ASTR/ATMO lecture course at the 500 level or above		
EECS – 1 course at the 300 level or above (in addition to MATH/EECS 781) (Note: courses below the 500 level will not count towards the required 30 hours of graduate credit.)		
EECS or MATH - 1 course at the 700 level or above in EECS or MATH (in addition to MATH/EECS 781 and the EECS 300+ requirement)		
1 additional PHSX/ASTR lecture course at the 500 level or above		

[PHSX 899](#)

Master's Research/Thesis

C. **9 42** or more credits from **at least 3 lecture or lab courses green** the following list of courses:

Note: Double counting of courses is not allowed, e.g. a course used to fulfill a requirement under part 2. (e.g. [EECS 448](#)) may not also be counted under part 3.

EECS 360	Signal and System Analysis ¹	4
EECS 368	Programming Language Paradigms ¹	3
EECS 388	Embedded Systems ¹	4
EECS 448	Software Engineering I ¹	4
EECS 560	Data Structures	4
EECS 672	Introduction to Computer Graphics	3
EECS 731	Introduction to Data Science	3
EECS 738	Machine Learning	3
EECS 739	Parallel Scientific Computing	3
EECS 837	Data Mining	3
MATH 611	Time Series Analysis	3
MATH 627	Probability	3
MATH 647	Applied Partial Differential Equations	3
MATH 650	Nonlinear Dynamical Systems (cannot be counted along with PHSX 721)	3
MATH 727	Probability Theory	3
or MATH 627	Probability	
MATH 728	Statistical Theory	3
or MATH 628	Mathematical Theory of Statistics	
MATH/EECS 782	Numerical Analysis II	3
MATH 783	Applied Numerical Methods for Partial Differential Equations	3

~~PHSX/ASTR/ATMO Courses Numbered 500 and above~~

~~Courses below the 500 level do not count towards the required 30 hours of graduate credit.~~

PHSX/ASTR Courses Numbered 500 and above

- ~~MATH 596 Special Topics: _____~~
- ~~MATH 696 Special Topics: _____~~
- ~~MATH 796 Special Topics: _____~~

Footnote 1: Courses below the 500 level do not count towards the required 30 hours of graduate credit.

D. All graduate students, after their first semester, will deliver at least 1 [oral presentation](#) per semester.

E. ~~Thesis~~: An important component of this degree is the completion and documentation of a successful computer project. A thesis must be presented that describes the basic physics involved in the project, the method of implementing the project, and a discussion of the results. An oral defense of the thesis is required before a committee of at least 3 members of the graduate faculty.

The departmental web page with some additional information, e.g., the Graduate Handbook and milestones, can be found at <http://physics.ku.edu/graduate-studies>

Rationale for proposal

This proposal is to update the requirements for and details of the MS with emphasis in Computational Physics and Astronomy. Since this emphasis has laid dormant for several years and there has been a recent interest among graduate students for this degree, we wanted to update it with the proper courses now available through our partnering departments (MATH and EECS).

Additional Information

Supporting Documents

Program Reviewer Comments

Rachel Schwien (rschwien) (09/07/17 9:45 am): Rollback: for additional edits