Proposal Of A New Undergraduate Or Graduate Program

This document should not exceed 3-5 pages in length.

1. Proposing College / School: School of Forestry and Wildlife Sciences

   Department:

2. Proposed Program Title: Urban Environmental Science Minor

3. CIP Code of Proposed Program:

4. Proposed Implementation Date: Fall 2014

5. Relationship of Proposed Program to the Auburn University Mission Statement and Strategic Plan:

   (Auburn University’s mission statement may be accessed at the following site: http://www.auburn.edu/administration/trustees/policymanual/vision_and_mission.html; Auburn University’s strategic plan may be accessed at the following site: http://ocm.auburn.edu/strategic_plan/)

   From the mission statement:
   The University will serve the citizens of the State through its instructional, research and outreach programs and prepare Alabamians to respond successfully to the challenges of a global economy.
   The University will give highest priority for resource allocation for the future development of those areas that represent the traditional strengths, quality, reputation, and uniqueness of the institution and that continue to effectively respond to the needs of students and other constituents.
   Recently and for the first time in history, more people are now living in cities than rural areas. In the Southeast U.S. and around the world, urban areas are expanding and encroaching on rural and wilderness areas resulting in increased stakeholder interest on how natural resources and the environment are managed. There is an increasing need for professionals who understand and are purposely trained to manage environments within cities and at the urban-rural boundary.

   The implementation of this minor is consistent with several priorities stated in the Auburn University Strategic Plan, including:
   Elevating undergraduate education and enrich the undergraduate student experience; serving our students better and raising their expectations and standards; and, implementing new projects in the area of sustainability (Strategic Priority 1: Elevating Academics).

6. Expected Program Outcomes and Assessment Methods:

   (Expected outcomes must be stated clearly and must include student learning outcomes and an assessment plan for ascertaining the extent to which the expected outcomes are achieved and for designing improvements based on analysis of assessment results.)

   Students completing the Urban Environmental Science minor will be able to accomplish the following learning outcomes and will be assessed through the following measures:

   Student Learning Outcomes:
   1) Understanding and capable of explaining the unique features associated with urban environments including: land patterns and processes, urban demographics, hydrology and watersheds, aquatic environments, wildlife, and atmospheric conditions. Capable of explaining the role of humans in urban environments through direct and indirect actions such as land use, laws and policy, commerce, and transportation. Understanding how urban environments affect local climate and its related environmental conditions. Understanding of the ecology and best management practices associated with urban forests and related natural resources.

   Assessment:
   1. Students will be evaluated on their knowledge and retention of the above learning objectives based upon individual assignments, presentations and testing within each of the required courses.
   2. Upon completion of the minor, students will complete an exit survey that will include general questions about urban environmental science. This survey will be examined by SFWS faculty to determine level of student comprehension
7. Degree Requirements (Including All Formal Options):
(For programs at the undergraduate level, please provide a curriculum model for the program as well as for each formal option.)

<table>
<thead>
<tr>
<th>Core electives (9 hours required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOWS 5050 Urban Ecology 3</td>
</tr>
<tr>
<td>FORY 5650 Urban Forestry 3</td>
</tr>
<tr>
<td>GEOG 5010 Urban Geography 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration Electives (minimum of 6 hours within or across concentrations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Sociology</td>
</tr>
<tr>
<td>RSOC 5650 Sociology of Natural Resources and the Environment 3</td>
</tr>
<tr>
<td>Agronomy and Soils</td>
</tr>
<tr>
<td>ACRN 5080/5083 Soils Resources and Conservation ACRN 2040 4</td>
</tr>
<tr>
<td>Landscape Architecture</td>
</tr>
<tr>
<td>LAND 5340 Urban Studies I 3</td>
</tr>
<tr>
<td>LAND 5350 Landscape Construction III: Hydrology 2</td>
</tr>
<tr>
<td>LAND 5360 Dynamic Systems I: Urban Ecologies 3</td>
</tr>
<tr>
<td>Community Planning</td>
</tr>
<tr>
<td>CPLN 5000 History and Theory of Urban Form 3</td>
</tr>
<tr>
<td>CPLN 5010 Introduction to Community Planning 3</td>
</tr>
<tr>
<td>CPLN 5060 Transportation and Mobility 3</td>
</tr>
<tr>
<td>CPLN 5070 Planning and the Environment 3</td>
</tr>
<tr>
<td>Civil Engineering</td>
</tr>
<tr>
<td>CIVIL 5230 Enviro-Health Engineering 3</td>
</tr>
<tr>
<td>CIVIL 5240 Air Pollution 3</td>
</tr>
<tr>
<td>CIVIL 5330 Landfills 3</td>
</tr>
<tr>
<td>CIVIL 5560 Transportation Planning 3</td>
</tr>
<tr>
<td>Economics</td>
</tr>
<tr>
<td>ECON 5100 Economics of Growth and Development 3</td>
</tr>
<tr>
<td>ECON 5200 Urban and Regional Economic Development 3</td>
</tr>
<tr>
<td>Entomology</td>
</tr>
<tr>
<td>ENTM 5340 Urban Forest Insects 3</td>
</tr>
<tr>
<td>ENTM 5360 Landscape Entomology 4</td>
</tr>
<tr>
<td>Horticulture</td>
</tr>
<tr>
<td>HORT 4270 Intermediate Landscape Design 3</td>
</tr>
<tr>
<td>Forestry and Wildlife Sciences</td>
</tr>
<tr>
<td>FORY 5310 Environmental Ethics 3</td>
</tr>
<tr>
<td>FOWS 5320 Environmental Services 3</td>
</tr>
<tr>
<td>WILD 5410 Wildlife Damage and Management 3</td>
</tr>
</tbody>
</table>

8. Specific Admission and/or Continuation Requirements:

N/A

9. Existing Courses and New Courses Required:
10. Relationship of Proposed Program to Other Auburn University Programs:
(if "yes" for either item, please provide explanation in the space provided below.)

Will the program support or be supported by other program(s) at Auburn University?  
Yes  No

Will this program replace any existing program(s), or specializations / options / concentrations within existing program(s) at Auburn University?  
Yes  No

11. New or Additional Resources / Resource Shifting Required:
(if "yes" for any item, please provide explanation in the space provided below.)

Will additional faculty lines be required?  
Yes  No

Will new or additional space (e.g.: laboratory or classroom) be required?  
Yes  No

Will additional library resources be required?  
Yes  No

Will additional GTA support be required?  
Yes  No

Explanation of or provision for new or additional resources / explanation of program's support or replacement of other programs:


10a. Courses from units beyond the SFWS are included in the proposed minor and may increase enrollment in those classes. Each of these units has been contacted and have agreed to the inclusion of their respective courses in this minor.

12. Potential Duplication of Other Programs in the State:
(If the program would overlap with or duplicate a similar offering at another institution in the state, articulate the program's necessity and/or any differences from similar programs.)

The minor does not duplicate any other programs in the state.

13. Collaboration With Other Institutions:
(Indicate whether or not the proposed program will -- either immediately or in the future -- involve collaboration with other post-secondary institutions. If so, provide all relevant details.)

N/A

14. Distance Education:
(If Distance Education will be incorporated in the delivery of the proposed program, provide details of implementation, scope, etc.)

N/A

15. Documented Need for Proposed Program:
(Elaborate upon the methodology used to appropriately assess regional, state, or national need and/or student demand for program.)

The world has become increasing urban with roughly half the population living in an urban area. In many areas, this has resulted in tremendous shifts in land use resulting in changes to natural ecosystems and the development of urban ecosystems. Much of this urbanization has occurred in the Southeast U.S. and is driven by population growth. Between 2000 and 2008, the south, a 11.5% increase in population making it one of the most important growth regions in the U.S. Natural and agricultural resource management has traditionally occurred in rural areas but is increasingly situated in close proximity to urban areas. Concurrently, there is greater emphasis to manage urban forests and other natural components for multiple human and environmental needs. There is an increasing demand for professionals trained specifically to deal with the unique challenges of managing natural areas in urban areas and at the urban fringe.
16. Employment Opportunities:
(Provide specific examples of employment opportunities anticipated for graduates of the proposed program.)

Effective study and management of urban environments requires professionals that are broadly trained in science-based coursework but also courses that enhance the understanding of unique conditions associated with them. This minor is well suited for students looking for a career in urban forestry, urban design and planning, and urban environmental science. Some professional positions that students with this minor may fill include:
- Urban forester
- Environmental consultant
- Water quality regulator
- Municipal community planner
- Urban landscape designer

The U.S. Bureau Employment anticipates that between 2008 and 2018, job growth in positions such as urban planners and environmental scientists will increase anywhere between 19-28%. Given the disproportionate amount of urban development expected in the Southeast U.S., we expect that regional job growth in these fields will meet or exceed national averages.
Yes. You indicated that it was the third of three similar requests. Somehow, I missed the others but can include our courses in the minor. If they result in an over load that we can’t handle, will let you know.

Dear Joe (this is the third of three similar requests),
Attached is a minor that we are proposing in Urban Environmental Science. We would like to include AGRN 5080 as an elective choice in this minor. Please reply and let me know whether you are willing to allow us to include this course. If you are willing, I will attach your e-mail in our submission packet to the University Curriculum Committee, if not, I will remove the course from our list of electives. Although I do not believe this inclusion will place substantial pressure on your course enrollment, if you agree to allow us to include them but increased numbers become a problem in any of the courses in the future, we would be happy to remove them as an option at any time.
Sincerely,
Ed

Edward F. Loewenstein, PhD
Associate Dean of Academic Affairs
School of Forestry and Wildlife Sciences
602 Duncan Drive
Auburn University, AL 36849-5418

loewenstein@auburn.edu
334-844-1069 (office)
334-844-1084 (fax)
Dr. Loewenstein,

Civil Engineering has no objection at this time. Good luck!

Michael Stallings
Head of Civil Engineering

From: Edward Loewenstein
Sent: Monday, March 11, 2013 3:21 PM
To: Michael Stallings
Subject: Proposed minor in Urban Environmental Science
Importance: High

Dear Michael,

Attached is a minor that we are proposing in Urban Environmental Science. We would like to include CIVIL 5230, 5240, 5330, and 5560 as elective options within the minor. Please reply and let me know whether you are willing to allow us to include these courses. If you are willing, I will attach your e-mail in our submission packet to the University Curriculum Committee, if not, I will remove the courses from our list. Although I do not believe this inclusion will place substantial pressure on your course enrollment (due to the prerequisites, I think it unlikely that any non-engineer would be able to enroll), if you agree to allow us to include them but increased numbers become a problem in these courses in the future, we would be happy to remove them as an option at any time.

Sincerely,
Ed

Edward F. Loewenstein, PhD
Associate Dean of Academic Affairs
School of Forestry and Wildlife Sciences
602 Duncan Drive
Auburn University, AL 36849-5418

loewenstein@auburn.edu
334-844-1069 (office)
334-844-1084 (fax)
Hi, Ed.

The courses would be:

CPLN 5060.001 Transportation and Mobility: Sustainable Transportation Planning (this is a professional fee trigger course, so SWF students would have to see me about an exemption)
CPLN 5070.001 Planning and the Environment: Cities, Planning and Climate Change
CPLN 5070.002 Planning and the Environment: Land Use Planning
CPLN 5070.003 Planning and the Environment: Environmental Policy

As I mentioned, we’re currently in the process of requesting that these courses be changed from their former status as CPLN 5970 Special Topics courses.

Perhaps it would be less confusing if you included only the following in your proposed curriculum model:

CPLN 5060 Transportation and Mobility
CPLN 5070 Planning and the Environment

That way your students could take any course that we offered in those categories.

The Interim Chair of our undergraduate program in Environmental Design is Magdalena Garmaz. She would be delighted to talk to you about the possibility of offering this minor to students in her program: garmama@auburn.edu

Once the minor has been approved, I’m sure that the Planning faculty would appreciate the opportunity to go explain their courses to your students.

The Planning faculty that teach these courses are Sweta Byahut: szb0054@auburn.edu and Becki Retzlaff: rcr0001@auburn.edu.

Thanks again,

Karen

---

From: Edward Loewenstein
Sent: Monday, March 11, 2013 4:27 PM
To: Karen Rogers
Subject: RE: Proposed minor in Urban Environmental Science

Dear Karen,

WOW!!! I’ll certainly give you a call tomorrow to discuss additional courses for inclusion. What time would be best for you?

Cheers,
Dear Ed,

We would love to have you include CPLN courses in your Urban Environmental Science minor. However, I think that we might have some more (or equally) appropriate options to both of those courses. We have electives on transportation planning and sustainability, and another on cities, planning and climate change (amongst others).

If you’d like to give me a call to discuss these options, I’ll be in office tomorrow morning (Tuesday March 12). 844 5384.

This is a great idea! Thanks for including us.

Karen

Dear Karen,

Attached is a minor that we are proposing in Urban Environmental Science. We would like to include CPLN 5000 and 5010 as elective options within the minor. Please reply and let me know whether you are willing to allow us to include these courses. If you are willing, I will attach your e-mail in our submission packet to the University Curriculum Committee, if not, I will remove the courses from our list. Although I do not believe this inclusion will place substantial pressure on your course enrollment, if you agree to allow us to include them but increased numbers become a problem in these courses in the future, we would be happy to remove them as an option at any time.

Sincerely,

Ed

Edward F. Loewenstein, PhD
Associate Dean of Academic Affairs
School of Forestry and Wildlife Sciences
602 Duncan Drive
Auburn University, AL 36849-5418

loewenstein@auburn.edu
334-844-1069 (office)
334-844-1084 (fax)
Edward Loewenstein

From: Michael Stern  
Sent: Tuesday, March 12, 2013 7:59 AM  
To: Edward Loewenstein  
Subject: RE: Proposed minor in Urban Environmental Science

Edward, sure you can include our courses in your new minor. Thanks,

- Michael

From: Edward Loewenstein  
Sent: Monday, March 11, 2013 3:15 PM  
To: Michael Stern  
Subject: Proposed minor in Urban Environmental Science

Dear Michael,

Attached is a minor that we are proposing in Urban Environmental Science. We would like to include ECON 5100 and 5200 as elective options within the minor. Please reply and let me know whether you are willing to allow us to include these courses. If you are willing, I will attach your e-mail in our submission packet to the University Curriculum Committee, if not, I will remove the courses from our list. Although I do not believe this inclusion will place substantial pressure on your course enrollment, if you agree to allow us to include them but increased numbers become a problem in these courses in the future, we would be happy to remove them as an option at any time.

Sincerely,

Ed
Hi Ed,

We would be pleased if you included us in the proposed Urban Environmental Science minor. The more students taking our courses the better.

Thanks and best wishes,

Art

Arthur G. Appel
Professor and Chair
Department of Entomology and Plant Pathology
301 Funchess Hall
Auburn University
Auburn, Alabama 36849-5413

Phone: 334-844-5016
FAX: 334-844-5005

Dear Arthur (this is the second of two similar requests),
Attached is another minor that we are proposing in Urban Environmental Science. We would like to include ENTM 5340 and 5360 as elective options within the minor. Please reply and let me know whether you are willing to allow us to include these courses. If you are willing, I will attach your e-mail in our submission packet to the University Curriculum Committee, if not, I will remove the courses from our list. Although I do not believe this inclusion will place substantial pressure on your course enrollment, if you agree to allow us to include them but increased numbers become a problem in these courses in the future, we would be happy to remove them as an option at any time.
Sincerely,
Ed

Edward Loewenstein
Associate Dean of Academic Affairs
School of Forestry and Wildlife Sciences
602 Duncan Drive
Auburn University, AL 36849-5418
loewenstein@auburn.edu
334-844-1069 (office)
334-844-1084 (fax)
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Hi Ed,
Yes, we can accommodate students in Urban. We are very happy to support this minor as well. More SCHs/WSCHs are always welcomed in GL/GY! Cheers! Mark

---

Edward F. Loewenstein, PhD
Associate Dean of Academic Affairs
School of Forestry and Wildlife Sciences
602 Duncan Drive
Auburn University, AL 36849-5418

loewenstein@auburn.edu
334-844-1069 (office)
334-844-1084 (fax)
Bring ‘em on Ed. We can easily accommodate a good many additional students in both classes. Cheers! Mark
Dear Mark (this is the second of three similar requests),
Thanks for responding so quickly to the Natural Resources Ecology minor; I fully understand that you are on the road and will not be able to respond until your return, but... when you get a chance, attached is another minor that we are proposing in Watershed Sciences. We would like to include GEOL 4260 and 5100; and GEOG 5210 and 5220 as elective options within the minor. Please reply and let me know whether you are willing to allow us to include these courses. If you are willing, I will attach your e-mail in our submission packet to the University Curriculum Committee, if not, I will remove the courses from our list. Although I do not believe this inclusion will place substantial pressure on your course enrollment, if you agree to allow us to include them but increased numbers become a problem in any of the courses in the future, we would be happy to remove them as an option at any time.
Sincerely,
Ed

Edward F. Loewenstein, PhD
Associate Dean of Academic Affairs
School of Forestry and Wildlife Sciences
602 Duncan Drive
Auburn University, AL 36849-5418
loewenstein@auburn.edu
334-844-1069 (office)
334-844-1084 (fax)
Thanks Jeff (and Gary and Carolyn),

I appreciate your input and insight; we’ll make the change in the minor replacing HORT 4280 with 4270. Also, I was wondering if you might consider our Dendrology course, FORY 3100, as an acceptable prerequisite for HORT 4270? It does focus primarily on trees, but we have added some shrubs and herbaceous species beginning this fall as it is now an alternative to systematic botany for our wildlife students.

Cheers,
Ed

---

From: Jeff Sibley  
Sent: Monday, March 11, 2013 3:57 PM  
To: Gary Keever; Carolyn Robinson; Edward Loewenstein  
Subject: RE: Proposed minor in Urban Environmental Science

Ed:

We would welcome being added to the minor, but think the best class would be our 4270 Intermediate Landscape Design, for reasons in two emails below. Reflect on this and let us know. Thank you,

Jeff Sibley

--

Gary Keever <keevegj@auburn.edu> wrote:

I would agree that without 4270 and a woody ID course or two, students are not likely to perform well in Advanced Design. Most would also lack basic drafting skills that are considered a given at the beginning of 5280/6280.

Gary

---

From: Carolyn Robinson  
Sent: Monday, March 11, 2013 3:23 PM  
To: Jeff Sibley  
Cc: Gary Keever  
Subject: Re: Proposed minor in Urban Environmental Science

I don't know if Gary has already responded, but 4280 doesn't exist anymore. It is now 5280/6280. Also, this is advanced design that has a pre-req of 4270 which has pre-reqs of at least one plant ID course. I'm ok with 4270 being used as an elective. I don't think they could jump into 5280, but that is a call for Gary to make.

Carolyn

Dr. Carolyn W. Robinson  
Assistant Professor  
Department of Horticulture  
Auburn University  
101 Funchess Hall  
Auburn, AL 36849
On Mar 11, 2013, at 2:43 PM, "Jeff Sibley" <sibleje@auburn.edu> wrote:

Gary/Carolyn:
Thoughts?
Jeff

Sent from my Verizon Wireless 4G LTE Smartphone

------- Original message -------
Subject: Proposed minor in Urban Environmental Science
From: Edward Loewenstein <LOEWEED@auburn.edu>
To: Jeff Sibley <sibleje@auburn.edu>
Cc:

Dear Jeff,

Attached is a minor that we are proposing in Urban Environmental Science. We would like to include HORT 4280 as an elective choice in this minor. Please reply and let me know whether you are willing to allow us to include this course. If you are willing, I will attach your e-mail in our submission packet to the University Curriculum Committee, if not, I will remove the course from our list of electives. Although I do not believe this inclusion will place substantial pressure on your course enrollment, if you agree to allow us to include it but increased numbers become a problem in the course in the future, we would be happy to remove it as an option at any time.

Sincerely,
Ed

Edward F. Loewenstein, PhD
Associate Dean of Academic Affairs
School of Forestry and Wildlife Sciences
602 Duncan Drive
Auburn University, AL 36849-5418

loewenstein@auburn.edu
334-844-1069 (office)
334-844-1084 (fax)

<UES MINOR ADVISOR CHECK SHEET.docx>
Dear Ed

I would be happy to include the Master of Landscape Architecture courses LAND 5340, 5350 and 5360 as elective options within your proposed minor in Urban Environmental Science.

Let me know if you need any further information about these courses.

Regards

Rod Barnett

---

Rod Barnett, PhD
Chair, Graduate Program in Landscape Architecture
School of Architecture, Planning and Landscape Architecture
Room 430
Dudley Hall
Auburn University 36849

334.332.8183

---

On Mar 11, 2013, at 2:53 PM, Edward Loewenstein <LOEWEED@auburn.edu> wrote:

<UES MINOR ADVISOR CHECK SHEET.docx>