

<b>Fiscal Unit/Academic Org</b>	Evolution, Ecology & Org Bio - D0390
<b>Administering College/Academic Group</b>	Arts And Sciences
<b>Co-administering College/Academic Group</b>	Biological Sciences
	Arts And Sciences
<b>Semester Conversion Designation</b>	Converted with minimal changes to program goals and/or curricular requirements (e.g., sub-plan/specialization name changes, changes in electives and/or prerequisites, minimal changes in overall structure of program, minimal or no changes in program goals or content)
<b>Current Program/Plan Name</b>	Zoology
<b>Proposed Program/Plan Name</b>	Zoology - BS
<b>Program/Plan Code Abbreviation</b>	ZOOLOGY-BS
<b>Current Degree Title</b>	Bachelor of Science

### Credit Hour Explanation

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program		45	30.0	30	0.0
Required credit hours offered by the unit	Minimum	40	26.7	26	0.7
	Maximum	40	26.7	26	0.7
Required credit hours offered outside of the unit	Minimum	5	3.3	3	0.3
	Maximum	5	3.3	3	0.3
Required prerequisite credit hours not included above	Minimum	49	32.7	40	7.3
	Maximum	49	32.7	40	7.3

**Explain any change in credit hours if the difference is more than 4 semester credit hours between the values listed in columns B and C for any row in the above table**

Prerequisite credits increased in other units in the semester system. Under quarters, two courses in Physics were required for a total of 10 credit hours; under semesters, two courses are required for a total of 10 semester units: increase of 3.4 semester units. Biology: 10 credit hours required in quarters system, 8 semester units required in semester system: increase of 1.4 semester units. Chemistry: 4 credit hours of organic chemistry required in quarters system; 4 semester units required in semesters: increase of 1.4 semester units. Mathematics: 10 credit hours of calculus required in quarters; 5 semester units required in semesters: 1.6 semester units reduced. Statistics: not required in quarters system, although all students had to take it as a prerequisite to other courses; 3 semester units required in semester system. Increase of 3 semester units.

### Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

**Program Learning Goals**

- Students understand the processes that underlie evolution and be familiar with their manifestation in the natural world.
- Students understand ecological concepts, methods of study, and the interactions among organisms and between organisms and their environment.
- Students understand organismal diversity and functioning at all levels, from the molecular and cellular to the whole organism, and will understand the interplay between organismal functioning and ecological and evolutionary processes.
- Students participate in the process of discovery by conducting experimental and observational studies, synthesizing results with the primary literature, and communicating their questions, hypotheses, observations, and experiences to others.
- Students are knowledgeable in mathematics, statistics, computer modeling, and the use of computers, as these topics relate to biology.
- Students know the theoretical framework of evolution, ecology and organismal biology and understand science as a process, including the history of science as it relates to these three disciplines within biology.
- Students are familiar with current issues in biology, especially those that have significant ethical and societal implications, and will be able to communicate scientific concepts and processes.

**Assessment**

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

**Is this a degree program (undergraduate, graduate, or professional) or major proposal? Yes**

**Does the degree program or major have an assessment plan on file with the university Office of Academic Affairs? Yes**

**Summarize how the program's current quarter-based assessment practices will be modified, if necessary, to fit the semester calendar.**

No modifications required at this time.

**Program Specializations/Sub-Plans**

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

**Pre-Major**

**Does this Program have a Pre-Major? No**

**Attachments**

- zoology.bs.supporting docs.pdf: Zoology BS supporting docs

*(Program Proposal. Owner: Wolfe,Andrea Dayle)*

**Comments****Workflow Information**

Status	User(s)	Date/Time	Step
Submitted	Wolfe,Andrea Dayle	11/02/2010 04:30 PM	Submitted for Approval
Approved	Wolfe,Andrea Dayle	11/02/2010 04:31 PM	Unit Approval
Pending Approval	Andereck,Claude David	11/02/2010 04:31 PM	College Approval





Department of Evolution, Ecology, and Organismal Biology

College of Arts and Sciences  
318 West 12th Avenue  
Columbus, OH 43210-1293

Phone (614) 292-8088  
Fax (614) 292-2030

To: Office of Academic Affairs  
From: Peter S. Curtis, Chair, Department of EEOB  
Date: 1 November 2010  
Re: Semester Program Proposal for Undergraduate Zoology Major

A handwritten signature in black ink, appearing to be "P. S. Curtis", written over the "From:" line of the header.

The Department of EEOB has the following programs that will be converted from quarters to semesters:

- 1) Undergraduate Zoology Major
- 2) Undergraduate Evolution & Ecology Major
- 3) Undergraduate Zoology Minor
- 4) Undergraduate Evolution & Ecology Minor
- 5) Evolution, Ecology and Organismal Biology MS
- 6) Evolution, Ecology and Organismal Biology PhD

We will be proposing semester programs for each of these six areas, beginning with the undergraduate majors and minors and then for each of the graduate programs.

The EEOB curriculum committee has been working on the semester conversion for the past academic year, involving the faculty as a whole and by dividing the faculty into three working groups covering each of the major areas of research covered in our department: Evolution, Ecology, and Organismal Biology. Program goals were revised from our previous major program change, which occurred when faculty from the Departments of Zoology and Plant Biology merged to form the Department of EEOB in 1998.

Our semester conversion efforts launched with a faculty retreat in November 2009 that was specifically focused on curriculum discussions. The curriculum committee took the lead in framing curricular revisions, first by mapping our existing courses onto our program goals. Overlap of information across our curriculum was noted and provided the impetus for combining courses with similar curricular content into courses that will easily fit a semester format. In January 2010, three working groups were formed to assess and revise the content of our curriculum into three major areas: evolution, ecology, and organismal biology. The proposed curriculum changes were discussed during faculty meetings Spring Quarter 2010 and approved by the entire faculty at the beginning of Autumn Quarter 2010.

## **Rationale for Changes to the Undergraduate Zoology Major - BS**

The Department of Evolution, Ecology, and Organismal Biology (EEOB) currently offers a BS and BA in Zoology. Under semesters, EEOB will continue to offer both options for the Zoology major. Changes to the Zoology BS major are summarized below.

Under semesters, the BS requirements will remain largely the same as they were under quarters, except that we have slightly reduced the mathematics and organic chemistry requirements from two quarters to one semester. For students on a pre-professional track (e.g., planning to enter medical school), a two-semester organic chemistry sequence will be recommended, but we will not require this of all students. In addition to these changes, we have added a one-semester requirement in statistics. Summarizing, the required supportive courses for the BS in Zoology are as follows: two semesters of introductory biology (BIOL 1113 and 1114), one course in calculus (MATH 1151 or 1156), two semesters of introductory chemistry (successor courses to CHEM 121, 122, and 123), one course in organic chemistry (successor to CHEM 231), two semesters of physics (PHYSICS 1250 and 1251), and one course in introductory statistics (STAT 2450 or 2480).

### **Zoology Major – BS**

The Department of Evolution, Ecology, and Organismal Biology (EEOB) currently offers a BS undergraduate major program in Zoology. The Zoology major is appropriate for students in the natural sciences whose main interests lie in animals, for students desiring a pre-professional program, and for students planning to enter a graduate program in organismal biology.

The structure of the Zoology major under semesters will be largely the same as under quarters, but under semesters students will have greater flexibility in satisfying the requirements in the different core areas in the major. The five core areas for the Zoology major are evolution, ecology, genetics, biodiversity, and organismal biology (previously called “form and function”). Under quarters there was a sixth area (cellular and developmental physiology), but we have dropped this from the core. For each of the first three core areas there is, as before, basically only one course (or honors version thereof) that will satisfy the requirement (Evolution: EEOB 3310; Ecology: EEOB 3410; and General Genetics: MOLGEN 4500). However, for the other two areas, biodiversity and organismal biology, students may now choose from a variety of courses. Students must take two courses in biodiversity from among seven possibilities and must take two in organismal biology from among six possibilities. Under quarters, these two requirements could be satisfied only by particular courses (Diversity and Systematics of Organisms: EEOB 405; and Animal Form and Function: EEOB 410); thus, student choice has been enhanced. The minimum number of units (semester hours) in the major is 30, and, depending on which courses a student chooses to satisfy the core requirements, she/he will need between zero and 10 units of electives to achieve this minimum. Courses acceptable as electives include any course in EEOB at the 2000 level or higher, as well as courses in other departments, as long as these courses have a substantial biology component. Most courses in from Biological Sciences (*sensu obsoletu*) are acceptable, as well as certain courses from other departments (e.g., Animal Science, Anthropology, Earth Sciences, Environment & Natural Resources, Human

Nutrition, Physiology & Cell Biology, Psychology). Students will need to check with their EEOB Zoology advisor if they have any question about whether a particular course can count as an elective in the major.

## **Transition Policy**

### **Zoology Major – BS**

Students who have declared the BS Zoology major within the three years prior to the switch to semesters can finish under the old requirements, or they can switch to the new ones. Since every core course or category under the old requirements has its equivalent (often with more options) under the new requirements, we do not foresee any great difficulties arising during the transition. Any course that fulfilled a requirement under the old rules will also do so under the new ones. The only potential difficulty is the new requirement for a statistics course among the required supportive courses for the Zoology major. If a student who started under the old system wants to fulfill the new degree requirements but finds it too difficult to fit in one of the required statistics courses, we will waive this requirement.

Potential problems in transition can arise in fulfilling the BS requirements if a student is partway through a two- or three-quarter sequence in supportive course requirements (e.g., in chemistry or physics). For such cases, we are relying on the relevant departments to create needed transitional courses. We will, however, try to forestall difficulties for students through advising, by encouraging them to complete all such sequences either before, or after, the switch to semesters.

Fortunately, because EEOB does not offer any two-course sequences, we will not need to develop any bridge courses. The only problem that might arise concerns courses that currently have separate lecture and laboratory components, in which the lab can be taken subsequent to the lecture. Only two such courses currently exist, Ecology (EEOB 503.01 is the lecture and 503.02 the lab) and Organismal Diversity (EEOB 405.01 is the lecture, 405.02 is the lab). Under semesters, the laboratory in these courses (EEOB 4410 and 3320, respectively) will be a mandatory part of the course. This raises the possibility that a student will have had the lecture but not the lab when the transition to semesters occurs. We will strive through advising to make sure a student is not caught in this predicament, but, if it happens, we will insert the student into the appropriate lab using the individual studies option, or else waive the requirement.

## Course Listing and Curriculum Map for the Zoology BS Major

### Required supportive courses (do not count towards hours in the major)

Requirements	Semester Course Number	Course Title	Semester Units	Quarter Equivalent Course Number	Quarter Credits	Notes	Relevant Program Goals
<b>Biology</b>	BIO 1113	Intro Bio	4	BIO 113	5	BIO 115H also accepted	1,2,3
	BIO 1114	Intro Bio	4	BIO 114	5	BIO 116H also accepted	1,2,3
<b>Math</b>	MATH 1148	College Algebra	4	MATH 151,152	10	MATH 1156 also accepted	5
	MATH 1151	Calculus 1	5	MATH 148,150	10		
<b>General Chem</b>	CHEM 121,123	General Chem	10	CHEM 121,122,123	15	2 semesters of inorganic chemistry required for program	4
<b>Organic Chem</b>	CHEM 231	Organic Chem	4	CHEM 251,252	6	1 semester organic chem required for majors; pre-professional track advised to take 2 semesters	4
<b>Physics</b>	PHYSICS 1250 & 1251	General Physics	10	PHYSICS 111, 112 or 131, 132	10	1250H & 1251H also accepted	4
<b>Statistics</b>	STAT 2450 or 2480	Intro Stats	3				5

### Required core courses

	EEOB 3310 or 3310H	Evolution	4	EEOB 400 or 400H	5	Enhanced content	1*, 3*, 5*, 6*, 7*
	EEOB 3410 or 3410H	Ecology	4	EEOB 503.01 EEOB 503.02 EEOB 503.03	4 2 6	Combines the content of the independent lecture and lab courses	2*,3*,5*
	MOLGEN 4500	General Genetics	3	MOLGEN 500	5		1*,2*,3*

### Elective courses in Biodiversity (choose two)

	EEOB 2220	Ohio Birds	2		EEOB 322	5	7-week course, same content	1,2,3,4,6,7
	EEOB 3320	Org Diversity	3		EEOB 405.01 EEOB 405.02	4 2	Merges contents of EEOB 405.01 and 405.02; combination of lab and lecture	1*,2*,3*,4*,7*
	EEOB 4210	E&E Vertebrates	2-4		EEOB 470	5	Same or enhanced content	1*,2*,3*,4*
	EEOB 4220	E&E Mammals	2-4		EEOB 625	5	Same or enhanced content	1*,2*,3*,4*
	EEOB 4230	E&E Invertebrates	2-4				New course	1*,2*,3*,4*
	EEOB 4410	Conserv Biol	3		EEOB 661	5	Same content	2*,5*,7*
	EEOB 4420	Trop Field Studies	2		EEOB 557H	3	Same content	2*,5*

### Elective courses in Organismal Biology (choose two)

	EEOB 2510	Human Anatomy	3		EEOB 235	5	Same content	3,4
	EEOB 3510	Cell Dev Biol	3		EEOB 415	4	Enhanced content	1,3*,7
	EEOB 4510	Comp Vert Anat	3		EEOB 512	2	Enhanced content	1*,3*,6*
	EEOB 4520	Comp Physiology	3		EEOB 410	4	New course title, enhanced content from previous course	2*,3*,5*
	EEOB 4550	Neurobio Behavior	3		EEOB 632	3	New course title, enhanced content from previous course	3**,5*,6*
	EEOB 4560	Endocrinology	2		EEOB 550	3	Same content	1*,3**,4*

### Elective courses in EEOB that could count toward major (up to 10 semester units)

Requirements	Semester Course Number	Course Title	Semester Units		Quarter Equivalent Course Number	Quarter Credits	Notes	Relevant Program Goals
	EEOB 2210	Ohio Plants	2		EEOB 210	5	7-week course, same content	1,2,3,4,6,7
	EEOB 2220	Ohio Birds	2		EEOB 322	5	7-week course, same content	1,2,3,4,6,7
	EEOB 2250	Dyn Dinosaurs	1.5		EEOB 350	3	7-week course, same content	1,3
	EEOB 2510	Human Anatomy	3		EEOB 235	5	Same content	3,4
	EEOB 2520	Human Physiol	3		EEOB 232	5	Same content	1,3,6,7
	EEOB 3189	UG Field Work	1-3					
	EEOB 3191	UG Internship	1-3					
	EEOB 3193	UG Indiv Studies	1-3		EEOB 293	1-5		
	EEOB 3194	UG Group Studies	1-3		EEOB 294	1-5		
	EEOB 3320	Org Diversity	3		EEOB 405.01 EEOB 405.02	4 2	Merges contents of EEOB 405.01 and 405.02; combination of lab and lecture	1*,2*,3*,4*,7*



	EEOB 3420	Behavioral Ecol	4		EEOB 440 EEOB 620 EEOB 730 EEOB 740	4 4 3 5	Combines the content of four courses (Ethology, Animal Communication, Bioacoustics, and Behavioral Ecology) into one comprehensive course on Behavioral Ecology	2*,3*
	EEOB 3510	Cell Dev Biol	3		EEOB 415	4	Enhanced content	1,3*,7
	EEOB 3520	Micro Anatomy	1.5		EEOB 630	5	New course title (changed from Vertebrate Histology), same content as previous course	3**,4*,5*,6*,7**
	EEOB 3797	UG Foreign study			EEOB 697			
	EEOB 3798	UG Study Tour			EEOB 698			
	EEOB 3998	UG Research	1-12		EEOB 699			
	EEOB 3999	UG Thesis Res	1-5					
	EEOB 4210	E&E Vertebrates	2-4		EEOB 470	5	Same or enhanced content	1*,2*,3*,4*
	EEOB 4220	E&E Mammals	2-4		EEOB 625	5	Same or enhanced content	1*,2*,3*,4*
	EEOB 4230	E&E Invertebrates	2-4				New course	1*,2*,3*,4*
	EEOB 4240	E&E Plants People	2-4		EEOB 502	4	Same or enhanced content	1*,2*,3*,4*,7*
	EEOB 4410	Conserv Biol	3		EEOB 661	5	Same content	2*,5*,7*
	EEOB 4420	Trop Field Studies	2		EEOB 557H	3	Same content	2*,5*
	EEOB 4430	Ecol Methods I	1-2				New course	2*,3*,5
	EEOB 4510	Comp Vert Anat	3		EEOB 512	2	Enhanced content	1*,3*,6*
	EEOB 4520	Comp Physiology	3		EEOB 410	4	New course title, enhanced content from previous course	2*,3*,5*
	EEOB 4520-H	Comp Physio - H	3		EEOB 410H	4	New course title, enhanced content from previous course	2*,3*,5*
	EEOB 4550	Neurobio Behavior	3		EEOB 632	3	New course title, enhanced content from previous course	3**,5*,6*
	EEOB 4560	Endocrinology	2		EEOB 550	3	Same content	1*,3**,4*
	EEOB 4910	Plants Tch SL	2		EEOB 511	3	Summer course at Stone Lab	1*,2*,3*
	EEOB 4920	Birds Tch SL	2		EEOB 522	3	Summer course at Stone Lab	1*,2*,3*
	EEOB 4930	Stream Eco Tch SL	2		EEOB 785	3	Summer course at Stone Lab	2*,3*
	EEOB 4950	Field Ecol SL	2		EEOB 513	3	Summer course at Stone Lab	2*,3*
	EEOB 5189	Field Work	1-4		EEOB 510 EEOB 513 EEOB 622 EEOB 651 EEOB 657	5 3 3 5 5	One course title to cover all of our field-oriented courses; emphasis to be announced with each offering	
	EEOB 5310	Adv Evolution	3		EEOB 673	5	New course title, same content as previous course, plus addition of animal case studies	1**,2*,3**,4*,5*,6**,7**
	EEOB 5320	Creation & Evol	3		EEOB 710	5	Same content	1**,6**,7**
	EEOB 5410	Ocean Ecology	1.5-3		EEOB 505	5	New course title, same content as	2**,3*,5*

						previous course		
	EEOB 5420	Ecol Inland Waters	1.5-3		EEOB 647 EEOB 655	5 5	Combines the content of two courses (Plankton and Limnology)	2**,3*,5*
	EEOB 5430	Fish Ecology	1.5-3		EEOB 626 EEOB 621	5 5	Combines the content of two courses (Biology of Fishes and Ichthyology)	2**,3*,5*
	EEOB 5450	Popul Ecology	3		EEOB 671	5	Same content	2**,5**
	EEOB 5460	Physio Ecology	3		EEOB 654.01 EEOB 674	4 5	Combines the contents of two course (Ecological Physiology of Animals and Physiological Ecology of Plants)	2**,5**
	EEOB 5470	Comm Ecosys Ecol	3		EEOB 700 EEOB 720	5 5	Combines content from two courses (Biogeography and Community Ecology and Ecosystems)	2**,3**,4**,5**
	EEOB 5910	Herpetology SL	2		EEOB 622	3	Summer course at Stone Lab	1*,2*,3*
	EEOB 5920	Aquatic Plants SL	3		EEOB 611	5	Summer course at Stone Lab	1*,2*,3*
	EEOB 5930	Fish Biology SL	3		EEOB 621	5	Summer course at Stone Lab	1*,2*,3*
	EEOB 5940	Field Zoology SL	3		EEOB 651	5	Summer course at Stone Lab	1*,2*,3*
	EEOB 5950	Algae ID SL	0.5		EEOB 692	1-6	Summer course at Stone Lab	3*
	EEOB 5960	Plankton ID SL	0.5		EEOB 692	1-6	Summer course at Stone Lab	3*
	EEOB 5970	Larval Fish ID SL	0.5		EEOB 692	1-6	Summer course at Stone Lab	3*

## **Program learning goals:**

1. Students understand the processes that underlie evolution and be familiar with their manifestation in the natural world.
2. Students understand ecological concepts, methods of study, and the interactions among organisms and between organisms and their environment.
3. Students understand organismal diversity and functioning at all levels, from the molecular and cellular to the whole organism, and will understand the interplay between organismal functioning and ecological and evolutionary processes.
4. Students participate in the process of discovery by conducting experimental and observational studies, synthesizing results with the primary literature, and communicating their questions, hypotheses, observations, and experiences to others.
5. Students are knowledgeable in mathematics, statistics, computer modeling, and the use of computers, as these topics relate to biology.
6. Students know the theoretical framework of evolution, ecology and organismal biology and understand science as a process, including the history of science as it relates to these three disciplines within biology.
7. Students are familiar with current issues in biology, especially those that have significant ethical and societal implications, and will be able to communicate scientific concepts and processes.

## **Notes:**

Program goal numbers that have no asterisk indicate a beginner's level; \* = intermediate level; \*\* = advanced level.

Honors versions of courses may be substituted in all cases; no more than three units of S/U credit can count toward the major.

## Zoology Major Program (BS)

The zoology major introduces students to the major areas of zoology (the core courses) and allows them to pursue their particular interests (elective courses).

### Part A. Required Supportive Courses (Do not count toward the 30 hour major)

Courses	Hours
<input type="checkbox"/> Biology 1113 and 1114	8
<input type="checkbox"/> Mathematics 1151 or 1156	5
<input type="checkbox"/> Chemistry 121, 122, 123	10
<input type="checkbox"/> Chemistry 231	4
<input type="checkbox"/> Physics 1250 and 1251	10
<input type="checkbox"/> Statistics 2450 or 2480	3

### Part B. Core Requirements

Courses	Hours
<input type="checkbox"/> Evolution EEOB 3310	4
<input type="checkbox"/> Ecology EEOB 3410	4
<input type="checkbox"/> Molecular Genetics Molecular Genetics 4500	3

### Part C. Other Major Courses

1. Biodiversity. Two courses in organismal diversity are required. These courses must be chosen from the following list: EEOB 2220, 3320, 4210, 4220, 4230, 4410, 4420.
2. Organismal Biology. Two courses must be taken from among the following possibilities: EEOB 2510, 3510, 4510, 4520, 4550, 4560.
3. Additional courses at the 2000 level or higher in biological sciences or related areas must be taken to achieve at least 30 credit hours (if this total is not already achieved). EEOB 4998 or 4999 is especially encouraged.

TOTAL: 30 OR MORE HOURS AT THE 2000 LEVEL OR ABOVE (PARTS B and C)

A minimum grade of C- in each course and a 2.0 overall GPA  
in the major is required in parts B and C.

A more detailed handout describing the zoology major is available from the EEOB office in Room 300 Aronoff.

For more information about the zoology major, contact:

Prof. W. Mitchell Masters, Undergraduate  
Coordinating Advisor in Zoology  
286 Aronoff Lab  
318 West 12th Ave.  
to schedule an appointment, email  
[masters.2@osu.edu](mailto:masters.2@osu.edu) or call 614-292-4602

or

Prof. Meg Daly, Honors Advisor  
1552 Museum of Biological Diversity  
1315 Kinnear Road  
to schedule an appointment, email [daly.66@osu.edu](mailto:daly.66@osu.edu)  
or call 614-247-8412

see also: <http://www.biosci.ohio-state.edu/~eeob/>

Zoology Major Program  
Bachelor of Science

Name \_\_\_\_\_

Semester of Graduation \_\_\_\_\_

**Required Supporting Courses**

**Biology (2 courses)**

- Biology 1113 or 1113H
- Biology 1114 or 1114H
- \_\_\_\_\_ Substitution
- Waived

**Mathematics (1 course)**

- Math 1151
- Math 1156
- \_\_\_\_\_ Substitution
- Waived

**Physics (2 courses)**

- Physics 1250 or 1250H
- Physics 1251 or 1251H
- \_\_\_\_\_ Substitution
- Waived

**Chemistry (2 courses)**

- Chemistry 121
- Chemistry 123
- \_\_\_\_\_ Substitution
- Waived

**Organic Chemistry (1 course)**

- Chemistry 231
- \_\_\_\_\_ Substitution
- Waived

**Statistics (1 course)**

- Statistics 2450
- Statistics 2480
- \_\_\_\_\_ Substitution
- Waived

**Core Courses**

- EEOB 3310
- EEOB 3410
- MolGen 4500
- \_\_\_\_\_ Substitution

**Biodiversity (any 2)**

- EEOB 2220
- EEOB 3320
- EEOB 4210
- EEOB 4220
- EEOB 4230
- EEOB 4410
- EEOB 4420

**Organismal Biology (any 2)**

- EEOB 2510
- EEOB 3510
- EEOB 4510
- EEOB 4520
- EEOB 4550
- EEOB 4560

**Electives**

\_\_\_\_\_

\_\_\_\_\_

Core courses and electives must total at least 30 semester units.

Advisor (Printed)

Advisor (Signature)

Date

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Zoology Major Program (BS)

The zoology major introduces students to the major areas of zoology (the core courses) and allows them to pursue their particular interests (elective courses).

### Part A. Required Supportive Courses (Do not count toward the 45 hour major)

Courses	Hours
<input type="checkbox"/> Biology 113 (H115), 114 (H116)	10
<input type="checkbox"/> Mathematics 151, 152	10
<input type="checkbox"/> Chemistry 121, 122, 123	15
<input type="checkbox"/> Chemistry 231	4
<input type="checkbox"/> Physics 111 (131), 112 (132)	10

### Part B. Core Requirements

Courses	Hours
<input type="checkbox"/> Evolution EEOB 400	5
<input type="checkbox"/> Diversity and Systematics EEOB 405.01 and 405.02	6
<input type="checkbox"/> Ecology EEOB 503.01	4
<input type="checkbox"/> Form and Function EEOB 410 or H410	4
<input type="checkbox"/> Cell and Development EEOB 415 or H415	4
<input type="checkbox"/> Molecular Genetics Molecular Genetics 500	5

### Part C. Electives

A **minimum** of 29 hours of zoology courses taught in EEOB, including core courses, is required. A list of acceptable courses is available in the EEOB office. These courses should be chosen in consultation with your zoology advisor. A **maximum** of 16 hours of courses outside EEOB that are relevant to zoology is permitted (including core requirements). These courses must be approved by your zoology advisor.

**TOTAL: 45 OR MORE HOURS AT THE 200 LEVEL OR ABOVE (PARTS B and C)**

A minimum grade of C- in each course and a 2.0 overall GPA in the major is required (parts B and C)

A more detailed handout describing the zoology major is available from the EEOB office in Room 300 Aronoff. For more information about the zoology major, contact:

Prof. W. Mitchell Masters, Undergraduate  
Coordinating Advisor in Zoology  
286 Aronoff Lab  
318 West 12th Ave.  
to schedule an appointment, email  
[masters.2@osu.edu](mailto:masters.2@osu.edu) or call 614-292-4602

or

Prof. Meg Daly, Honors Advisor  
1552 Museum of Biological Diversity  
1315 Kinnear Road  
to schedule an appointment, email [daly.66@osu.edu](mailto:daly.66@osu.edu)  
or call 614-247-8412

see also: <http://www.biosci.ohio-state.edu/~eob/>

# EEOB Zoology Major (BS)

## Sample curricula for students at different stages of the transition

Graduating spring 2012 or earlier		Graduating spring 2013		Graduating spring 2014		Graduating spring 2015		Graduating spring 2016 or later	
BioSci 100 (biology survey)	1	BioSci 100 (biology survey)	1	BioSci 100 (biology survey)	1	BioSci 100 (biology survey)	1	Biology Survey	1
Math 148 (algebra & trigonometry)	5	Math 148 (algebra & trigonometry)	5	Math 148 (algebra & trigonometry)	5	Math 148 (algebra & trigonometry)	5	Math 1148 (algebra & trigonometry)	3
GEC foreign language 101	5	GEC foreign language 101	5	GEC foreign language 101	5	GEC foreign language 101	5	Chem XXXX (chemistry 1)	5
GEC English 110	5 16	GEC English 110	5 16	GEC English 110	5 16	GEC English 110	5 16	GE English 110 successor	3
Math 150 (elementary functions)	5	Math 150 (elementary functions)	5	Math 150 (elementary functions)	5	Math 150 (elementary functions)	5	Biology 1113 (intro bio 1)	4 16
Chem 121 (chemistry 1)	5	Chem 121 (chemistry 1)	5	Chem 121 (chemistry 1)	5	Chem 121 (chemistry 1)	5	Math 1150 (elementary functions)	3
Biology 113 (intro bio 1)	5 15	Biology 113 (intro bio 1)	5 15	Biology 113 (intro bio 1)	5 15	Biology 113 (intro bio 1)	5 15	Chem XXXX (chemistry 2)	5
GEC writing (367 course)	5	GEC writing (367 course)	5	GEC writing (367 course)	5	GEC writing (367 course)	5	GE writing (367 course successor)	3
Chem 122 (chemistry 2)	5	Chem 122 (chemistry 2)	5	Chem 122 (chemistry 2)	5	Chem 122 (chemistry 2)	5	Biology 1114 (intro bio 2)	4 15
Biology 114 (intro bio 2)	5 15	Biology 114 (intro bio 2)	5 15	Biology 114 (intro bio 2)	5 15	Biology 114 (intro bio 2)	5 15		
						<b>Total quarter hours</b>	<b>46</b>		
						<b>Equivalent semester units</b>	<b>31</b>		
Chem 123 (chemistry 3)	5	Chem 123 (chemistry 3)	5	Chem 123 (chemistry 3)	5			Math 1151 (calculus 1)	5
Math 151 (calculus 1)	5	Math 151 (calculus 1)	5	Math 151 (calculus 1)	5	Math 1151 (calculus 1)	5	EEOB 3310 (intro evolution)	4
EEOB 400 (intro evolution)	5 15	EEOB 400 (intro evolution)	5 15	EEOB 400 (intro evolution)	5 15	Chem 123T (transition course)	3	Physics 1250 (physics 1)	5 14
Math 152 (calculus 2)	5	Math 152 (calculus 2)	5	Math 152 (calculus 2)	5	Physics 1250 (physics 1)	5	Physics 1250 (physics 1)	5 14
Chem 251 (organic chem 1)	4	Chem 251 (organic chem 1)	4	Chem 251 (organic chem 1)	4	Unrestricted elective	2 15	EEOB 3410 (intro ecology)	4
Physics 111 (physics 1)	5 14	Physics 111 (physics 1)	5 14	Physics 111 (physics 1)	5 14	EEOB 3410 (intro ecology)	4	Mol Gen 4500 (intro genetics)	3
EEOB 405.01 (intro biodiversity lec)	4	EEOB 405.01 (intro biodiversity lec)	4	EEOB 405.01 (intro biodiversity lec)	4	EEOB 3310 (intro evolution)	4	Chem XXXX (organic chem)	4
EEOB 405.02 (intro biodiversity lab)	2	EEOB 405.02 (intro biodiversity lab)	2	EEOB 405.02 (intro biodiversity lab)	2	Chem XXXX (organic chem)	4	Physics 1251 (physics 2)	5 16
Physics 112 (physics 2)	5	Physics 112 (physics 2)	5	Physics 112 (physics 2)	5	Physics 1251 (physics 2)	5 17		
Chem 252 (organic chem 2)	4 15	Chem 252 (organic chem 2)	4 15	Chem 252 (organic chem 2)	4 15				
				<b>Total quarter hours</b>	<b>90</b>				
				<b>Equivalent semester units</b>	<b>60</b>				
MolGen 500 (intro genetics)	5	MolGen 500 (intro genetics)	5						
EEOB 410 (comparative physiology)	4	EEOB 410 (comparative physiology)	4	Mol Gen 5400 (intro genetics)	3	GE foreign language 1102.05	5	GE foreign language 1101	4
GEC foreign language 102	5	GEC foreign language 102	5	GE foreign language 1102.05	5	Statistics 2450	3	Statistics 2450	3
Unrestricted elective	1 15	Unrestricted elective	1 15	Statistics 2450	3	GE social science 1	3	GE social science 1	3
GEC social science 1	5	GEC social science 1	5	GE arts	3	Mol Gen 5400 (intro genetics)	3 14	GE literature	3
EEOB 415 (cell physiology & devel)	4	EEOB 415 (cell physiology & devel)	4	EEOB biodiversity course 1	2 16	GE foreign language 1103	4	EEOB biodiversity course 1	2 15
EEOB elective	2	EEOB elective	2	GE foreign language 1103	4	GE historical study	3	GE foreign language 1102	4
GEC foreign language 103	5 16	GEC foreign language 103	5 16	GE historical study	3	EEOB comparative physiology 1	3	GE historical study	3
GEC social science 2	5	GEC social science 2	5	EEOB comparative physiology 1	3	GE arts	3	EEOB comparative physiology 1	3
GEC historical study 1	5	GEC historical study 1	5	GE literature	3	EEOB biodiversity course 1	2 15	GE arts	3
GEC foreign language 104	5 15	GEC foreign language 104	5 15	EEOB biodiversity course 2	2 15			EEOB biodiversity course 2	2 15
		<b>Total quarter hours</b>	<b>136</b>						
		<b>Equivalent semester units</b>	<b>91</b>						
EEOB 503.01 (intro ecology lecture)	4	EEOB elective(s)	4						
EEOB elective(s)	5	GE arts	3	EEOB comparative physiology 2	3	EEOB biodiversity course 2	2	GE social science 2	3
GEC arts & humanities 1	5	GE literature	3	EEOB elective(s)	4	EEOB elective(s)	4	EEOB elective(s)	4
Unrestricted elective	1 15	GE foreign language 1103	4	GE social science 2	3	GE literature	3	GE foreign language 1103	4
EEOB elective(s)	5	Unrestricted elective	1 15	GE culture/historical study	3	GE social science 2	3	EEOB comparative physiology 2	3 14
GEC additional breadth 1	5	EEOB comparative physiology 2	3	Unrestricted elective(s)	2 15	GE open option 1	3 15	EEOB elective(s)	5
GEC arts & humanities 2	5 15	EEOB elective(s)	5	EEOB elective(s)	5	EEOB comparative physiology 2	3	GE culture/historical study	3
EEOB elective(s)	5	GE open option 1	3	GE open option 1	3	EEOB elective(s)	5	GE open option 1	3
GEC historical study 2	5	GE open option 1	3	GE open option 2	3	GE culture/historical study	3	GE open option 2	3
GEC additional breadth 2	5 15	Unrestricted elective	1 15	Unrestricted elective(s)	4 15	GE option option 2	3 14	Unrestricted elective(s)	2 16
<b>Total hours/units</b>	<b>181</b>	<b>Total hours/units</b>	<b>121</b>	<b>Total hours/units</b>	<b>121</b>	<b>Total hours/units</b>	<b>121</b>	<b>Total hours/units</b>	<b>121</b>