Approved by Academic Senate
March 6, 2013

ILLINOIS STATE UNIVERSITY REQUEST
FOR NEW PROGRAM APPROVAL
Financial Implication Form

Purpose: Proposed new undergraduate and graduate programs (degrees, sequences, minors, and certificates) must include information concerning how the program will be financially supported to proceed through the curricular process.

Procedure: This completed form is to be approved by the Department/School Curriculum Committee chair, department chair/school director, college dean, and Provost prior to submission of the proposal to the College Curriculum Committee.

Definition: A "program" can be a degree, a sequence within a degree, a minor, or a certificate. This form is to be used for both undergraduate and graduate programs.

Complete the following information:

Department: Geography-Geology

Contact person: Dagmar Budikova

Date: February 9, 2017

Proposed new program: B.S. in Environmental Systems Science and Sustainability

(Note: if the proposed program is a sequence, please indicate the full degree it is housed within)

BRIEF DESCRIPTION OF THE PROPOSED PROGRAM

This request seeks to establish a new Bachelors of Science (BS) Degree program in Environmental Systems Science and Sustainability (ESSS) at Illinois State. The program builds on existing academic strengths already present at Illinois State University that currently offers a minor in Environmental Studies housed in Geography-Geology (CAS), a minor in Business Environment and Sustainability (COB), a major in Renewable Energy (CAST), and a major in Health Sciences (CAST). There is still room, however, to increase University enrollment through a new major in ESSS and do so in a way that should not substantially decrease participation in these or any other existing programs (e.g., geology, geography, biological sciences). Instead, we trust that ESSS will attract new student populations interested in issues related to environmental systems and sustainability that currently go elsewhere for their undergraduate studies. The curriculum of the envisioned ESSS program provides currently untapped opportunities for student learning and training at the University, builds upon existing academic offerings at Illinois State, and amplifies elements of *Educating Illinois 2013-2018*.

The Department of Geography, Geology, and the Environment has a long-standing history at Illinois State of focusing on the study of the natural environment and nature-society interactions. The department currently offers 12 courses with an environmental focus, some of which have been part of our curricula for decades. Eight of our tenure-line faculty members pursue environmentally related research agendas and the department administers and provides advising for the interdisciplinary Minor in Environmental Studies. The introduction of a major program in environmental science is a natural step in the evolution of our department's mission, and the most logical academic unit from which such a program ought to grow and in which it should be administered. The new ESSS program will prepare the next generation of environmental systems and sustainability scientists

and problem-solvers who appreciate the complex interactions between natural and human-social systems and the ensuing environmental challenges facing humankind in the 21st century. Students will learn the importance of and best approaches to coping with these challenges in sustainable way that are mindful of social values and needs while maintaining the health of the natural environment.

The envisioned ESSS program is distinct in important ways from similar programs offered at other institutions in the state and across the Midwest. The program will incorporate the word "sustainability" into its title and grow this important area of student interest through faculty hiring. Our program will offer specializations that focus on 1) water resources, 2) environmental systems analysis, and 3) nature and society. No other program offers specialized training in environmental systems analysis and we do not believe that any of the public programs require the completion of an internship.

Successful implementation will require the hiring of two new faculty members (one at open rank) in sustainability science to build on existing strengths in systems analysis and water resources with a particular focus on issues of water quality, quantity, and sustainable management. One of these individuals will serve as the program and internship director.

This request is accompanied by a program feasibility report where additional details are presented.

ENROLLMENTS

In the table below, summarize enrollment and degrees conferred projections for the program for the first- and fifth-years of operation. If possible, indicate the number of full-time and part-time students to be enrolled each fall term in the notes section. If it is not possible to provide fall enrollments or fall enrollments are not applicable to this program, please indicate so and give a short explanation.

TABLE 1

STUDENT ENROLLMENT AND DEGREE PROJECTIONS FOR THE PROPOSED PROGRAM		
Category	Year One	5th Year (or when fully implemented)
Number of Program Majors/Minors (Fall Headcount)	15	100
Annual Full-time-Equivalent Majors/Minors (Fiscal Year)	30	100
Annual Number of Degrees Awarded	0	25

Add any relevant notes for the enrollment table 1 (Students are to be enrolled in a cohort; all students will be enrolled part-time; etc.) as an attachment

See Attachment for additional information

Budget Rationale (as an attachment; include corresponding data in Table 2)

Provide financial data that document the department or school's capacity to implement and sustain the proposed program and describe the program's sources of funding.

accommodate this program, and assist the Program Director, the seats would be absorbed into other elective offerings already taught by faculty. The second AP position has been repurposed to accommodate some time for helping faculty and the GA with laboratory instruction in our GIS and other techniques courses that require the most contact hours and are in highest demand. The position will also have supporting responsibilities in the internship program. No additional hires will be requested.

At full capacity the department will require additional GTA funds to help support laboratory instruction in ESS 100; GEO 303, 305, and 304.

Other impacted departments/schools have been contacted to see if additional resources will be needed to accommodate the program. Biological Sciences will require additional GA support for BSC196, 197, and 201.

e. Are the unit's current facilities adequate to support the program when fully implemented? Will there need to be facility renovation or new construction to house the program? (For a new degree program describe in detail the facilities and equipment available to maintain high quality in this program including buildings, classrooms, office space, laboratories, equipment and other instructional technologies for the program). *[Table 2 – Section 3]*

The department has adequate office space needs for the two requested faculty hires. We do not anticipate any special facilities renovations specifically for this program.

f. Are library resources adequate to support the program when fully implemented? Please elaborate.

Given that this program is largely designed to utilize existing academic talents and expertise from our faculty, we do not anticipate a significant impact on library resources to come from this program beyond the regular demand for new materials resulting from new faculty hires.

g. Are there any additional costs not addressed in items a. – d.? If "yes" please explain. *[Table 2 – Section 4]*

h. Are any sources of funding temporary (e.g., grant funding)? If so, how will the program be sustained once these funds are exhausted?

Geography-Geology received one-time funding to write the program feasibility report.

i. If this is a graduate program, discuss the intended use of graduate assistantships and where the funding for assistantships would come from.

This is not a graduate program.

a. Is the unit's (College, Department, School) current operating budget (contractual, commodities, equipment, etc.) adequate to support the program when fully implemented? If "yes", please explain. If new resources are to be provided to the unit to support the program, what will be the source(s) of these funds? *[Table 2 – Section 1]*

The Department operating budget is adequate to support the program when fully implemented assuming that the program is capped at 100 students at that time and 2 new faculty members are hired.

b. What impact will the new program have on faculty assignments in the department? Will current faculty be adequate to provide instruction for the new program?

The ESSS curriculum is highly interdisciplinary and incorporates existing classes from our department and other units in the university (see curriculum structure in the program feasibility report). Eleven of our department's 13 faculty will teach classes in the new curriculum (these classes will continue to also serve our other geography and geology programs). Faculty members in the Geography Program will be most impacted, however, with all seven of its faculty playing some type of a role in the ESSS curriculum. The department has reviewed student demand in the various classes to be incorporated into ESSS, and with the exception of GIS, we believe that we can accommodate the anticipated demand through reshuffling of existing assignments, making changes in how some classes are delivered, and by hiring two new full-time tenure-line faculty members dedicated to the ESSS and teaching the sustainability courses. One of these hires will also have expertise in GIS. The department will request funding to staff any new laboratory sections of GIS, and other technique classes by GTAs and will reassign more time for one of its AP GIS Technician to help faculty run laboratory sections of the techniques classes.

We have reached out to department chairs in other departments whose courses are listed in the curriculum. We are in the process of collecting that information. In the event that a class may not be available, we are looking for alternate solutions.

Current faculty expertise at ISU will not be adequate to provide all of the instruction of the new program. ISU currently lacks faculty expertise in sustainability science and to teach related classes in the core curriculum. (see c. below for more details).

c. Will additional faculty need to be hired, either for the proposed program or for courses faculty of the new program would otherwise have taught? If yes, please indicate whether new faculty members will be full-time or part-time faculty, tenure track or non-tenure track faculty.
[Table 2 – Section 2]

The full implementation of this program will require the addition of 2 full-time tenure line faculty members with expertise in Sustainability Science that will be dedicated to the ESSS program. One of these individuals whom we propose to hire at open rank will be the Program Director and Internship Coordinator. Both individuals will bring critical expertise in sustainability to the program that is currently lacking in our department. In addition, they will be chosen to further build on the program foci in Environmental Systems Analysis, and Water Resources. Like other faculty, both individuals will teach a combination of core courses, electives in their areas of expertise, and contribute to general education. Upon their hiring, the department does not foresee the need for additional faculty for the ESSS program under the projected enrollments.

d. Will current staff be adequate to implement and maintain the new program? If "yes", please explain. Will additional staff be hired? Will current advising staff be adequate to provide student support and advisement, including job placement and or admission to advanced studies? If additional hires will be made, please elaborate. *[Table 2 – Section 2]*

The department currently has 2 AP positions that contribute to the geography program. One of these positions is our academic advisor who currently also teaches 2 elective courses for geography each year. To help

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Illinois' first public university

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Memorandum of Understanding

DATE: June 19, 2017

TO: Dagmar Budikova, Chair
Department of Geography, Geology, and the Environment

Greg Simpson, Dean
College of Arts and Science

FROM: Jan Murphy, Interim Vice President and Provost
Division of Academic Affairs JM

Alan Lacy, Associate Vice President for Academic Fiscal Management
Division of Academic Affairs AL

RE: New Program Approval
B.S. in Environmental Systems Science and Sustainability

Given the long term commitment being made to this new program in the Department of Geography, Geology, and the Environment, it is important to codify our mutual understanding of financial implications moving forward in future years. This document can serve as a guide to administrators who will be making future financial decisions regarding this new major.

A new position has been approved for search in FY18 and hire in FY19. This position is for a person with expertise in sustainability science and GIS. This position is funded at the associate/full professor level, and it is expected that a successful hire will bring needed leadership and expertise to this new program. It is up to the College and Department to provide necessary start-up funds for this faculty member. Assistance from the Office of the Provost may be a possibility, but requests for these funds should be made through the normal budgetary requests procedures.

A second faculty member is listed as a need on the Financial Implication Form in the fifth year as this new program hopefully grows and is fully implemented. If the program grows rapidly, this need may become acute prior to the fifth year. In the event that the program does not grow as rapidly as hoped, this need could be delayed. This position will need to be requested through the normal budgetary request procedures when the need arises and the timing is right. While the Office of the Provost can make no promises about authorizing this second position, it is certainly our hope that the program flourishes and necessitates this second faculty authorization. Assuming start-up funds will be expected, the situation is the same as stated in the previous paragraph in reference to the already authorized position.

There are also financial implications regarding graduate assistant (GA) funding in both BIO and GEO to support laboratory sections related to required courses. It is our understanding if and when the need for increased lab sections with GA instructors arises, CAS will work with GEO to provide funding. This funding could come from sources such as permanent or temporary variance from the college and/or department. If that funding is not available, then making requests through the annual IC/Gen Ed allocation process becomes a possibility. In that case, it will be important for CAS to work closely with the Office of the Provost to demonstrate a clear need for this GA funding. We recognize that funding commitments need to be made for multiple years when recruiting GA applicants for these assignments.

It is in the best interests of the University, Academic Affairs, CAS, and GEO for this newly proposed program to be successful. Successful programs need appropriate funding to sustain appropriate size and growth. For all programs, the Office of the Provost wishes to work closely with Colleges and Departments/Schools to allocate funds requested through the annual budgetary processes to facilitate adequate resources to support students and faculty. It is our hope that the Office of the Provost can provide necessary financial support for demonstrated needs and that this new program will attract many new students to ISU, will build a strong academic reputation, and enjoy great success.

Copies: Jim Jawahar, Destini Fincham, Marla Reese-Weber

Table 2: RESOURCES REQUIREMENTS

TABLE 2

ESTIMATED COSTS OF THE PROPOSED PROGRAM- Only new resources not currently available to the program			
Category	**Unit of Measurement**	**Year One**	**5th Year (or when fully implemented)**
Section 1: Operating Expenses			
Including but not limited to: Contractual, Commodities, Equipment, etc.		$0	$0
Section 2: Personnel			
Faculty	2.0 FTE	#1	#2
Faculty		$90,000	$69,000+ per year
Other Personnel Costs – All Staff excluding Faculty GA Funding in Biology to support labs in 196, 197, and 201 GA Funding for GEO (Hydrogeology) to support labs in techniques classes and	G A	$17,000 BSC $15,000 GEO	$17,000+ per year $15,000+ per year
Section 3: Facilities			
Including but not limited to rental, maintenance, etc.	$ 0	$0	$0
Section 4: Other Costs (itemized)			
•	$	$	$
•	$	$	$
•	$	$	S
•	$	$	$
•	$	$	$
Total	**$0**	**$0**	**$0**

Routing and action summary – in sequential order:

1. David Malone — 2/13/2017
Department/School Curriculum Committee Chair — Date Approved

2. Margaret Bernier — 2/14/2017
Department Chairperson/School Director — Date Approved

3. [signature] — 2/14/17
College Dean — Date Approved

4. [signature] — 6.15.17
Provost — Date Approved

5. John M. Stewart — 11/16/17
College Curriculum Committee Chairperson — Date Approved

6. _____ — _____
Teacher Education Council Chair — Date Approved

7. Jean M. Stanford — 2/7/18
University Curriculum Committee Chairperson — Date Approved

Once approved, include this form with the curricular proposal for the new program.