

## Updates since the UCC meeting on 12.12.2012

### UCC inquiries and responses:

1. **BA Geography:** add language to limit the number of courses student can take towards multiple concentrations

RE:

<b>Concentrations (21 hrs)</b>	<b>21</b>
Choose in consultation with a Geography faculty advisor. See below for course list and specific requirements for each area. Students must focus on one area; however, they may choose to add an additional concentration(s) to their program, which will be reflected on their transcripts. No more than 6 credit hours can be counted towards multiple concentrations.	

- 2.
3. **Cartography & GIS Certificate:** add language to (a) accommodate students who had taken Introductory GIS (GIS I) in other institutions; (b) accommodate graduate students to ensure that that can take GIS I for graduate xcredit (Geography already offers equivalent graduate course GEOG 6286 Studies in GIS)

RE:

The Certificate in ~~Cartography and~~ Geographic Information Systems (GIS) **and Cartography** is designed to give the student a substantial background in the fields of ~~cartography and~~ geographic information **systems and digital cartography.** ~~systems.~~ Students completing the program will be familiar with the terminology, techniques and theory of **GIS cartography and cartography.** ~~GIS principles.~~ Hands-on computer experience is a major feature of many of the courses. The program complements majors in disciplines other than geography while increasing the geography major's preparation for the job market.

**May be taken at graduate and undergraduate levels.** The student must earn a grade point average of at least 3.00 in the courses taken for the certificate. It is the responsibility of the student to notify the Head of the Department of Geography during or immediately after the semester in which the course requirements will be or have been completed. **Up to 3 credits can be transferred from another institution. For graduate credit GEOG 3310 can be substituted with GEOG 6286 Studies in GIS.**

4. Conduct **additional consultations** with Computer Science and Social Science Teaching programs

RE: see attached emails

\*other consultations are available in the original package.

5. As per UCC recommendation GEOG 4130/5130 (970:114g) Political Geography and GEOG 4140/5140 (970:116g) Geopolitics: (Variable Topic) **will remain in the catalog.**

## Additional Consultation: Computer Science: Eugene Wallingford

(removing CS 1130 Visual Basic as method elective in BS in GIS program methods electives)



### Re: Curriculum consultation

1 message

**Andrey Petrov** <andrey.petrov@uni.edu>  
To: Eugene Wallingford <wallingf@cs.uni.edu>  
Cc: Patrick Pease <Patrick.Pease@uni.edu>

Eugene,  
Thank you very much for your response. C++ is not very relevant for GIS applications and will unlikely be useful for our majors.  
I hope you will enjoy the rest of the break.  
Andrey  
--

Andrey N. Petrov, PhD  
Department of Geography  
University of Northern Iowa  
205 ITTC UNI 50614-0406 USA  
Phone: 1-319-273-6245  
Fax: 1-319-273-7103  
[www.uni.edu/apetrov](http://www.uni.edu/apetrov)

On Fri, Jan 4, 2013 at 5:00 PM, Eugene Wallingford <wallingf@cs.uni.edu> wrote:

> I hope you had a nice holiday. I am just wondering whether you were able to  
> look into the curricular question below.

Thanks, Andrey. Yes, it's been a good break. The faculty did discuss this, and I have responding to the consult on my list of things to do when I get back to the office next week. The short answer is, Has impact - no objection.

A couple of folks wanted me to ask if CS 1160 C/C++ should be listed as an option. Without CS 1130, I think that the database course is the only item in a "choose one" category.

---- Eugene

> Thank you very much,  
> Andrey

> --

> Andrey N. Petrov, PhD  
> Department of Geography  
> University of Northern Iowa  
> 205 ITTC UNI 50614-0406 USA  
> Phone: 1-319-273-6245  
> Fax: 1-319-273-7103  
> [www.uni.edu/apetrov](http://www.uni.edu/apetrov)

> On Thu, Dec 13, 2012 at 6:03 AM, Eugene Wallingford <wallingf@cs.uni.edu> wrote:

> > Geography is revising its BS in GIS degree. The electronic curriculum  
> > development system is not operational, and we are instructed to seek  
> > consultation by email.

> > I'll have an answer for you in the next few days. Thanks.

> > ---- Eugene

> > >

> > > -----  
> > > FORM J  
> > > TO: Eugene Wallingford (Dept. Head affected by proposal)  
> > > FROM: Andrey Petrov (Curriculum Chair initiating proposal)  
> > > CONSULTATION REQUEST  
> > > DATE: 12/12/2012  
> > > It is the responsibility of the department initiating curriculum  
> > > proposals to assess the impact of the proposed changes and consult with  
> > > those who may be affected by the changes.  
> > > If the recipients have objections to the changes, it is their  
> > > responsibility to promptly notify the initiating department of the reasons  
> > > for the objections. Both parties are then expected to work together to  
> > > attempt to find a solution to their differences.  
> > > >  
> > > CS 1130 Visual Basic is listed as an elective in the BS in GIS program.  
> > > However, in the last two years GIS majors generally stopped taking this  
> > > course due to the migration of GIS technology away from VB. To reflect this  
> > > change we plan to remove CS 1130 from the list of electives for the BS in  
> > > GIS.  
> > > >  
> > > We hope you will be able to respond to this consultation request:

## Additional Consultation: Social Science Teaching: Chad Christopher

andrey.petrov@uni.edu ▾

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Re: Curriculum consultation -social sciences teaching Inbox x

Chad Christopher

12/19/12 ☆
 

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▾

to me ▾

Andrey,  
Thanks for sharing the changes.  
I see no impact on the Social Science Teaching program.

**Chad Christopher**  
 Social Science and History Education  
 University of Northern Iowa  
 Seerley 328  
 (319) 273-3157  
<http://www.uni.edu/csbs/social-science-and-history-education>  
*"Learning About the Past, Understanding the Present, to Teach the Future"*

On Wed, Dec 19, 2012 at 1:57 PM, Andrey Petrov <[andrey.petrov@uni.edu](mailto:andrey.petrov@uni.edu)> wrote:  
 Dear Chad,  
 University Curriculum Committee asked Geography to send our curriculum package to your attention. The curricular changes deal with the recasting of our undergraduate BA major and minor alterations in other programs, and do not seemingly affect social science students. Still we thought it is important to make sure that you have access to our proposal, in case you have any comments or suggestions. Please, let us know if you think these changes may impact social science students.  
 Thank you very much,  
 Andrey  
\*\*\*

Chad Christopher

chad.christopher@uni.edu

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**Summary of changes:**

<b>Program</b>	<b>Type of change</b>	<b>Details</b>
MA in Geography	<u>Restructuring:</u> Program restatement	Identified possible research focus areas for incoming students. Identified thesis as ‘research’ and non-thesis as ‘professional’ option.
BA in Geography	<u>Restructuring:</u> Program restatement	<b>New curriculum:</b> 3 concentrations (see below)  BA in Geography: Program restatement Degree has been completely restructured. Defined new core and electives, identified three concentration areas: Environmental Systems and Sustainability; Globalization and Regional Geography; Planning and Development. The total number of hours for BA remained unchanged.
BS in GIS	Program restatement	BS in GIS: Program restatement Eliminated Application focus on Human Geographic Processes (97B) Replace CS 1130 Visual Basic with GEOG 4390 GIS Programming (proposed)
Minor in Geography	<u>Restructuring:</u> Name change  Program restatement	Minor in Geography Program restatement Reduced hours (from 19 to 18) Remove “Liberal Arts” from the program title
Certificate in GIS and Cartography	Name change  Program restatement	GIS and Cartography Certificate: Program restatement Change of name: from cartography and GIS to GIS and Cartography Add GEOG 4390 GIS Programming (proposed) to electives Add “May be taken at <b>graduate</b> and <b>undergraduate</b> levels”

**Courses to add and drop:**

<b>Courses to drop</b>	<b>Justification</b>	<b>Courses to add</b>	<b>Justification</b>
n/a		GEOG 4390 GIS Programming	Strengthen BS in GIS. Was offered in 2011 and 2012; taught by existing faculty
n/a			
GEOG 1210 Phys Geo <b>4 hr</b> version	Poorly aligned with Geo progr and LAC	GEOG XXXX Phys Geogr Lab	Disentangle lecture and lab.

# Program changes (screenshots of the CourseLeaf/Leapfrog system)<sup>1</sup>

Department of Geography < University of Northern Iowa - Mozilla Firefox

https://nextcatalog.uni.edu/courseleaf/courseleaf.exe?page=/collegeofsocialandbehavioralsciences/geography/index.html&step=tcadiff



## Department of Geography

**If the program is long or contains many courses that must be taken sequentially, show how the program may be completed within the allowable number of semesters (Standard programs allow 8 semesters plus a summer session. Extended programs allow 9 semesters, or 9 semesters plus a summer session):**

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Summary of changes:  
 MA in Geography: Program restatement  
 Summary: Identified possible research focus areas for incoming students.

**Explanation and Justification:**

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**Describe how this change will affect the usage of computer resources and facilities:**

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**Summarize the needs for additional library resources and services that this change will require:**

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**Will this change increase the total budgetary requirements of the Department:**

a. If No, explain why not:

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b. If Yes, identify the total costs:

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(1) Staff:

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(2) Additional Facilities:

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(3) Equipment:

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(4) Support Personnel:

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(5) Library Requirements:

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(6) Computer Service:

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(7) Educational Technology:

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(8) Other services (identify below):

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**TOTAL COSTS:**

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- List of Programs by Department
- General Information
- College of Business Administration
- College of Education
- College of Humanities, Arts and Sciences and College of Social and Behavioral Sciences
- College of Humanities, Arts and Sciences
- College of Social and Behavioral Sciences
  - School of Applied Human Sciences
  - Department of Geography
  - Department of History
  - Department of Political Science
  - Department of Psychology
  - Department of Social Work
  - Department of Sociology, Anthropology, and Criminology
  - Social Science
- Interdisciplinary Majors, Minors and Program Certificates
- Iowa Teacher Intern License Pathway (ITILP)
- Department of Military Science

<sup>1</sup> The system is not currently operational for a standard workflow.

OVERVIEW	PLAN OF STUDY	COURSES
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(College of Social and Behavioral Sciences)

[www.uni.edu/geography](http://www.uni.edu/geography)

The Department of Geography offers the following undergraduate and graduate programs and program certificate. Specific requirements for these programs are listed within this Department of Geography section in the following order:

- **Undergraduate Major (B.S.)**
  - Geographic Information Science
- **Undergraduate Major (B.A.)**
  - Geography
- **Minor**
  - **Geography**
- ~~Geography Liberal Arts~~ **Graduate Major (M.A.)**
  - **Geography**
- ~~Geography~~ **Program Certificate**
  - Certificate in ~~Cartography and~~ Geographic Information Systems (GIS) **and Cartography**

## Bachelor of Science Degree Programs

### Geographic Information Science Major

The B.S. Geographic Information Science major requires a minimum of 126 total hours to graduate. This total includes Liberal Arts Core requirements and the following specified major requirements, plus course choices for a focus within the major and electives, needed to complete the minimum of 126 hours.

**Required**

Geographic Information Science core:		30-32
GEOG 1120 (970:010)	Human Geography	
GEOG 1210 (970:026)	Physical Geography (4 hr. version)	
GEOG 3598 (970:193)	Research Experience in Geography	
GEOG 3310 (970:164)	Geographic Information Systems I	
GEOG 4310/5310 (970:170g)	GIS Applications: (Variable Topic)	
GEOG 4320/5320 (970:174g)	Geographic Information Systems II	
GEOG 4350/5350 (970:175g)	Global Positioning System Field Survey Methods	
GEOG 4360/5360 (970:165g)	Thematic Cartography	

GEOG 4370/5370 (970:173g)	Remote Sensing of the Environment	
GEOG 4550 (970:180)	Senior Seminar in Geography	
GEOG 4560 (970:181)	Professional Seminar	
Geography: (two of the following)		6
GEOG 1310 (970:061)	Maps and Map Interpretation	
GEOG 4340/5340 (970:160g)	Spatial Data Analysis *	
GEOG 4380/5380	Satellite Image Processing	
One course from each of the following pairs:		3
Mathematics or Sociology select one of the following:		
STAT 1772 (800:072)	Introduction to Statistical Methods	
SOC 2020 (980:080)	Statistics for Social Research	
Computer Science or Geography select one of the following: :		
CS 1130 (810:030)	Visual BASIC Programming	
<b>GEOG 4390</b>	<b>Course GEOG 4390 Not Found (GIS Programming)</b> proposed	
CS 3140/5140 (810:114g)	Database Systems *	
<b>Choose one Application Focus (below) and four courses from that focus</b>		<b>12</b>
<b>Application Focus on Environmental Science and Policy</b>		
Health Promotion/Environmental:		
HPE/ENV SCI 4666	Environmental and Occupational Health Regulations	
Earth Science:		
EARTHSCI 3230/5230 (870:123g)	Air Quality *	
Geography:		
GEOG 2210 (970:028)	Recent Climate Change	
GEOG 3210 (970:137)	Natural Hazards and Disasters	
GEOG 3220 (970:100)	Environmental Geography	
GEOG 4210/5210 (970:127g)	Climatology	
GEOG 4220/5220 (970:126g)	Soils and Landscapes	
GEOG 4230/5230 (970:129g)	Rivers	
GEOG 4240/5240 (970:155g)	Reconstructing Ice Age Environments *	
GEOG 4250/5250 (970:185g)	Laboratory Methods in Environmental Geography	

**Application Focus on Human-Geographic Processes**

Or approved courses in cognate areas.

**Application Focus on Economic Geography and Business**

Management:

**Geography:**

MGMT 3153 (150:153)	Organizational Management
MGMT 3919/5919 (150:119g)	Leadership and Human Relations

Geography:

GEOG 3110 (970:101)	Economic Geography
GEOG 4110/5110 (970:111g)	Cultural Geography
GEOG 4180/5180 (970:121g)	Locational Analysis for Business
GEOG 4190/5190 (970:117g)	Transportation Planning and Policy

Or approved courses in cognate areas.

**Application Focus on Planning and Policy**

Health Promotion:

HPE 3110 (410:110)	Introduction to Epidemiology
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Political Science:

POL AMER 1048 (942:048)	Introduction to Public Administration
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~~GEOG 4130/5130  
(970:114g) Political Geography~~

~~GEOG 4120/5120  
(970:119g) Demography and Population Geography~~

~~GEOG 4110/5110 (970:111g) Cultural Geography~~

~~GEOG 4190/5190  
(970:117g) Transportation Planning and Policy~~

Geography:

GEOG 3110 (970:101)	Economic Geography
GEOG 3120 (970:104)	North American Cities
<del>GEOG 4140/5140 (970:116g)</del>	<del>Geopolitics: (Variable Topic)</del>

Or approved courses in cognate areas.

~~GEOG 4130/5130  
(970:114g) Political Geography~~

GEOG 4110/5110 (970:111g) Cultural Geography

GEOG 4120/5120  
(970:119g) Demography and Population Geography

GEOG 4170/5170 Regional Analysis and Planning

GEOG 4170/5170 (970:168g)	Regional Analysis and Planning	
GEOG 4190/5190 (970:117g)	Transportation Planning and Policy	
Or approved courses in cognate areas.		
<b>Electives</b>		<b>1-4</b>
Other courses, in Geography or cognate areas approved, to reach a minimum of 56 hours.		
Total hours		56

\* These courses have additional prerequisites as follows:

GEOG 4340/5340 (970:160g) has prerequisite of STAT 1772 (800:072) or SOC 2020 (980:080)

CS 3140/5140 (810:114g) has prerequisites of CS 1520 (810:052); CS 1800 (810:080).

EARTHSCI 3230/5230 (870:123g) has prerequisites of MATH 1420 (800:060); EARTHSCI 3210/5210 (870:121g).

GEOG 4240/5240 (970:155g) has prerequisites of GEOG 2210 (970:028); EARTHSCI 1300 (870:031) or consent of instructor.

**Note:** Choice of courses and subsequent course prerequisites may increase the length of this program.

## Bachelor of Arts Degree Programs

### Geography Major

The Geography major requires a minimum of 120 total hours to graduate. This total includes Liberal Arts Core requirements and the following specified major requirements, plus electives to complete the minimum of 120 hours.

#### Required

Geography:		
GEOG 1110 (970:040)	World Geography	3
GEOG 1120 (970:010)	Human Geography	3
GEOG 1210 (970:026)	Physical Geography	3
GEOG 1310 (970:061)	Maps and Map Interpretation	3
GEOG 4550 (970:180)	Senior Seminar in Geography	3
GEOG 4560 (970:181)	Professional Seminar	1
<b>Concentrations (21 hrs)</b>		<b>21</b>
Choose in consultation with a Geography faculty advisor. See below for course list and specific requirements for each area. Students must focus on one area; however, they may choose to add an additional concentration(s) to their program, which will be reflected on their transcripts. No more than 6 credit hours can be counted towards multiple concentrations.		
<b>Concentration on Globalization and Regional Geography</b>		
<b>Professional and Regional Electives</b>		
GEOG 3310 (970:164)	Geographic Information Systems I	
GEOG 2210 (970:028)	<b>Recent Climate Change</b>	
GEOG 3110 (970:101)	<b>Economic Geography</b>	
GEOG 3120 (970:104)	<b>North American Cities</b>	
GEOG 3179 (970:179)	<b>Cooperative Education in Geography</b>	
GEOG 3220 (970:100)	<b>Environmental Geography</b>	
GEOG 3230 (970:144)	<b>Natural Regions of North America</b>	
GEOG 4110/5110 (970:111g)	<b>Cultural Geography</b>	
GEOG 4120/5120 (970:119g)	<b>Demography and Population Geography</b>	
GEOG 4150/5150 (970:141g)	<b>Regional Geography: (Variable Topic)</b>	
GEOG 4160/5160 (970:151g)	<b>Historical Geography: (Variable Topic)</b>	
GEOG 4250/5250 (970:185g)	<b>Laboratory Methods in Environmental Geography</b>	

<b>GEOG 4520/5520 (970:171g)</b>	<b>Issues in the Teaching of Geography</b>
<b>SOC 2020 (980:080)</b>	<b>Statistics for Social Research</b>
Other Geography courses or courses from other departments as approved. Some non-Western cultures courses may be taken upon approval. They must be taken in addition to any LAC required non-Western cultures course.	
<b>Concentration on Environmental Systems &amp; Sustainability</b>	
<b>Methods Electives</b>	
<b>Select three from the following:</b>	
<b>STAT 1772 (800:072)</b>	<b>Introduction to Statistical Methods</b>
<b>GEOG 3310 (970:164)</b>	<b>Geographic Information Systems I</b>
<b>GEOG 4310/5310 (970:170g)</b>	<b>GIS Applications: (Variable Topic)</b>
<b>GEOG 4250/5250 (970:185g)</b>	<b>Laboratory Methods in Environmental Geography</b>
<b>GEOG 4340/5340 (970:160g)</b>	<b>Spatial Data Analysis</b>
<b>Professional Electives</b>	
<b>Select four from the following:</b>	
<b>TECH 1015</b>	<b>Introduction to Sustainability</b>
<b>GEOG 2210 (970:028)</b>	<b>Recent Climate Change</b>
<b>GEOG 3220 (970:100)</b>	<b>Environmental Geography</b>
<b>GEOG 3230 (970:144)</b>	<b>Natural Regions of North America</b>
<b>GEOG 4220/5220 (970:126g)</b>	<b>Soils and Landscapes</b>
<b>GEOG 4210/5210 (970:127g)</b>	<b>Climatology</b>
<b>GEOG 4230/5230 (970:129g)</b>	<b>Rivers</b>
<b>GEOG 3210 (970:137)</b>	<b>Natural Hazards and Disasters</b>
<b>GEOG 4240/5240 (970:155g)</b>	<b>Reconstructing Ice Age Environments</b>
<b>GEOG 4370/5370 (970:173g)</b>	<b>Remote Sensing of the Environment</b>
<b>EARTHSCI 3330/5330 (870:141g)</b>	<b>Geomorphology</b>
<b>Concentration on Planning and Development</b>	
<b>Methods Electives</b>	
<b>Select three from the following:</b>	

<b>Select three from the following:</b>	
<b>STAT 1772 (800:072)</b>	<b>Introduction to Statistical Methods</b>
SOC 2020 (980:080)	Statistics for Social Research
<b>GEOG 4340/5340 (970:160g)</b>	<b>Spatial Data Analysis</b>
<b>GEOG 3310 (970:164)</b>	<b>Geographic Information Systems I</b>
<b>GEOG 4310/5310 (970:170g)</b>	<b>GIS Applications: (Variable Topic)</b>
<b>GEOG 3179 (970:179)</b>	<b>Cooperative Education in Geography</b>
<b>Professional Electives</b>	
<b>Select four from the following:</b>	
<b>GEOG 3110 (970:101)</b>	<b>Economic Geography</b>
<b>GEOG 3120 (970:104)</b>	<b>North American Cities</b>
<b>GEOG 3210 (970:137)</b>	<b>Natural Hazards and Disasters</b>
<b>GEOG 4180/5180 EARTHSCI 3355/5355 (870:175g)</b>	<b>Locational Analysis for Business Hydrogeology</b>
<b>GEOG 4190/5190 (970:117g)</b>	<b>Transportation Planning and Policy</b>
<b>GEOG 4120/5120 (970:119g)</b>	<b>Demography and Population Geography</b>
<b>GEOG 4170/5170 (970:168g)</b>	<b>Regional Analysis and Planning</b>
<b>GEOG 4150/5150 (970:141g)</b>	<b>Regional Geography: (Variable Topic)</b>
<b>ECON 3249/5249 (920:143g)</b>	<b>Economic Development</b>
<b>Other Geography courses or courses from other departments as approved</b>	
Total Hours	37

\* Other programs occasionally offer courses appropriate to the geography major. The Department of Geography will approve substituting up to two such courses for electives in Geography. Note that only 3 hours of credit in GEOG 3179 (970:179) will count toward electives for the major.

## Minor

### Geography ~~Minor~~ ~~Minor-Liberal Arts~~

#### Required

Geography:		
GEOG 1120 (970:010)	Human Geography	3
or GEOG 1110 (970:040)	World Geography	
GEOG 1210 (970:026)	Physical Geography	3
<b>Electives in geography *</b>		<b>12</b>
Total Hours		18

\* Only 3 hours of credit in GEOG 3179 (970:179) will count toward electives for the minor.

## Master of Arts Degree Program

### Major in Geography

Students interested in enrolling in the program should contact the graduate coordinator in the Department of Geography. Applications should include two letters of recommendation, a brief statement about professional interests and career objectives, and transcripts of both undergraduate and graduate credit. Graduate information and application for graduate admission can be found at [www.grad.uni.edu/admission](http://www.grad.uni.edu/admission).

The Graduate Record Examination (General Test) **is not** required for admission to the program.

**Only graduate courses (course number 5000 or above) will apply to a graduate degree, even if the undergraduate course number (4999 or less) is listed. No exceptions will be made.**

The major in Geography is available on the **thesis (research)** and **non-thesis (professional)** options. A **minimum of 32 semester hours**, including 6 hours GEOG 6299 (970:299) for thesis research and writing, is required for the **thesis** option. Students must successfully present a written and oral thesis proposal prior to registration in GEOG 6299 (970:299). A **minimum of 38 semester hours**, including 3 hours GEOG 6298 (970:298) for completion of a research paper, is required for the **non-thesis** option. **A minimum of 17 hours of 200/6000-level course work is required for both the thesis and non-thesis options.** Any 200/6000-level course offered as a graded course must be taken on a graded basis. **Students pursuing either thesis or non-thesis option may select from the following research concentrations: Geographic Information Science and Remote Sensing; Environmental and Earth Systems; Geomorphology; Human Spatial Systems; Planning and Development; Geography Education.**

*Thesis Option:*

#### Required Geography

GEOG 6000 (970:202)	Graduate Colloquium (1 hr; must be taken twice)	<b>2</b>
GEOG 6010 (970:294)	Nature of Geography and Its Research Methodology	3

GEOG 6299 (970:299)	Research	6
GEOG 6550 (970:280)	Seminar	3
<b>Electives</b> *		<b>18</b>
Total Hours		32

\* At least 12 of the 18 hours must be in geography; at least 3 of the 18 hours must be at the 200/6000-level; cannot include GEOG 6598 (970:298); additional hours of GEOG 6299 (970:299) cannot count toward the minimum 18 elective hours.

### *Non-Thesis Option:*

#### **Required Geography**

GEOG 6000 (970:202)	Graduate Colloquium (1 hr; must be taken twice)	2
GEOG 6010 (970:294)	Nature of Geography and Its Research Methodology	3
GEOG 6550 (970:280)	Seminar	3
GEOG 6598 (970:298)	Directed Research Project	3
<b>Electives</b> *		<b>27</b>
Total Hours		38

\* At least 15 of the 27 hours must be in geography; at least 6 of the 27 hours must be at the 200/6000-level; cannot include GEOG 6299 (970:299).

Each student's program (beyond the required core courses) will be determined by individual needs in consultation with her/his graduate advisor and the graduate coordinator. For the thesis option, an oral thesis defense is required. For the non-thesis option, a final presentation of the research paper is required.

## Program Certificate

The University of Northern Iowa makes available, in addition to traditional programs, the opportunity for students to earn program certificates. Program certificates provide an alternative to programs leading to a degree, a major, or a minor; they certify that an individual has completed a program approved by the university. For information on the following program certificate, contact the Department of Geography or the Office of the Registrar, which serves as the centralized registry.

### Certificate in ~~Cartography and~~ Geographic Information Systems (GIS) and Cartography

The Certificate in ~~Cartography and~~ Geographic Information Systems (GIS) and Cartography is designed to give the student a substantial background in the fields of ~~cartography and~~ geographic information ~~systems and digital cartography. systems.~~ Students completing the program will be familiar with the terminology, techniques and theory of GIS ~~cartography and cartography. GIS principles.~~ Hands-on computer experience is a major feature of many of the courses. The program complements majors in disciplines other than geography while increasing the geography major's preparation for the job market.

**May be taken at graduate and undergraduate levels.** The student must earn a grade point average of at least 3.00 in the courses taken for the certificate. It is the responsibility of the student to notify the Head of the Department of Geography during or immediately after the semester in which the course requirements will be or have been completed. **Up to 3 credits can be transferred from another institution. For graduate credit GEOG 3310 can be substituted with GEOG 6286 Studies in GIS.**

Geography:		
GEOG 3310 (970:164)	Geographic Information Systems I	3
GEOG 4320/5320 (970:174g)	Geographic Information Systems II	3
GEOG 4360/5360 (970:165g)	Thematic Cartography	3
<b>Electives</b>		<b>6</b>
Select two of the following:		
Geography:		
GEOG 4310/5310 (970:170g)	GIS Applications: (Variable Topic)	
GEOG 4340/5340 (970:160g)	Spatial Data Analysis	
GEOG 4350/5350 (970:175g)	Global Positioning System Field Survey Methods	
GEOG 4370/5370 (970:173g)	Remote Sensing of the Environment	
GEOG 4380/5380	Satellite Image Processing	
<b>GEOG 4390</b>	<b>Course GEOG 4390 Not Found (GIS Programming)</b> <sup>proposed</sup>	
Total Hours		15

### **Changes in course description – semesters when course is offered**

3220 Environmental Geography – change from **Variable** to to odd **Fall**

4360 Thematic Cartography – change from **Fall** to **Spring**

4520 Issues in Teaching of Geography change from **odd Fall** to **odd Spring**

#### **Justification**

Provide better scheduling options to ensure student progress and graduation, optimize enrollments and teaching loads.

#### **Impacts on resources:**

None.

All are existing courses.

## New Course Proposal

### Changes saved but not submitted

Viewing: **GEOG 4390 : GIS Programming**

Last edit: 10/03/12 7:05 pm

Catalog Pages  
referencing this course [Department of Geography](#)

College College of Social and Behavioral Sciences

Department Geography

Proposed Course  
Number GEOG 4390 / 5390

Title GIS Programming  
 Short Title GIS Programming  
 Credit Hours 3  
 Catalog Description  
 Short Prerequisites  
 Catalog Prerequisites GEOG 3310 or permission of the instructor  
 Same As  
 Terms Offered Fall  
 Offering Frequency Annually

Identify the relationship of the proposed course to other planning processes

Identify whether the proposed course is part of any new or existing program

Identify the type of students likely to take the course

Identify the expected frequency with which the course is to be offered

Fall

Fall

List the names of any prospective instructors, if possible

new hire (search in progress)

List any other courses with similar content or title which are offered by another department

Identify the semester(s) during which the proposed course has been taught on an experimental basis and the student enrollment each time it has been taught.

Provide an outline of the proposed course, including the proposed topic coverage, textbook(s), supplemental reading(s), and pedagogy.

If the course has been taught before, please attach a syllabus

Supporting Documents

Describe how the proposed change(s) will affect the usage of computer and library resources and facilities

This course will use existing computers in UNI GIS lab (ITTC 234). No new equipment is necessary. No impact on library resources is anticipated.

Will this proposed new course increase the total budgetary requirements of the Department?

No  
If No, explain why not:

**Changes saved but not submitted**

Viewing: **GEOG 1210 : Physical Geography**

Last edit: 10/15/12 12:35 am

Catalog Pages referencing this course	<a href="#">Bachelor of Arts Degree and Minor Programs</a> <a href="#">Department of Earth Science</a> <a href="#">Department of Geography</a> <a href="#">Earth Science Courses (EARTHSCI)</a> <a href="#">Geography Courses (GEOG)</a> <a href="#">Social Science</a> <a href="#">Undergraduate Information and Degree Requirements</a>
Other Courses referencing this course	In The Catalog Prerequisites: <hr/> <a href="#">EARTHSCI 3330 : Geomorphology</a> <a href="#">GEOG 3220 : Environmental Geography</a> <a href="#">GEOG 4220 : Soils and Landscapes</a> <a href="#">GEOG 4240 : Reconstructing Ice Age Environments</a> <a href="#">GEOG 4250 : Laboratory Methods in Environmental Geography</a>

College College of Social and Behavioral Sciences

Department Geography

Proposed Course Number GEOG 1210

Title	Physical Geography
Short Title	Physical Geography
Credit Hours	<del>3-4</del>
Catalog Description	Explanation of patterns of solar energy receipt, atmospheric pressure, winds, and precipitation around the Earth. Emphasis on how solar energy, water, and crustal movements interact to determine characteristics of natural environments on Earth.
Short Prerequisites	student must have satisfied university entrance requirements in English and Mathematics.
Catalog Prerequisites	student must have satisfied university entrance requirements in English and Mathematics.
Same As	
Terms Offered	Fall Spring
Offering Frequency	Annually

Explanation and justification: **Remove 4 credit option. This option (3 hrs + 1 hr lab) is inconvenient for students, creates scheduling issues and is not well aligned with the program. The course will be taught as 3 credit hour course. The lab hour will be created into a separate 1 hr lab course. This also will be better aligned with other courses in LAC Category 4.**

If the course has been taught before, please attach a syllabus	
Supporting Documents	
Describe how the	

**New Course Proposal**  
**Changes saved but not submitted**

Viewing: **GEOG 1211 : Physical Geography Laboratory**

College            College of Social and Behavioral Sciences  
 Department     Geography  
 Proposed Course Number    GEOG XXXX

Title	Physical Geography Laboratory
Short Title	Physical Geography Laboratory
Credit Hours	1
Catalog Description	Explanation of patterns of solar energy receipt, atmospheric pressure, winds, and precipitation around the Earth. Emphasis on how solar energy, water, and crustal movements interact to determine characteristics of natural environments on Earth. Prerequisite(s): student must have satisfied university entrance requirements in English and Mathematics. (Fall, Spring)
Short Prerequisites	
Catalog Prerequisites	
Same As	
Terms Offered	Fall Spring
Offering Frequency	Annually

Identify the relationship of the proposed course to other planning processes

This is a recombination of hours from existing course: dissolution of the GEOG 1210 Physical Geography 4 hrs version into 3hrs lecture and 1 hr lab class. This will be more convenient to students, more aligned with Geography and LAC programs and less cumbersome to schedule.

Identify whether the proposed course is part of any new or existing program

on  
Specify: BA Geography, BS GIS

Identify the type of students likely to take the course

freshmen and sophomore

Identify the expected frequency with which the course is to be offered

Fall and Spring

List the names of any prospective instructors, if possible

Fall and Spring

List the names of any prospective instructors, if possible

David May, Dennis Dahms

List any other courses with similar content or title which are offered by another department

none

Identify the semester(s) during which the proposed course has been taught on an experimental basis and the student enrollment each time it has been taught.

has been taught as a part of 4 Cr. Hr GEOG 1210 for decades

Provide an outline of the proposed course, including the proposed topic coverage, textbook(s), supplemental reading(s), and pedagogy.

Laboratory course in physical geography. Practical study of patterns of solar energy receipt, atmospheric pressure, winds, and precipitation around the Earth. Emphasis on how solar energy, water, and crustal movements interact to determine characteristics of natural environments on Earth. Involves labs and practical exercises. Taught as a complement to GEOG 1210 (lecture section).

If the course has been taught before, please attach a syllabus

Supporting Documents

Describe how the proposed change(s) will affect the usage of computer and library resources and facilities

no impact

Will this proposed new course increase the total budgetary requirements of the Department?

No

If No, explain why not:

## Change Forms and Justifications

### 97G MA in Geography

**If the program is long or contains many courses that must be taken sequentially, show how the program may be completed within the allowable number of semesters (Standard programs allow 8 semesters plus a summer session. Extended programs allow 9 semesters, or 9 semesters plus a summer session):**

Summary of changes:

MA in Geography: Program restatement

Summary: identified possible research focus areas for incoming students.

Identified thesis as 'research' and non-thesis as 'professional' option.

**Explanation and Justification:**

Provide better articulation of existing areas of research concentration and specialization. This is a marketing tactics that is designed to make the program more attractive to potential applicants.

Changes also make it easier for applicants and enrolled students to navigate among program options and adviser/committee choices. The changes will potentially increase graduation rates by providing a framework for higher efficiency coursework organization and timing.

**Describe how this change will affect the usage of computer resources and facilities:**

Since no new courses or options are proposed, no impact is anticipated.

**Summarize the needs for additional library resources and services taht this change will require:**

Since no new courses or options are proposed, no impact is anticipated.

**Will this change increase the total budgetary requirements of the Deaprtment:**

a. If No, explain why not:

No. The program will use existing resources. es or options are proposed

b. If Yes, identify the total costs

(1) Staff:

**(2) Additional Facilities:**

**(3) Equipment:**

**(4) Support Personnel:**

**(5) Library Requirements:**

**(6) Computer Service:**

**(7) Educational Technology:**

**(8) Other services (identify below):**

**TOTAL COSTS:**



## Change Form

### 970 BA in Geography

**If the program is long or contains many courses that must be taken sequentially, show how the program may be completed within the allowable number of semesters (Standard programs allow 8 semesters plus a summer session. Extended programs allow 9 semesters, or 9 semesters plus a summer session):**

*Summary of changes:*

BA in Geography: Program restatement

Degree has been completely restructured. Defined new core and electives, identified three concentration areas: Environmental Systems and Sustainability; Globalization and Regional Geography; Planning and Development. The total number of hours for BA remained unchanged.

## Bachelor of Arts Degree Programs

### Geography Major

The Geography major requires a minimum of 120 total hours to graduate. This total includes Liberal Arts Core requirements and the following specified major requirements, plus electives to complete the minimum of 120 hours.

Required

Geography:

<a href="#">GEOG 1110 (970:040)</a>	World Geography	3
<a href="#">GEOG 1120 (970:010)</a>	Human Geography	3
<a href="#">GEOG 1210 (970:026)</a>	Physical Geography	3
<a href="#">GEOG 1310 (970:061)</a>	Maps and Map Interpretation	3
<a href="#">GEOG 4550 (970:180)</a>	Senior Seminar in Geography	3
<a href="#">GEOG 4560 (970:181)</a>	Professional Seminar	1

Concentrations (21 hrs)

Choose in consultation with a Geography faculty advisor. See below for course list and specific requirements for each area. Students must focus on one area; however, they may choose to add an

additional concentration(s) to their program, which will be reflected on their transcripts.

Concentration on Globalization and Regional Geography

Professional and Regional Electives

<a href="#"><u>GEOG 3310 (970:164)</u></a>	Geographic Information Systems I
<a href="#"><u>GEOG 2210 (970:028)</u></a>	Recent Climate Change
<a href="#"><u>GEOG 3110 (970:101)</u></a>	Economic Geography
<a href="#"><u>GEOG 3120 (970:104)</u></a>	North American Cities
<a href="#"><u>GEOG 3179 (970:179)</u></a>	Cooperative Education in Geography
<a href="#"><u>GEOG 3220 (970:100)</u></a>	Environmental Geography
<a href="#"><u>GEOG 3230 (970:144)</u></a>	Natural Regions of North America
<a href="#"><u>GEOG 4110/5110 (970:111g)</u></a>	Cultural Geography
<a href="#"><u>GEOG 4120/5120 (970:119g)</u></a>	Demography and Population Geography
<a href="#"><u>GEOG 4150/5150 (970:141g)</u></a>	Regional Geography: (Variable Topic)
<a href="#"><u>GEOG 4160/5160 (970:151g)</u></a>	Historical Geography: (Variable Topic)
<a href="#"><u>GEOG 4250/5250 (970:185g)</u></a>	Laboratory Methods in Environmental Geography
<a href="#"><u>GEOG 4520/5520 (970:171g)</u></a>	Issues in the Teaching of Geography
<a href="#"><u>SOC 2020 (980:080)</u></a>	Statistics for Social Research

Other Geography courses or courses from other departments as approved. Some non-Western cultures courses may be taken upon approval. They must be taken in addition to any LAC required non-Western cultures course.

Concentration on Environmental Systems & Sustainability

Methods Electives

Select three from the following:

<a href="#">STAT 1772 (800:072)</a>	Introduction to Statistical Methods
<a href="#">GEOG 3310 (970:164)</a>	Geographic Information Systems I
<a href="#">GEOG 4310/5310 (970:170g)</a>	GIS Applications: (Variable Topic)
<a href="#">GEOG 4250/5250 (970:185g)</a>	Laboratory Methods in Environmental Geography
<a href="#">GEOG 4340/5340 (970:160g)</a>	Spatial Data Analysis
<a href="#">GEOG 3179 (970:179)</a>	Cooperative Education in Geography
Professional Electives	
Select four from the following:	
<a href="#">TECH 1015</a>	Introduction to Sustainability
<a href="#">GEOG 2210 (970:028)</a>	Recent Climate Change
<a href="#">GEOG 3220 (970:100)</a>	Environmental Geography
<a href="#">GEOG 3230 (970:144)</a>	Natural Regions of North America
<a href="#">GEOG 4220/5220 (970:126g)</a>	Soils and Landscapes
<a href="#">GEOG 4210/5210 (970:127g)</a>	Climatology
<a href="#">GEOG 4230/5230 (970:129g)</a>	Rivers
<a href="#">GEOG 3210 (970:137)</a>	Natural Hazards and Disasters
<a href="#">GEOG 4240/5240 (970:155g)</a>	Reconstructing Ice Age Environments
<a href="#">GEOG 4370/5370 (970:173g)</a>	Remote Sensing of the Environment
<a href="#">EARTHSCI 3330/5330 (870:141g)</a>	Geomorphology
<a href="#">EARTHSCI 3355/5355 (870:175g)</a>	Hydrogeology

Concentration on Planning and Development

Methods Electives

Select three from the following:

<a href="#">STAT 1772 (800:072)</a>	Introduction to Statistical Methods
<a href="#">SOC 2020 (980:080)</a>	Statistics for Social Research
<a href="#">GEOG 4340/5340 (970:160g)</a>	Spatial Data Analysis
<a href="#">GEOG 3310 (970:164)</a>	Geographic Information Systems I
<a href="#">GEOG 4310/5310 (970:170g)</a>	GIS Applications: (Variable Topic)
<a href="#">GEOG 3179 (970:179)</a>	Cooperative Education in Geography

Professional Electives

Select four from the following:

<a href="#">GEOG 3110 (970:101)</a>	Economic Geography
<a href="#">GEOG 3120 (970:104)</a>	North American Cities
<a href="#">GEOG 3210 (970:137)</a>	Natural Hazards and Disasters
<a href="#">GEOG 4180/5180 (970:121g)</a>	Locational Analysis for Business
<a href="#">GEOG 4190/5190 (970:117g)</a>	Transportation Planning and Policy
<a href="#">GEOG 4120/5120 (970:119g)</a>	Demography and Population Geography
<a href="#">GEOG 4170/5170 (970:168g)</a>	Regional Analysis and Planning
<a href="#">GEOG 4150/5150 (970:141g)</a>	Regional Geography: (Variable Topic)
<a href="#">ECON 3249/5249 (920:143g)</a>	Economic Development

Other Geography courses or courses from other departments as approved

Total Hours

37

**Explanation and Justification:**

BA in Geography has been suspended pending program restructuring. The restructuring allowed us to eliminate splintering of geography degree options into separate emphases and merge them



**TOTAL COSTS:**



## 97A-D BS in GIS

**If the program is long or contains many courses that must be taken sequentially, show how the program may be completed within the allowable number of semesters (Standard programs allow 8 semesters plus a summer session. Extended programs allow 9 semesters, or 9 semesters plus a summer session):**

*Summary of changes:*

BS in GIS: Program restatement

Eliminated Application focus on Human Geographic Processes (97B)

Replace CS 1130 Visual Basic with GEOG 4390 GIS Programming (proposed)

.

**Explanation and Justification:**

Due to faculty retirement we suspended a number of elective courses. As a result the Application focus on Human Geographic Processes could no longer be maintained.

New course GEOG 4390 GIS Programming is proposed. Its content is more tailored to the needs of GIS students. At the same time CS 1130 lost its relevance due to development in GIS technology away from VB programming language.

**Describe how this change will affect the usage of computer resources and facilities:**

No impact is anticipated. Proposed course GEOG 4390 GIS Programming will use existing facilities.

**Summarize the needs for additional library resources and services that this change will require:**

No impact is anticipated. Proposed course GEOG 4390 GIS Programming is a lab-based course that will not require additional library resources.

**Will this change increase the total budgetary requirements of the Department:**

a. **If No, explain why not:**

**No.** The program will use existing resources. No new resources or options are proposed

b. **If Yes, identify the total costs**

**(1) Staff:**

**(2) Additional Facilities:**

**(3) Equipment:**

**(4) Support Personnel:**

**(5) Library Requirements:**

**(6) Computer Service:**

**(7) Educational Technology:**

**(8) Other services (identify below):**

**TOTAL COSTS:**



## Minor in Geography

**If the program is long or contains many courses that must be taken sequentially, show how the program may be completed within the allowable number of semesters (Standard programs allow 8 semesters plus a summer session. Extended programs allow 9 semesters, or 9 semesters plus a summer session):**

*Summary of changes:*

Minor in Geography Program restatement

Reduced hours (from 19 to 18)

Remove “Liberal Arts” from the program title

## Minor

### Geography Minor

Required

Geography:

<a href="#">GEOG 1120 (970:010)</a>	Human Geography	3
or <a href="#">GEOG 1110 (970:040)</a>	World Geography	
<a href="#">GEOG 1210 (970:026)</a>	Physical Geography	3
Electives in geography *		12
Total Hours		18

### Explanation and Justification:

Removed the requirement to take 4 credit hours version of GEOG 1210 Physical Geography (with lab). This requirement does not appear to be useful or necessary for providing course content or ensuring student graduation and learning outcomes. In the recent years Geography expanded its offerings of lab-based courses, so that the above requirement no longer serves its original purpose.

Since Geography Teaching Minor has been eliminated, there is no need to keep “Liberal Arts” designation attached to the remaining Geography Minor program name. In addition, “Liberal Arts” designation no longer reflects the content of the Minor since students have an option to take GIScience classes, which are outside of the Liberal Arts area.

**Describe how this change will affect the usage of computer resources and facilities:**

No impact is anticipated.

**Summarize the needs for additional library resources and services that this change will require:**

No impact is anticipated.

**Will this change increase the total budgetary requirements of the Department:**

a. If No, explain why not:

No. The program will use existing resources.

b. If Yes, identify the total costs

(1) Staff:

(2) Additional Facilities:

(3) Equipment:

(4) Support Personnel:

(5) Library Requirements:

(6) Computer Service:

(7) Educational Technology:

(8) Other services (identify below):


**TOTAL COSTS:**

## Program Certificate in GIS and Cartography

**If the program is long or contains many courses that must be taken sequentially, show how the program may be completed within the allowable number of semesters (Standard programs allow 8 semesters plus a summer session. Extended programs allow 9 semesters, or 9 semesters plus a summer session):**

*Summary of changes:*

GIS and Cartography Certificate: Program restatement

Change of name: from Cartography and GIS to GIS and Cartography

Add GEOG 4390 GIS Programing (proposed) to electives

Add “May be taken at **graduate** and **undergraduate** levels”

### Certificate in Geographic Information Systems (GIS) and Cartography

The Certificate in Geographic Information Systems (GIS) and Cartography is designed to give the student a substantial background in the fields of cartography and geographic information systems. Students completing the program will be familiar with the terminology, techniques and theory of GIS and cartography. Hands-on computer experience is a major feature of many of the courses. The program complements majors in disciplines other than geography while increasing the geography major's preparation for the job market.

May be taken at **graduate** and **undergraduate** levels. The student must earn a grade point average of at least 3.00 in the courses taken for the certificate. It is the responsibility of the student to notify the Head of the Department of Geography during or immediately after the semester in which the course requirements will be or have been completed.

Required

Geography:

<a href="#">GEOG 3310 (970:164)</a>	Geographic Information Systems I	3
<a href="#">GEOG 4320/5320 (970:174g)</a>	Geographic Information Systems II	3
<a href="#">GEOG 4360/5360 (970:165g)</a>	Thematic Cartography	3

Electives 6

Select two of the following:

Geography:

<a href="#">GEOG 4310/5310 (970:170g)</a>	GIS Applications: (Variable Topic)
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<a href="#">GEOG 4340/5340 (970:160g)</a>	Spatial Data Analysis
<a href="#">GEOG 4350/5350 (970:175g)</a>	Global Positioning System Field Survey Methods
<a href="#">GEOG 4370/5370 (970:173g)</a>	Remote Sensing of the Environment
<a href="#">GEOG 4380/5380</a>	Satellite Image Processing
<b>GEOG 4390</b>	<b>Course GEOG 4390 Not Found</b> (GIS Programming) <sup>proposed</sup>

Total Hours

15

**Explanation and Justification:**

The new title better reflects the content of the certificate curriculum. In the last decade the focus of the certificate shifted from Cartography to GIS as more GIS electives have become available. This shift also reflects the evolution in geography and geospatial technology disciplines since the inception of the Certificate.

New course GEOG 4390 GIS Programming is proposed and added as an elective. Its content is well tailored to the needs of students who receive the certificate. This course adds an option to learn advanced programming and customization algorithms and tools within GIS environment, i.e. acquire a highly demanded set of skills.

We added clarification that the certificate may be taken at graduate and undergraduate levels.

**Describe how this change will affect the usage of computer resources and facilities:**

No impact is anticipated.

**Summarize the needs for additional library resources and services that this change will require:**

No impact is anticipated.

**Will this change increase the total budgetary requirements of the Department:**

a. If No, explain why not:

No. The program will use existing resources.

b. If Yes, identify the total costs

(1) Staff:

**(2) Additional Facilities:**

**(3) Equipment:**

**(4) Support Personnel:**

**(5) Library Requirements:**

**(6) Computer Service:**

**(7) Educational Technology:**

**(8) Other services (identify below):**

**TOTAL COSTS:**