

# **: WILDLIFE AND FISHERIES CONSERVATION MINOR, UG**

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## **In Workflow**

1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
2. 1875 Committee Chair (jrmillr@illinois.edu)
3. 1875 Head (schooley@illinois.edu)
4. KL Committee Chair (bjgray2@illinois.edu)
5. KL Dean (aball@illinois.edu)
6. University Librarian (jpwilkin@illinois.edu)
7. Provost (kmartens@illinois.edu)
8. Senate EPC (bjlehman@illinois.edu; kmartens@illinois.edu; moorhouz@illinois.edu)
9. Senate (jtempel@illinois.edu)
10. U Senate Conf (none)
11. Board of Trustees (none)
12. IBHE (none)
13. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

## **Approval Path**

1. Thu, 15 Oct 2020 20:57:57 GMT  
Deb Forgacs (dforgacs): Approved for U Program Review
2. Mon, 26 Oct 2020 20:00:35 GMT  
James Miller (jrmillr): Approved for 1875 Committee Chair
3. Tue, 27 Oct 2020 14:10:40 GMT  
Robert Schooley (schooley): Approved for 1875 Head
4. Thu, 05 Nov 2020 15:04:55 GMT  
Brianna Gregg (bjgray2): Approved for KL Committee Chair
5. Thu, 05 Nov 2020 15:20:01 GMT  
Anna Ball (aball): Approved for KL Dean
6. Thu, 05 Nov 2020 15:32:35 GMT  
John Wilkin (jpwilkin): Approved for University Librarian
7. Thu, 05 Nov 2020 15:38:57 GMT  
Kathy Martensen (kmartens): Approved for Provost
8. Wed, 18 Nov 2020 18:45:35 GMT  
Barbara Lehman (bjlehman): Rollback to 1875 Committee Chair for Senate EPC
9. Mon, 23 Nov 2020 11:51:53 GMT  
James Miller (jrmillr): Approved for 1875 Committee Chair
10. Mon, 23 Nov 2020 21:37:13 GMT  
Robert Schooley (schooley): Approved for 1875 Head
11. Mon, 23 Nov 2020 21:40:10 GMT  
Brianna Gregg (bjgray2): Approved for KL Committee Chair
12. Mon, 30 Nov 2020 15:52:35 GMT  
Anna Ball (aball): Approved for KL Dean
13. Mon, 30 Nov 2020 18:31:34 GMT  
John Wilkin (jpwilkin): Approved for University Librarian
14. Mon, 30 Nov 2020 21:42:36 GMT  
Kathy Martensen (kmartens): Approved for Provost

## **New Proposal**

Date Submitted: Mon, 12 Oct 2020 19:02:12 GMT

## **Viewing:: Wildlife and Fisheries Conservation Minor, UG**

Changes proposed by: James Miller

## Proposal Type

**Proposal Type:**

Minor (ex. European Union Studies)

**Proposal Title:**

**If this proposal is one piece of a multi-element change please include the other impacted programs here. *example: A BS revision with multiple concentration revisions***

Proposal to establish a new undergraduate minor in Wildlife and Fisheries Conservation in the Department of Natural Resources and Environmental Sciences, College of Agricultural, Consumer, and Environmental Sciences

**EP Control Number**

EP.21.028

**Official Program Name**

Wildlife and Fisheries Conservation Minor, UG

**Effective Catalog Term**

Fall 2020

**Sponsor College**

Agr, Consumer, & Env Sciences

**Sponsor Department**

Natural Res & Env Science

**Sponsor Name**

James Miller

**Sponsor Email**

jrmillr@illinois.edu

**College Contact**

Anthony Yannarell

**College Contact Email**

acyann@illinois.edu

## Program Description and Justification

Provide *abrief* description and justification of the program, including highlights of the program objectives, and the careers, occupations, or further educational opportunities for which the program will prepare graduates, when appropriate.

Description: This proposal will establish an undergraduate minor focused on fisheries management and wildlife conservation within the Department of NRES. This minor will be available to students who are pursuing any non-NRES degree and who are interested to learn more about the science behind the conservation of wild fish and animal populations. Students pursuing this minor will complete an introductory 3-hour course on general ecology, and they will also complete 15-16 hours of upper-level coursework related to the population biology of fish and/or wildlife, the management of their numbers, and the conservation of their habitats.

Justification: This revision addresses a key criticism of the initial version of this proposal. The committee was concerned about the number of prerequisites for the four IB courses that comprise one of the three groupings of optional courses below. We have added two NRES classes, both appropriate to this minor, to this list. This will make it easier for a non-IB student to obtain the minor in a timely fashion. The original justification follows:

Although the NRES Department offers the Fish, Wildlife, and Conservation Biology Concentration to NRES majors, there is no corresponding sequence of wildlife-focused available through any other program at the University of Illinois. We anticipate that the proposed minor will be especially appealing to two primary audiences of students: 1) Animal Sciences majors who want to learn more about working with wild populations of animals (as opposed to livestock and companion animals) and 2) SIB students who want exposure to applied ecological sciences that complement their general education in ecology, evolution, and behavior. For these students, the proposed minor will broaden their horizons by exposing them to material that is related to their major discipline but is not covered in their major. A handful of students from Animal Sciences and SIB regularly enroll in some of the courses in this minor (especially NRES 348, 407, and 409), and thus we perceive that there is already interest in this minor across campus. We anticipate that enrollment in this minor will grow to be on par with the more general minor in Natural Resource Conservation offered by NRES, with an average enrollment of 15 students.

Please include how the proposed minor requires some depth in the subject, but not as extensive as the major.

The minor is designed to provide all students with instruction in introductory ecology (NRES 219) and advanced fish and wildlife ecology (NRES 348). Students then complete 11-12 hours in three advanced courses focused on habitat/ecosystem conservation, natural history of a particular taxon (fish, birds, mammals, reptiles/amphibians, plants), and advanced population ecology or fisheries science. In contrast, students in the NRES major (Fish, Wildlife, and Conservation Biology concentration) would complete 20+ hours in advanced coursework related to fish/wildlife ecology and conservation, and they would also need to complete the 31 credit NRES core coursework.

Is this program interdisciplinary?

No

Is this minor?

A Comprehensive study in a single discipline

Academic Level

Undergraduate

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

## Enrollment

**Will the department limit enrollment to the minor?**

No

**Describe how the department will monitor the admission to/enrollment in the minor.**

Students will be able to declare this minor as outlined by the University of Illinois Office of the Provost (<https://provost.illinois.edu/education/advising-resources/pursuing-undergraduate-minor/how-to-declare-a-minor/>). Students will need to complete both a "Statement of Intent to Pursue a Campus-Approved Minor" form and an "NRES minor application form," both of which are available online (they can be accessed through the NRES website: <https://nres.illinois.edu/undergraduate/minors>). The NRES Student Services staff will monitor enrollment in the minor.

**Are there any prerequisites for the proposed minor?**

No

**Number of Students in Program (estimate)**

**Year One Estimate**

5

**5th Year Estimate (or when fully implemented)**

15

**What is the typical time to completion of this program?**

N/A

**What are the minimum Total Credit Hours required for this program?**

17

## Delivery Method

**This program is available:**

On Campus

**Other than certification via the students' degree audits, is there any additional planned mechanism to award/honor successful completion of the minor?**

No

## Budget

**Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?**

No

### Additional Budget Information

All courses in the minor are already regularly offered on campus. Anticipated enrollment of 15 students will not necessitate additional staffing for advising or instruction.

Advising: given that NRES majors are not eligible for this minor, all of the students taking the proposed minor will come from other campus units, and they will have access to the advising resources of their home units. The requirements to complete the proposed minor are relatively straightforward, and we do not expect the program to impose additional strain on advisors in other units. However, the NRES Visiting Academic Advising Coordinator and the six NRES faculty members with expertise in Applied Animal Ecology and Conservation can assist with advising students in the minor as necessary.

All NRES courses in the proposed minor have capacity to support any increased enrollment due to the minor. There are some non-NRES courses in the proposed minor (IB 203, IB 461, IB 462, IB 463, IB 464), and several of the courses in the proposed minor have pre-requisite courses that are taught in the School of Integrative Biology and the Department of Molecular and Cellular Biology. These specific courses are: MCB 150 (for students electing to take IB 203); IB 150 (for students electing to take IB 203); IB 202 (prerequisite for IB 462); IB 302 (prerequisite for IB 463/4640; IB 204 (prerequisite for IB 302). However, given that we expect that at least half of the students enrolled in the proposed minor will be IB majors who already need these classes to fulfill their major requirements, we do not anticipate that the new minor will result in a large increase in enrollment for these classes. We expect that enrollment for these classes will increase by approximately 4-8 students as a result of the proposed minor. These numbers assume that 1) only non-SIB students would contribute to an increase in class size and 2) only some of the students in the minor will take any given course at any given time, as they have several elective options to choose from. We do not anticipate that 4-8 additional students will place an undue burden on instructors teaching these courses.

## Resource Implications

Facilities

**Will the program require new or additional facilities or significant improvements to already existing facilities?**

No

Technology

**Will the program need additional technology beyond what is currently available for the unit?**

No

Non-Technical Resources

**Will the program require additional supplies, services or equipment (non-technical)?**

No

## Resources

For each of these items, be sure to include in the response if the proposed new program or change will result in replacement of another program(s). If so, which program(s), what is the anticipated impact on faculty, students, and instructional resources? Please attach any letters of support/acknowledgement from faculty, students, and/or other impacted units as appropriate.

Library Resources

**Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.**

We do not anticipate any impact on the University Library as a result of the proposed program, as the new minor will primarily draw on students who are already enrolled at the University of Illinois.

Instructional Resources

**Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?**

No

**Does the program include other courses/subjects impacted by the creation/revision of this program?**

No

## Financial Resources

**How does the unit intend to financially support this proposal?**

The proposed minor should not necessitate the hiring of additional staff or the acquisition of additional technologies, classroom space, or other resources. It utilizes existing courses that are regularly taught on campus and that have sufficient capacity to accommodate enough students to meet our anticipated enrollment goals (15 students). Thus, the proposed minor should not require any additional financial support beyond "business as usual."

**Will the unit need to seek campus or other external resources?**

No

## Program Regulation and Assessment

**Briefly describe the plan to assess and improve student learning, including the program's learning objectives; when, how, and where these learning objectives will be assessed; what metrics will be used to signify student's achievement of the stated learning objectives; and the process to ensure assessment results are used to improve student learning. (Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable).**

All courses in the minor have been selected because they specifically address the learning objectives of the proposed minor. We therefore intend to use student performance in these courses as benchmarks to ensure that students have achieved these educational goals. All courses in NRES regularly undergo peer-review assessments, and we will continue this practice for all courses in the minor.

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

## Program of Study

"Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source: <https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf>). For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

An undergraduate minor should consist of at least 16 - and no more than 21 hours - of course work, with at least 6 hours of 300- or 400- level courses. Except clearly remedial offerings, prerequisite courses within the sponsoring unit count towards the total; prerequisite courses outside the sponsoring unit do not count toward this total. The unit sponsoring the minor and that unit's college may set educationally necessary prerequisites for eligibility for the minor within these constraints. Does this proposal meet these criteria?

Yes

All proposals must attach the new or revised version of the Academic Catalog program of study entry. Contact your college office if you have questions.

For new programs, attach Program of Study

NRES\_Minor\_WFCv3.docx

Catalog Page Text

**Catalog Page Text: Description of program for the catalog page. This is not official content, it is used to help build the catalog pages for the program. Can be edited in the catalog by the college or department.**

The Wildlife and Fisheries Conservation minor is ideal for students in biology-centered fields who seek additional instruction related to the management and conservation of undomesticated fish and animals. This minor is not available to NRES majors, but it is open to students in all other majors. The minor requires the completion of an additional 17-19 hours of coursework selected from the following list.

### Statement for Programs of Study Catalog

Code	Title	Hours
Required courses:		17-19
NRES 219 or IB 203	Applied Ecology Ecology	3
NRES 348	Fish and Wildlife Ecology	3
Pick one:		
NRES 407	Wildlife Population Ecology	
NRES 409	Fishery Ecol and Conservation	
Pick one:		
NRES 465	Landscape Ecology	
NRES 420	Restoration Ecology	
NRES 429	Aquatic Ecosystem Conservation	
NRES 485	Stream Ecosystem Management	

Pick one:

NRES 302	Dendrology
NRES 415	Native Plant ID and Floristics
IB 335	Plant Systematics
IB 462/NRES 442	Mammalogy
IB 464/NRES 461	Herpetology
IB 464	Herpetology
IB/NRES 463	Ichthyology

## EP Documentation

### Attach Rollback/Approval Notices

ep21028\_emailtosponsor\_2020118.pdf

ep21028\_Wildlife and Fisheries Conservation Minor UG Support Letter.pdf

## DMI Documentation

### Program Reviewer Comments

**Anthony Yannarell (acyann)** (Tue, 03 Dec 2019 22:42:03 GMT):Rollback: Needs letter of support from IB; ACES C&C suggested some other edits at 11/5/19 meeting

**Barbara Lehman (bjlehman)** (Wed, 18 Nov 2020 18:45:35 GMT):Rollback: Rollback: Returning for additional documentation. See attached email.

Key: 930



**Natural Resources and Environmental Sciences  
Minor in Wildlife and Fisheries Conservation**

**Required courses:**

*NRES 219 – Principles of Ecosystem Management (3 hours); or IB 203 – Ecology (4 hours)*  
*NRES 348 – Fish and Wildlife Ecology (3 hours)*

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**Pick one:**

*NRES 407 – Wildlife Population Ecology (4 hours)*  
*NRES 409 – Fishery Ecology and Conservation (4 hours)*

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**Pick one:**

*NRES 465 – Landscape Ecology (3 hours)*  
*NRES 420 – Restoration Ecology (4 hours)*  
*NRES 429 – Aquatic Ecosystem Conservation (3 hours)*  
*NRES 485 – Stream Ecosystem Management (4 hours)*

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**Pick one:**

*NRES 302 – Dendrology (4 hours)*  
*NRES 415 – Native Plant ID and Floristics (4 hours)*  
*IB 335 – Plant Systematics (4 hours)*  
*IB 462/NRES 442 – Mammalogy (4 hours)*  
*IB 461/NRES 461 – Ornithology (4 hours)*  
*IB 464 – Herpetology (4 hours)*  
*IB 463/NRES 463 – Ichthyology (4 hours)*

**TOTAL HOURS: 17-19**

**From:** [Miller, Nolan H](#)  
**To:** [Yannarell, Anthony](#)  
**Cc:** [Miller, James Robert](#); [Martensen, Kathy](#); [Lehman, Barbara J](#)  
**Subject:** RE: Wildlife and Fisheries Conservation Minor  
**Date:** Wednesday, November 18, 2020 12:32:04 PM  
**Attachments:** [image001.png](#)

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Hi Tony,

I'm cc'ing Kathy Martensen at the Provost's office who can do the rollback. As you work on the proposal, feel free to reach out if you have questions.

Best,

Nolan

P.S. There was a terrible pun to be made there about getting ducks in a row that I almost was able to avoid.



**NOLAN H MILLER**

*Daniel and Cynthia Mah Helle Professor in Finance* | Department of Finance  
*Director, Center for Business and Public Policy*  
Gies College of Business | University of Illinois at Urbana-Champaign  
Research Associate, National Bureau of Economic Research  
217.244.2847 | [nmiller@illinois.edu](mailto:nmiller@illinois.edu) | <http://www.business.illinois.edu/nmiller>

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**From:** Yannarell, Anthony <acyann@illinois.edu>  
**Sent:** Wednesday, November 18, 2020 12:28 PM  
**To:** Miller, Nolan H <nsmiller@illinois.edu>  
**Cc:** Miller, James Robert <jrmillr@illinois.edu>  
**Subject:** Re: Wildlife and Fisheries Conservation Minor

Dear Nolan:

Thanks for getting in touch with us about this. We'd like to request a rollback. The folks at SIB will be providing a letter, but they've also suggested a few changes to the minor that we'd like to make. We think they'll help make the minor more flexible and accessible for students.

At your convenience, can you please roll it back to the 1875 Committee Chair?

Thanks!  
Tony

**ANTHONY YANNARELL**

*Associate Professor, Microbial Ecology*

Department of Natural Resources and Environmental Sciences  
College of Agricultural, Consumer and Environmental Sciences  
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On Nov 16, 2020, at 9:40 AM, Miller, Nolan H <[nmiller@illinois.edu](mailto:nmiller@illinois.edu)> wrote:

Hello,

I'm the subcommittee chair at the Senate Education Policy committee handling the proposal for the minor in Wildlife and Fisheries Conservation. I see in the proposal that it was rolled back last year to get a letter of support from IB. I don't see that letter attached to the proposal. Did you ever get it? Given how much the minor relies on support from IB, I suspect the committee members are going to ask again for a letter. If you already have the letter, please send it to me ASAP, and I'll see if it can get added to the proposal without having to roll it all the way back to you again.

I'm hopeful that there will be a first discussion of your proposal at the EPC meeting today, although the committee may get hung up on a proposal to change grading policies for this semester due to Covid. I think the proposal is in pretty good shape. I'm hopeful that if you can get the letter from IB and respond to any concerns the committee raises, we can get this approved in time to get on the December Senate agenda.

Best,

Nolan

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<[IMAGE001.PNG](#)>

**NOLAN H MILLER**

*Daniel and Cynthia Mah Helle Professor in Finance | Department of Finance  
Director, Center for Business and Public Policy*

Gies College of Business | University of Illinois at Urbana-Champaign  
Research Associate, National Bureau of Economic Research  
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**From:** [Downie, Stephen R](#)  
**To:** [Miller, James Robert](#)  
**Cc:** [Yannarell, Anthony](#); [Suarez, Andrew](#)  
**Subject:** Wildlife and Fisheries Conservation Minor, UG Support Letter  
**Date:** Wednesday, November 18, 2020 3:22:27 PM

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Dear Dr. James Miller,  
Department of Natural Resources and Environmental Sciences  
College of ACES

Dear Dr. Miller,

The School of Integrative Biology supports the inclusion of IB courses 335 (Plant Systematics), 461 (Ornithology), 462 (Mammology), 463 (Ichthyology), and 464 (Herpetology) as coursework options in your proposed minor in Wildlife and Fisheries Conservation.

The inclusion of these courses in your minor will not substantially impact the School of Integrative Biology.

Thank you for seeking our approval. I know some of our students will be quite excited to learn of the availability of this minor!

Sincerely,

Stephen R. Downie

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Stephen R. Downie, Professor  
Associate Director of Academic Affairs | School of Integrative Biology  
Director | GAANN Fellowships  
Curator | University of Illinois Vascular Plant Herbarium (ILL)  
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[www.life.illinois.edu/plantbio/](http://www.life.illinois.edu/plantbio/)

