

Cover Sheet: Request 14783

BA in Geography in Geographical Science and Sustainability

Info

Process	Specialization New/Modify/Close Ugrad
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Liang Mao liangmao@ufl.edu
Created	3/2/2020 2:14:54 PM
Updated	9/11/2020 2:01:24 PM
Description of request	This request is to apply for a new specialization of 'Geographic science and sustainability' under BA in Geography.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CLAS - Geography 011609000	Jane Southworth		3/2/2020
DCP_email.pdf					3/2/2020
WEC_supportletter.pdf					3/2/2020
EES_supportletter.pdf					3/2/2020
College	Approved	CLAS - College of Liberal Arts and Sciences	Joseph Spillane		4/17/2020
No document changes					
Associate Provost for Undergraduate Affairs	Approved	PV - Associate Provost for Undergraduate Affairs	Casey Griffith		4/28/2020
No document changes					
University Curriculum Committee	Commented	PV - University Curriculum Committee (UCC)	Lee Morrison	Added to the UCC May agenda. If approved, it will be for the 2021-2022 catalog.	5/5/2020
No document changes					
University Curriculum Committee	Commented	PV - University Curriculum Committee (UCC)	Lee Morrison	Added to the UCC September agenda.	9/11/2020
UF Major Catalog_GPY_Sustainability_ModelSemesterPlan2.docx					9/1/2020
SST endorsement.doc					7/1/2020
SST_CourseSupportLetters.pdf					7/1/2020
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			9/11/2020
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					

Step	Status	Group	User	Comment	Updated
No document changes					

Specialization|New for request 14783

Info

Request: BA in Geography in Geographical Science and Sustainability

Description of request: This request is to apply for a new specialization of 'Geographic science and sustainability' under BA in Geography.

Submitter: Liang Mao liangmao@ufl.edu

Created: 9/1/2020 9:48:16 AM

Form version: 2

Responses

Degree Program

Enter the name of the Degree Program.

Response:
Geography

CIP Code

Enter the six digit Classification of Instructional Programs (CIP) code for the existing degree program. The code has the numerical format XX.XXXX. Contact the [Office of Institutional Planning and Research \(OIPR\)](#) to verify the CIP code for the existing degree program.

Response:
45.0701

Major Name

Enter the name of the major in which the new specialization will be offered. Example: Mathematics.

Response:
Geography

Major Code

Enter the two or three letter code that uniquely identifies the major in the student records system. Example: the code for mathematics is MS.

Response:
GPY

Degree Type

Enter the degree type of the major in which the new specialization will be offered. Example: BS

Response:
BA

Existing Specializations

Enter the complete name of each specialization that is currently offered in the major.

Response:

GPY, BA in Geography
GPY, BS in Geography
GPY, BA in Environmental Geoscience
GPY, BA in Medical Geography in Global Health
GPY, BS in Medical Geography in Global Health

Name of Proposed Specialization

Enter the name of the proposed specialization. Example: Mathematical Modeling.

Response:
Geographical Science and Sustainability

Code(s)

Enter the proposed two or three letter specialization code(s) that would uniquely identify the proposed specialization(s) in the student information system. Specialization codes are appended to the major code.

Response:
GSS

Credits

The credit hours must equal the total credit hours that were approved for the existing major and degree program.

Response:
120

Students

Response:
30

Effective Term

Enter the term (semester and year) that the proposed specialization(s) would start.

Response:
Earliest Available

Effective Year

Response:
Earliest Available

Percentage of Credits Available Fully Online

Indicate the percentage of course credits that will be available through full online courses.

Response:
<50%

Percentage of Credits Available Off-Campus

Indicate the percentage of course credits that will be available away from the main Gainesville campus (including courses with onsite – off main campus meetings).

Response:

<25%

Rationale for Proposed Specialization

Describe the rationale for offering this new specialization and having it on the transcript, how this program will enhance the quality of the existing major, how it relates to undergraduate programs at peer institutions. Also describe what distinguishes this new specialization within the existing major(s) in the degree program, the degree of its overlap with existing majors and specializations (both in the degree program and in other degree programs at the university), and a justification for any such overlap.

Response:

Geospatial technologies, such as geographical information system, remote sensing, and spatial analysis, play an important role in sustainability studies and development by helping understand human-environment interaction and supporting optimal decision making. Current sustainability programs on campus (in CLAS and DCP) do not have a strong component in geography and geospatial technologies. We hope to develop this joint program (specialization) between geography and sustainability studies to fill this gap. The catalog is tailored based on current core courses in Geography and in Sustainability Studies programs, and adds a strong component of geographic technique courses.

Students in the specialization learn modern geospatial technologies, such as geographical information system, remote sensing and spatial analysis, and use them to maintain ecological and environmental health, create economic welfare, and pursue social justice in a changing world.

Impacts on Other Programs

Describe any potential impact on other programs or departments, including increased need for general education or common prerequisite courses, or increased need for required or elective courses outside of the existing program.

Response:

The Bachelor of Arts in Geographical Science and Sustainability is a joint program (specialization) between Geography and Sustainability Studies in CLAS, and is intended for students interested in using geospatial technologies to advance sustainability. This new specialization will facilitate the communication and collaboration between CLAS and DCP, such as students pursuing minors or certificates, as well as research opportunities. This specialization will be administrated by the Department of Geography.

The new specialization will increase needs for elective courses offered by other programs, such as Wildlife Ecology and Conversation, Environmental Engineering Sciences, Urban Planning, Food, Resources Economics. All these programs have realized such an impact and agreed to support this new specialization. Please refer to the supporting letters from these programs.

Mao,Liang

From: Armaghani,Bahar A
Sent: Friday, February 28, 2020 7:38 AM
To: Mao,Liang; Chini,Abdol Reza
Cc: Thiele,Leslie Paul; Southworth,Jane; Patten,Iris; Dejong, Patric E; Dean,Rachel E
Subject: RE: External consultation for A new joint BA program for Geographical Science and Sustainability

Dear Professor Liang,
Hope all is well. Thank you for giving us the opportunity to review your new proposed undergraduate program, **Geographical science and Sustainability**. After a thorough review, we are in full support of this program. We believe that this program and ours can complement and strengthen each other. We look forward to further collaboration.

Below are couple of comments for your consideration:

- The three SBE listed courses as electives including **DCP 3210, DCP3220, and DCP 3200** are our core courses, and they can be used in your new program if students are enrolled with SBE for minor. Otherwise these courses usually full and the priority goes to SBE students major and minor students.
- We would like to add below listed courses from your program to elective course work for SBE. If you agree please let us know the semester that each course will be offered and starting date to include them in our elective list.

GEO 3250	Climatology (Gen-Ed P)	
GEO 3280	Principles of Geographic Hydrology (Gen-Ed P)	3
GEO 3341	Extreme Floods (Gen-Ed P)	3
GEO 3352	The Human Footprint on Landscape	3
GEO 3372	Conservation of Resources	3
GEO3930	Managing for a Changing Climate	3
GEO3930	Sea Level Variability & Change	3
GEO3930	Weather, Climate, & Society	3
GIS 4324	GIS analysis of hazard vulnerability	3
GIS 4938	Population GIS	3

Thank you.

Bahar Armaghani

Bahar Armaghani, LEED Fellow

Director, Sustainability and the Built Environment, and Lecturer
Director, UF Green Building Learning Collaborative

Sustainability and the Built Environment College of Design, Construction and Planning

1480 Inner Road
Architecture Building
PO Box 115701
Gainesville, FL 32611-5701

PH: 352-294-1428

barmagh@ufl.edu

<http://www.dcp.ufl.edu>

Please consider supporting our program, [Make an Impact with Your Contribution](#)

From: Armaghani, Bahar A
Sent: Sunday, February 16, 2020 1:03 AM
To: Mao, Liang <liangmao@ufl.edu>; Chini, Abdol Reza <chini@ufl.edu>
Cc: Thiele, Leslie Paul <thiele@ufl.edu>; Southworth, Jane <jsouthwo@ufl.edu>
Subject: RE: External consultation for A new joint BA program for Geographical Science and Sustainability

Dear Professor Liang,
Hope all is well. I wanted to let you know that I have to contact another unit within our college for feedback, and hope to get back with you soon.
Thank you.

Bahar Armaghani

Bahar Armaghani, LEED Fellow
Director, Sustainability and the Built Environment, and Lecturer
Director, UF Green Building Learning Collaborative

Sustainability and the Built Environment
College of Design, Construction and Planning

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Please consider supporting our program, [Make an Impact with Your Contribution](#)

From: Armaghani, Bahar A
Sent: Wednesday, January 8, 2020 10:19 PM
To: Mao, Liang <liangmao@ufl.edu>; Chini, Abdol Reza <chini@ufl.edu>
Cc: Thiele, Leslie Paul <thiele@ufl.edu>; Southworth, Jane <jsouthwo@ufl.edu>
Subject: RE: External consultation for A new joint BA program for Geographical Science and Sustainability

Hello Professor Liang,
Thank you for reaching out. We will review this internally and should be able to reply in the next couple of weeks.
Thank you.

Bahar Armaghani

Bahar Armaghani, LEED Fellow
Director, Sustainability and the Built Environment, and Lecturer
Director, UF Green Building Learning Collaborative

Sustainability and the Built Environment
College of Design, Construction and Planning

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Please consider supporting our program, [Make an Impact with Your Contribution](#)



 Please consider the environment before printing this email.

From: Mao,Liang <liangmao@ufl.edu>
Sent: Monday, January 6, 2020 3:11 PM
To: Armaghani,Bahar A <barmagh@ufl.edu>; Chini,Abdol Reza <chini@ufl.edu>
Cc: Thiele,Leslie Paul <thiele@ufl.edu>; Southworth,Jane <jsouthwo@ufl.edu>
Subject: External consultation for A new joint BA program for Geographical Science and Sustainability

Dear Drs. Armaghani and Chini,

The geography and sustainability studies in the college of liberal arts and sciences are working on a joint undergraduate program '**Geographical science and Sustainability**', intended for students who are interested in using geospatial technologies, such as GIS, digital mapping, and remote sensing, to advance sustainability. Attached please find the proposed major catalog and model semester plan.

We were asked by the UCC to consult with the college of DCP for comments. We carefully compared our proposal with your program in **Sustainability and the Built Environment**. We did not see any overlap in major coursework, though students can take DCP courses as their outside-major electives or pursue a minor from DCP. We wonder if this is something that your college would be supportive of? If so, would you be able to provide a short letter indicating this support, which the Department of Geography would include in its request to the UCC?

Thank you in advance.

Liang Mao, PhD
Undergraduate Coordinator
Associate Professor
Department of Geography
3121 Turlington Hall
University of Florida
Gainesville, FL, 32611
Office: (352)294-7516
<http://geog.ufl.edu/people/faculty/mao/>

Mao,Liang

From: Elliot P. Douglas
Sent: Thursday, November 15, 2018 1:40 PM
To: Mao,Liang
Subject: RE: External consultation for A new joint BA program for Geographical Science and Sustainability

Follow Up Flag: Follow up
Flag Status: Flagged

Liang,

We approve these courses, with the understanding that our students get first priority for seats as we have limited electives available for our students.

Let me know if you need anything more formal.

Elliot

For undergrad student advising appointments, go to <https://my.timetrade.com/book/TF4ZK>.

Elliot P. Douglas – Professor & Undergraduate Coordinator, Environmental Engineering Sciences | Engineering School of Sustainable Infrastructure & Environment | Associate Director for Research, UF Institute for Excellence in Engineering Education | Director, Engineering Education Collaborative | Distinguished Teaching Scholar | University of Florida | 217 Black Hall, Box 116450, Gainesville, FL 32611 | 352-846-2836 | edouglas@ufl.edu | Twitter @ElliotPDouglas

From: Mao,Liang <liangmao@ufl.edu>
Sent: Monday, November 12, 2018 9:25 AM
To: Elliot P. Douglas <Elliot.douglas@essie.ufl.edu>
Subject: Re: External consultation for A new joint BA program for Geographical Science and Sustainability

Hi Elliot,

Thanks for your comments and I really appreciate your careful review. I made following changes on the catalog:

1. I removed EES4316, EES4401, EES4103, since they are not taught in recent years.
2. I also removed ENV4101 because it has prerequisite and is generally full.

I kept EES3008, EEE4050, and ENV4932 in the catalog since they are offered recently, and have no prerequisites. Given all of them are elective courses in the catalog, I think less than 5 students from the proposed major might take them every semester. Would this be supportive from your program?

Liang Mao, PhD
Associate Professor
Undergraduate Coordinator

3121 Turlington Hall
Department of Geography
University of Florida
<http://www.geog.ufl.edu/faculty/mao.html>

From: Elliot P. Douglas
Sent: Wednesday, November 7, 2018 11:25 AM
To: Mao,Liang
Subject: RE: External consultation for A new joint BA program for Geographical Science and Sustainability

Liang,

I have looked through the list of courses you have selected. Here are some comments:

ENV 4101, Elements of Atmospheric Pollution, is one of the required courses for our major and is generally full. It has a prereq of EES 4203, which is also a required course that is generally full. Thus, I don't think it is possible to include it.

The other courses you selected are tech electives in our department. Not all of them have been taught in recent years. Here is the most recent time each was taught:

EES 3008 – F18
EES 4050 – F18
EES 4103 – S15
EES 4316 – S14
EES 4401 – F13

Even for the ones that have been taught recently there is no guarantee of when they will be taught again. It depends on individual faculty's teaching loads and what they want to teach that is not required.

If you still want to list those, I need some sense of how many students it would be. I will then need to check with our faculty.

Elliot

For undergrad student advising appointments, go to <https://my.timetrade.com/book/TF4ZK>.

Elliot P. Douglas – Professor & Undergraduate Coordinator, Environmental Engineering Sciences | Engineering School of Sustainable Infrastructure & Environment | Associate Director for Research, UF Institute for Excellence in Engineering Education | Director, Engineering Education Collaborative | Distinguished Teaching Scholar | University of Florida | 217 Black Hall, Box 116450, Gainesville, FL 32611 | 352-846-2836 | edouglas@ufl.edu | Twitter @ElliotPDouglas

From: Mao,Liang
Sent: Wednesday, October 31, 2018 2:40 PM
To: Elliot P. Douglas <Elliot.douglas@essie.ufl.edu>
Subject: External consultation for A new joint BA program for Geographical Science and Sustainability

Dear Dr. Douglas,

The geography and sustainability studies in the college of liberal arts and sciences are working on a joint undergraduate program '**Geographical science and Sustainability**', intended for students who are interested in using geospatial technologies to advance sustainability. Several courses offered by EES are listed as electives in this program. We found that you are the current undergraduate coordinator of the EES program. We wonder if this is something that your

program would be supportive of? If so, would you be able to provide a short letter indicating this support, which the Department of Geography would include in its request to the UCC?

Attached please find the proposed major catalog and model semester plan. Thank you in advance.

Liang Mao, PhD
Undergraduate Coordinator
Associate Professor
Department of Geography
3121 Turlington Hall
University of Florida
Gainesville, FL, 32611
Office: (352)294-7516
<http://geog.ufl.edu/people/faculty/mao/>



College of Liberal Arts and Sciences
Department of Economics

332 Matherly Hall
PO Box 117140
Gainesville, FL 32611-7140
352-392-1077

May 24, 2020

The **Department of Economics** supports the Geography Department's specialization in Geographical Science and Sustainability and can accommodate these students in our ECO 2310 – Economics of Sustainability course taught in the Spring semesters.

If you have any questions, please do not hesitate to get in touch with me or our department chair, Dr. Thomas Knight.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kristian Estevez', written in a cursive style.

Kristian Estevez, Ph.D.
University of Florida
Department of Economics
Undergraduate Coordinator

Mao,Liang

From: Wise,Benjamin
Sent: Wednesday, May 20, 2020 3:25 PM
To: Mao,Liang
Subject: Re: External consultation for A new joint specilization for 'Geographical Science and Sustainability'

Hi Liang,

The **history department** supports this plan as outlined in your email below.

Best,

Ben Wise

--

Benjamin E. Wise
Associate Professor
Department of History
208 Flint Hall
University of Florida
(352) 273-3363

From: Mao,Liang
Sent: Wednesday, May 20, 2020 12:56 PM
To: Wise,Benjamin
Subject: RE: External consultation for A new joint specilization for 'Geographical Science and Sustainability'

Dr. Wise,

I think every other year should be fine for our students. Could you please send me a letter of support or just reply this email to indicate the support for history.

Many thanks,

Liang

From: Wise,Benjamin <benwise@ufl.edu>
Sent: Wednesday, May 20, 2020 11:50 AM
To: Mao,Liang <liangmao@ufl.edu>
Subject: Re: External consultation for A new joint specilization for 'Geographical Science and Sustainability'

Hi Liang,

I checked with Jack Davis, who teaches this course for us, and he says he thinks we will offer it every other year. If you think this will work for the students on this track, we'd be happy to support your including this as a requirement.

--

Benjamin E. Wise
Associate Professor
Department of History

208 Flint Hall
University of Florida
(352) 273-3363

From: Mao,Liang
Sent: Monday, May 18, 2020 12:55 PM
To: Wise,Benjamin
Subject: External consultation for A new joint specialization for 'Geographical Science and Sustainability'

Dear Dr. Wise,

The Geography department is working with Sustainability Studies on a joint undergraduate specialization of '**Geographical science and Sustainability**', intended for students who are interested in using geospatial technologies, such as GIS, digital mapping, and remote sensing, to advance sustainability studies.

In the proposed catalog (attached), we require the students to take **AMH2631 History of Sustainability** as one of fundamental courses. We expect up to 5 students per semester and wonder if this would be an enrollment concern for History. Of course, students in history will get first priority for seats. If no significant concern, would you be able to provide a short letter indicating this support, which the Department of Geography would include in its request to the UCC?

Thank you in advance.

Dr. Liang Mao
Associate Professor of Medical Geography
Undergraduate Coordinator
Department of Geography
University of Florida

Mao,Liang

From: Peterson,Anna
Sent: Wednesday, May 20, 2020 3:17 PM
To: Mao,Liang
Cc: Ostebo,Terje
Subject: Re: External consultation for A new joint specialization for 'Geographical Science and Sustainability'

This is to confirm that the **department of religion** supports the inclusion of REL 2071: Religion and Sustainability as an elective in the proposal for a joint specialization in Geographical Science and Sustainability.

Sincerely,
Anna Peterson
Undergraduate Coordinator

Anna Peterson
Professor
Department of Religion
107 Anderson Hall
University of Florida
Gainesville, FL 32611-7410
tel 352/392-1625
fax 352/392-7395
<http://people.clas.ufl.edu/annap/>

From: Mao,Liang
Sent: Wednesday, May 20, 2020 2:40:30 PM
To: Peterson,Anna
Cc: Ostebo,Terje
Subject: RE: External consultation for A new joint specialization for 'Geographical Science and Sustainability'

Hi Anna,

I think 'every other year' should be fine for our students. Could you please send me a letter of support or just reply this email to indicate the support from religion.

Many thanks,

Liang

From: Peterson,Anna <annap@ufl.edu>
Sent: Wednesday, May 20, 2020 1:27 PM
To: Mao,Liang <liangmao@ufl.edu>
Cc: Ostebo,Terje <ostebo@ufl.edu>
Subject: Fw: External consultation for A new joint specialization for 'Geographical Science and Sustainability'

Dear Prof. Mao,

Robert Kawashima is no longer the undergrad coordinator for our department. He forwarded this to me, since I'm the new UGC. I do not see any problems with listing Religion and Sustainability as an elective for

this new specialization. However, I wanted to let you know that we do not offer the course every semester, and sometimes not every year, depending on the availability of instructors. We are committed to offering it at least every other year, since it is a core course for the Sustainability Studies major. If that works for your program, then we'd be happy to be included.

thanks,
Anna

Anna Peterson
Professor
Department of Religion
107 Anderson Hall
University of Florida
Gainesville, FL 32611-7410
tel 352/392-1625
fax 352/392-7395
<http://people.clas.ufl.edu/annap/>

From: Kawashima,Robert S
Sent: Tuesday, May 19, 2020 8:20:43 AM
To: Peterson,Anna
Subject: Fw: External consultation for A new joint specilization for 'Geographical Science and Sustainability'

I must still be listed somewhere as UGC. Here you go.
Robert

From: Mao,Liang
Sent: Monday, May 18, 2020 1:04 PM
To: Kawashima,Robert S
Subject: External consultation for A new joint specilization for 'Geographical Science and Sustainability'

Dear Dr. Kawashima,

The Geography department is working with Sustainability Studies on a joint undergraduate specialization of '**Geographical science and Sustainability**', intended for students who are interested in using geospatial technologies, such as GIS, digital mapping, and remote sensing, to advance sustainability studies.

In the proposed catalog (attached), we require the students to take **REL2071 Sustainability and Religion** as one of fundamental courses. We expect up to 5 students per semester and wonder if this would be an enrollment concern for Religion. Of course, students in your program will get first priority for seats. If no significant concern, would you be able to provide a short letter indicating this support, which the Department of Geography would include in its request to the UCC?

Thank you in advance.

Dr. Liang Mao
Associate Professor of Medical Geography
Undergraduate Coordinator
Department of Geography
University of Florida

Mao,Liang

From: Mutahi,Teresa
Sent: Monday, May 18, 2020 3:29 PM
To: Mao,Liang; . CLAS-Biology Chair; Oppenheimer,David G; Mulkey,Stephen Shawhan
Subject: FW: External consultation for A new joint specilization for 'Geographical Science and Sustainability'
Attachments: UF Major Catalog_GPY_Sustainability_ModelSemesterPlan2.docx

Hello Dr. Liao,

Thank you for the email and the document attached. I am also coping Dr. Oppenheimer and Dr. Wayne our chair regarding your request or if there would be any enrollment concerns.

BSC2862: Global Change Ecology and Sustainability (Gen-Ed B) is to meet general education requirements from the attached plan and I see no issue with this.

Teresa

Biology major undergraduate Coordinator

From: Mao,Liang <liangmao@ufl.edu>
Sent: Monday, May 18, 2020 1:07 PM
To: Mutahi,Teresa <tmutahi@ufl.edu>
Subject: External consultation for A new joint specilization for 'Geographical Science and Sustainability'

Hello Dr. Mutahi,

The Geography department is working with Sustainability Studies on a joint undergraduate specialization of '**Geographical science and Sustainability**', intended for students who are interested in using geospatial technologies, such as GIS, digital mapping, and remote sensing, to advance sustainability studies.

In the proposed catalog (attached), we require students to take **BSC2862 Climate Change Ecology and Sustainability** as one of fundamental courses. We expect up to 5 students per semester and wonder if this would be an enrollment concern for Biology. Of course, students in your program will get first priority for seats. If no significant concern, would you be able to provide a short letter indicating this support, which the Department of Geography would include in its request to the UCC?

Thank you in advance.

Dr. Liang Mao
Associate Professor of Medical Geography
Undergraduate Coordinator
Department of Geography
University of Florida



College of Liberal Arts & Sciences
125 Dauer Hall
Classics Department PO Box 117435

Gainesville, FL 32611-7435
352-392-2075
352-846-0297 Fax

May 18, 20

Dr. Liang Mao
Associate Professor of Medical Geography
Undergraduate Coordinator, Department of Geography
University of Florida

Dear Dr. Mao,

Thank you for your communication. I am pleased to hear that CLA 2521 was chosen as one of the fundamentals for the proposed specialization in 'Geographical science and Sustainability'. As for enrollment, adding a number of students from Geography is no problem at all. **We fully support the proposal.**

Sincerely,
Robert S. Wagman

A handwritten signature in black ink, appearing to read 'RWagman', written in a cursive style.

Professor **of Classical Studies**
Undergraduate Coordinator, Classical Studies



Sustainability Studies
302 Anderson Hall
1507 University Avenue
Gainesville, FL 32611-7325

<http://sustainability.clas.ufl.edu>

Tel: 352-273-2380

Fax: 352-392-8127

thiele@ufl.edu

May 18, 2020

To Whom It May Concern:

I am pleased to endorse the proposed Specialization in Geographical Sciences and Sustainability, which is being developed as a BA in Geography.

My understanding is that 'Facets of Sustainability,' the gateway course for the Sustainability Studies major and minor, will be required for geography students taking this new specialization. Sustainability courses offered by other departments will also be included, and will complement 'Facets of Sustainability' to provide specializing students a broad background in the field.

Sincerely,

A handwritten signature in black ink, appearing to read 'L. Thiele', written over a white background.

Leslie Paul Thiele
Director,
Sustainability Studies

Bachelor of Arts in Geography in Geographical Science and Sustainability

Overview:

The Bachelor of Arts in Geography in Geographical Science and Sustainability is a joint program (specialization) co-offered by Geography and Sustainability Studies, and is intended for students interested in using geospatial technologies to advance sustainability. Students in this specialization learn modern geospatial technologies, such as geographical information system, remote sensing and spatial analysis, and use them to maintain ecological and environmental health, create economic welfare, and pursue social justice in a changing world.

About this Major

- **College:** Liberal Arts and Sciences
- **Degree:** Bachelor of Arts
- **Credits for Degree:** 120
- **Contact:** liangmao@ufl.edu;
- [Related Sustainability Programs](#)
- [Related Geography Programs](#)

To graduate with this major, students must complete all university, college, and major requirements.

Coursework for the major

This specialization under the Bachelor of Arts in Geography requires a major coursework of 43 credits from the geography program and sustainability studies program, and 3 additional credits of STA2023. Students must earn a minimum grade of C in all coursework for the major.

Required courses (new courses for this specialization are highlighted in blue)

STA2023	Introduction to Statistics	3
Geography Fundamentals		13
GEO2200 & GEO2200L	Physical Geography & Physical Geography Lab (Gen-Ed P)	4
GEO2006	Natural Hazards Geography (pending for Gen-Ed S)	3
GEO2351	Geographical Sciences & Sustainability	3
GIS2002	The Digital Earth	3
Sustainability Fundamentals		12
IDS 2154	Facets of Sustainability	3
AMH 2631 or CLA 2521 or REL 2071 or	History of Sustainability or Classical Antiquity and Sustainability (Gen-Ed H) or Sustainability and Religion (Gen-Ed H; WR2000)	3
BSC2862	Global Change Ecology and Sustainability (Gen-Ed B)	3
ANT 2402 or POS 2032 or ECO 2310 or PSY 3626	Anthropology of Sustainability or Politics of Sustainability (Gen-Ed S) Economics of Sustainability Psychology of Sustainability	3

Geospatial technique courses (Select two)		8
GIS 3001C	Spatial Maps and Graphs	4
GIS 3043	Foundations in GIS	4
GIS 4037	Digital Image Processing	4
Capstone Courses		1
GEO 4930	Senior Seminar	1
Geography Electives for Sustainability (select 3 courses) (Other geography courses can be counted under the discretion of the undergraduate coordinator)		9
GEO 2242	Extreme Weather (Gen-Ed P)	3
GEO 3250	Climatology(Gen-Ed P)	3
GEO 3280	Principles of Geographic Hydrology (Gen-Ed P)	3
GEO 3315	Geography of Crop Plants (Gen-Ed B)	3
GEO 3341	Extreme Floods (Gen-Ed P)	3
GEO 3352	The Human Footprint on Landscape	3
GEO 3372	Conservation of Resources	3
GEO 3452	Introduction to Medical Geography (Gen-Ed B)	3
GEO 3454	Peoples and Plagues	3
GEO3334	Managing for a Changing Climate	3
GEO3930	Sea Level Variability & Change	3
GEO3930	Weather, Climate, & Society	3
GEO3930	Extreme Droughts	3
GEO 4300	Environmental Biogeography	3
GIS 4021C	Aerial Photo Interpretation	3
GIS 4102C	GIS Programming	3
GIS 4324	GIS analysis of hazard vulnerability	3
GEO 4938	Population GIS	3
Total		46

Recommended Outside Major Electives

[CLAS requires 18 credits of upper division (3000 and 4000-level) electives outside the major. Below are some courses that would strongly complement the BA track in geographical sciences for sustainability in both the Geography and Sustainability Studies majors]

AEB 3450 Introduction to Natural Resource and Environmental Economics
 AGG 3501 Environment, Food and Society
 AGR 4212 Alternative Cropping Systems
 ALS 3133 Agricultural and Environmental Quality
 BSC 3307C Climate Change Biology
 DCP 3200 Methods of Inquiry for Sustainability and the Built Environment
 DCP 3210 Sustainable Solutions for the Built Environment
 DCP 3220 Social and Cultural Sustainability and the Built Environment
 ECP 3302 Environmental Economics and Resource Policy
 EES 3008 Energy and Environment
 EES 4050 Environmental Planning and Design
 FAS 4270 Marine Ecological Processes

FNR 4660 Natural Resource Policy and Economics
FOR 3202 Society and Natural Resources
FOR 4664 Sustainable Ecotourism Development
PCB 3034C Introduction to Ecology
SWS 3022 Introduction to Soils in the Environment
SWS 4245 Water Resource Sustainability
WIS 3401 Wildlife Ecology and Management
WIS 4554 Conservation Biology

Model Semester Plan

Semester One		Credits
IDS 2154	Facets of Sustainability (Critical Tracking)	3
State Core Gen Ed Composition (Writing Requirement)		3
Foreign language		4-5
State Core Gen Ed Mathematics (pure math)		3-4
Credits		13-15
Semester Two		
Sustainability Fundamentals course		3
IUF 1000	What is the Good Life (Gen Ed Humanities)	3
GEO 2200 & 2200L	Physical Geography (Critical Tracking ; Gen Ed Physical Sciences) and Physical Geography Laboratory (Science laboratory)	4
Foreign language		3-5
Credits		13-15
Semester Three		
Geography fundamental course (Critical Tracking)		3
STA 2023	Introduction to Statistics 1 (Gen Ed Mathematics)	3
State Core Gen Ed Biological or Physical Sciences		3
Sustainability Fundamentals course (Critical Tracking)		3
Elective or foreign language if 4-3-3 option		3
Credits		15
Semester Four		
Gen Ed Biological or Physical Sciences (area not taken in semester three)		3
Sustainability Fundamentals course		3

Geography fundamental course Critical Tracking	3
State Core Gen Ed Humanities	3
State Core Gen Ed Social and Behavioral Sciences	3
Credits	15
Semester Five	
Gen Ed Composition (Writing Requirement)	3
Geography fundamental course (Critical Tracking)	3
Geospatial technique course (GIS3043 Foundations in GIS recommended)	4
Elective (3000 level or above, not in major)	3
State Core Gen Ed Physical Sciences or elective	3
Credits	16
Semester Six	
Gen Ed Biological Sciences or elective	3
Geospatial technique course (Critical Tracking)	4
Geography elective	3
Elective (3000 level or above; not in major)	3
State Core Gen Ed Humanities (if needed) or elective	3
Credits	16
Semester Seven	
Geography elective (Critical Tracking)	3
Electives	7
Electives (3000 level or above, not in major)	6
Credits	16
Semester Eight	

GEO4930	Senior Seminar (capstone course) (Critical Tracking)	1
	Geography elective	3
	Elective	6
	Electives (3000 level or above, not in major)	6
	Credits	16
	Total Credits	120

Mao,Liang

From: Hellgren, Eric C
Sent: Thursday, November 29, 2018 4:45 PM
To: Mao,Liang
Cc: Williams,Claire C; Johnson,Steven Albert
Subject: RE: External consultation for A new joint BA program for Geographical Science and Sustainability

Hi Liang:

WEC supports the following in the Cluster Course options for the proposed Geographical Science and Sustainability major:

Cluster A: WIS 4523 – Human Dimensions of Natural Resource Conservation (note: the long-term instructor of this course has retired and we are searching for her replacement. We plan to continue to offer this course once annually). WEC majors will have priority enrollment

Cluster D: WIS 2040, 2552, 3401, 3402, 4934 – all OK

WIS 3404 – this online course is at capacity, given the grading requirements. We do not support its inclusion in the GSS major. Other ecology courses abound at UF!

WIS 4554 – This course would be OK to include, but it has a majors requirement of WIS 3553C (Conservation Genetics), which in turn has a pre-requisite. It may not be the best course to include in your options, as most students in your major would not have the pre-reqs to take it.

I have copied our Undergraduate Coordinator (Johnson) and our Academic Services Coordinator (Williams).

Thanks for considering our department in your major, and good luck with the program development! It looks like a very topical major.

Cheers,

ECH

Eric C Hellgren
Professor and Chair
Department of Wildlife Ecology and Conservation
Institute of Food and Agricultural Sciences
University of Florida
Gainesville, FL 32611
Ph. 352-846-0552
<http://wec.ufl.edu/>

From: Mao,Liang <liangmao@ufl.edu>

Sent: Thursday, November 29, 2018 2:24 PM

To: Hellgren,Eric C <hellgren@ufl.edu>

Subject: External consultation for A new joint BA program for Geographical Science and Sustainability

Dear Dr. Hellgren,

The geography and sustainability studies in the college of liberal arts and sciences are working on a joint undergraduate program '**Geographical science and Sustainability**', intended for students who are interested in using geospatial technologies, like digital mapping, GIS, and Remote sensing, to advance sustainability. Many courses offered by WEC are listed as electives in this program. We wonder if this is something that WEC would be supportive of? If so, would you be able to provide a short letter (or just drop a few lines in email) indicating this support, which the Department of Geography would include in its request to the UCC?

Attached please find the proposed major catalog and model semester plan. Thank you in advance.

Liang Mao, PhD

Undergraduate Coordinator

Associate Professor

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<http://geog.ufl.edu/people/faculty/mao/>