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: Natural Resources Ecology Minor (ECOL)

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 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."

As a land-grant college, Auburn has always had strengths in natural resource studies. This new minor will further strengthen AU’s commitment to training students in these fields.

From the Strategic Plan, Priority 1: Elevating Academics, Implement new projects--"The University will pursue new projects in the areas of sustainability, wellness, and health sciences... Natural resource ecology is a field of study that will become increasingly important as human populations continue to grow, habitats continue to be lost, and the earth undergoes climate change. A program such as this will prepare students to work in occupations that seek to address these problems.

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.)

This minor is intended to provide students with exposure to broad ecological topics in natural resources ranging from the organismal level to the ecosystem level and including interactions among both biotic (living) and abiotic (non-living) systems. No minor could possibly cover all the possible ecological interactions that exist. Thus, the purpose of the minor is to ensure that students are informed of the types of interactions that are possible, and exposed to some examples of those types of interactions. In general, upon completion of this minor, students will understand the broad ecological concepts associated with:

1) Biotic and abiotic factors that effect both individual organisms and ecosystems.
2) The interactions of a single organism/species with its environment (autecology)
3) The interactions among communities of organisms (synecology)
4) Landscape level interactions and adjacency issues at a large scale.

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 exam that will test their general knowledge about the ecology of natural resources. This exam will be administered by SFWS faculty to determine level of student comprehension and whether there is a need to modify the courses contained in the minor.

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.)

Core: 9 hours required
Course (credit)
FORY 5220 – Landscape Ecology  3
FORY 5250 – Wetland Ecology and Management  3

Concentration Electives: 1 course (3-4 hours) required from each of the 2 concentration areas
Course
Landscapes and Abiotic systems
BIOL 5090 – Conservation Biology  3
FOWS 5050 – Urban Ecology  3
FORY 5240 – Forest Watershed Management  3
AGRN 5080 – Soil Resources and Conservation  4
GEOG 5210 – Climatology  3
AGRN 5400 – Bioenergy and the Environment  3
AGRN 5000 – Soils and Environmental Quality  3
FISH 5220 – Water Sciences  3

Biotic systems
WILD 3280 – Principles of Wildlife Management  3
BIOL 5150 – Animal Community Ecology  3
BIOL 5360 – Population Ecology  3
BIOL 4010 – Invertebrate Biodiversity  4
BIOL 4020 – Vertebrate Biodiversity  4
ENTM 5220 – Insect Ecology  4
FISH 5510 – Fisheries Biology and Management  3
WILD 5280 – Wildlife Ecology and Management I  3
WILD 5290 – Wildlife Ecology and Management II  3
BIOL 5140 – Plant Ecology  4
FORY 3100 – Dendrology  3
FORY 5150 – Forest Health  3

8. Specific Admission and/or Continuation Requirements:
None

9. Existing Courses and New Courses Required:
No 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.)

This minor is not offered anywhere else 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.)

No collaboration anticipated at this time

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

No distance education is planned at this time.

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 new major in Natural Resources Management is a solid foundation for providing students with broad training in the management of natural resources. However, because natural resources can encompass so many specific fields of study, the major requires a concentrated minor to provide students with a level of specialization in one of those fields. The minor in natural resource ecology is intended to provide students with specialization and expertise in ecological systems. Without this minor, students in the Natural Resources Management major will be lacking a minor that provides them with specific training in the ecology of natural resources.

16. Employment Opportunities:
(Provide specific examples of employment opportunities anticipated for graduates of the proposed program.)

Federal and state agencies that work with natural resources, such as US Forest Service, Environmental Protection Agency, National Park Service, US Bureau of Land Management, Alabama Department of Conservation and Natural Resources, Alabama State Parks, etc.
Edward Loewenstein

From: Edward Loewenstein
Sent: Saturday, March 09, 2013 11:38 AM
To: Mark Steltenpohl
Subject: Proposed Minor in Natural Resources Ecology
Importance: High

Dear Mark,

Attached is a minor that we are proposing in Natural Resources Ecology. We would like to include GEOG 5210, as an elective 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 future, we would be happy to remove the course as an option at any time.

Sincerely,

Ed

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Ed,  

I have checked with our curriculum committee chair and the instructors of record for the two fisheries courses that you have suggested be included in your minor for Natural Resources Ecology and have heard no concerns. Therefore we would be pleased to have FISH 5220 and 5510 included in the minor. We also believe the courses would be appropriate for the minor.

Sincerely,

David

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David B. Rouse, Ph.D.
Head, Department of Fisheries and Allied Aquacultures
Director, International Center For Aquaculture and Aquatic Environments
203 Swingle Hall
Auburn University, Auburn Alabama 36849
Phone 334-844-4786
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Department: [http://www.ag.auburn.edu/dept/faa](http://www.ag.auburn.edu/dept/faa)
From: John Feminella
Sent: Monday, June 24, 2013 12:23 PM
To: Edward Loewenstein
Subject: Re: Proposed Minors

Ed:

Sorry for the 2nd delay in replying. I suggest you proceed as outlined. Having BIOL 3060 or FORY 4230 be interchangeable pre-reqs for NRM majors allows for the maximum flexibility while limiting growth of BIOL 3060 enrollment. Doing the same for the minor makes sense as well; I understand that may increase 3060 demand, but let's see where that move takes us.

Good luck with the minors!

Jack

On Jun 11, 2013, at 2:12 PM, Edward Loewenstein wrote:

Hi Jack,
I'm just back from a couple of weeks teaching at our Forestry Summer Practicum and am trying to tie up a few loose ends. Have you had the opportunity to consider the Natural Resources Ecology Minor? I need to get this submitted, but did not want to do so until I get your decision on the inclusion of the BIOL courses.
Cheers,
Ed
With regard to the Natural Resources Ecology Minor, I agree that we should not be competing for the same students. Our target audience is primarily students in our Natural Resources Management BS, this degree has a required minor. I also see the minor differing in the scale of focus. Ours is fundamentally management oriented and focuses at a scale above the organism…the ecosystem and landscape.

We did consider including BIOL 3060 in the minor, but decided not to do so because our target audience (Natural Resource Management majors) are already required to take BIOL 3060. That said, for courses within the School, we typically accept BIOL 3060 or FORY 4230 interchangeably as a prerequisite. Thus, If you think it appropriate, we are willing to include [BIOL 3060 OR FORY 4230] as part of the minor core. On the other hand, this would increase the potential enrollment pressure in the courses you mentioned. I really do not have a good estimate of the total number of students that are likely to be interested in this minor. As I said, our target audience is NRM majors (we currently have 13 and hope to grow this number to about 200 over the next five years). Although that major has a required minor, the chosen minor can be any minor offered on campus so long as it is appropriate to the career goals of the student. Thus far our NRM majors have chosen a wide variety of minor emphases. I think the number of options that students have will keep course enrollment pressure low, but if you agree to allow us to include these courses in the Natural Resources Ecology minor, but increased numbers become a problem in any of these courses in the future, we would be happy to remove them as an option at any time.

Thanks for considering our request and let me know if I can try to answer (sidestep?) any additional questions.

Cheers,

Ed

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From: John Feminella
Sent: Monday, May 06, 2013 9:39 AM
To: Edward Loewenstein
Subject: Re: Proposed Minors

Ed:

Thanks for the gentle nudge. Responses below. Let me know if we need to discuss….thanks.

Jack

1. NBR: Conservation and Ecology concentration seems OK. There is room in BIOL 5090, but the course has grown, so it would be helpful to know the annual anticipated enrollment---we can handle 5-10 more per year, but anything more could put a strain on the course as Bob Boyd has students a lot of writing.

2. NRE: This minor is very close to our Organismal Biology-Conservation/Biodiversity formal option; it would be helpful to know your target audience for the minor, and how it differs from CONB, so NRE and CONB are not competing for students. Also, it seems highly appropriate that BIOL 3060 (ecology) be a required course. I
know FORY 4230 doesn't require 3060, but several electives do (BIOL 5150, 5360, 4140, ENTM 5220, FORY 5150, WILD 3280, 5280), so not having taken 3060 will limit options for the minor unless advisors/advisees are vigilant. That said, we would need to know anticipated enrollment in BIOL 3060 as that course is close to saturation. Ditto for BIOL 4010, 4020 and 5140 as they also have limited seating without acquiring resources for more lab sections.

On May 2, 2013, at 6:51 PM, Edward Loewenstein wrote:

Hi Jack,
Just wondering if you’ve had a chance to look over those minors yet? 
Cheers,
Ed

From: John Feminella
Sent: Friday, April 05, 2013 10:02 AM
To: Edward Loewenstein
Subject: Re: Proposed Minors

Sorry, Ed...your request got lost a a sea of emails....will respond ASAP. Jack

On Apr 5, 2013, at 8:43 AM, Edward Loewenstein wrote:

Jack,
I was wondering if you have had the opportunity to look over the other two minors I sent. I’ve attached copies if you need them. The only BIOL course in the Nature Based Recreation Minor is Conservation Biology and it is one of several options in the restricted electives. In the Natural Resources Ecology Minor, there are several BIOL courses listed, but most (with the exception of Conservation Biology) are listed in a single category from which a student can select only a single course.
Cheers,
Ed

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<NBR MINOR ADVISOR CHECK SHEET.doc><NRE MINOR ADVISOR CHECK SHEET.docx>
Jack Feminella, Professor and Chair
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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

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