

UNDERGRADUATE CURRICULUM PROPOSAL COVER SHEET
(original and 1 copy)

NOV 13 2008

Title of Proposal: ⁴⁴⁵ BIOL - Herpetology (BIOL 340) as a 400-level course

REGISTRATION

Check One: x Full Proposal Information Item

Effective Date for Curricular Offering: August 2009

FROM: Thomas P. Wilson, Biological and Environmental Sciences, 226 Holt Hall, 425-4713, Thomas-wilson@utc.edu (proposal originator: include spokesperson's name, office number, telephone, e-mail)

Does this require new resources from the originating department or other department?

No

Faculty of the originating department approved this proposal on 11/7/08 (date), by a vote of 16 aye votes; 0 nay votes; 0 abstentions; 1 eligible voting members absent.

The following have examined this proposal:

Dept Head/Director: John C. Tucker 11/13/08 [Signature] Approve neutral disapprove*

College Curriculum Committee Date: Vote: Signature of Chair

Spokespersons for Affected Departments:

(name, department, date) Signature Approve neutral disapprove*

(name, department, date) Signature Approve neutral disapprove*

(name, department, date) Signature Approve neutral disapprove*

(name, department, date) Signature Approve neutral disapprove*

Dean/Director: [Signature] 11/13/08 [Signature] Approve neutral disapprove*

University Registrar: Linda Orth [Signature] Comments

Provost: Phil Oldham [Signature] Signature Approve neutral disapprove*

[Handwritten mark]

*Those who disapprove may attach an explanation.

ACTIONS on this proposal:	<i>Curriculum Committee</i>	<i>Faculty Senate</i>
Date the proposal was considered	_____	_____
Vote of the body:	_____	_____
Accepted as information item (indicate date)	_____	_____
Approved as submitted (indicate date)	_____	_____
Approved with amendments (amendments indicated and transmitted to all signatories above, date):	_____	_____
Signature of Chair:	_____	_____

To: Curriculum Committee Chair
From: Thomas P. Wilson, Biological and Environmental Sciences Department
Re: Herpetology as a 400 level course
Date: November 10, 2008

The Department of Biological and Environmental Sciences requests to change the catalog description, prerequisites and course number for Biology 340 (Herpetology).

A1) Current Catalog Description:

BIOL 340 Herpetology (4)

Morphology, ecology, taxonomy, and evolution of amphibians and reptiles. Spring, fall or summer semester. Dissections and field trips. Lecture 3 hours, laboratory 2 hours. Prerequisite: Biology 122 or equivalent with a minimum grade of C. Laboratory/studio course fee will be assessed.

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A2) Proposed New Catalog Description:

BIOL ~~4XX~~ Herpetology (4)

The biology of amphibians and non-avian reptiles, with a strong emphasis on morphology, physiology, diversity, distribution, taxonomy, ecology, evolution and ethology. Laboratory includes problem solving, and an in-depth approach to the identification of regional and global diversity, as well as dissections, demonstrations and field trips. Lecture 3 hours, Laboratory 3 hours. Fall or spring semester alternate years. Prerequisites: Biology 122 with a minimum grade of C, and at least one 300-400 level course from the Biology or Environmental Science curriculum with a minimum grade of C, and Junior standing. Laboratory/studio course fee will be assessed.

B) Objectives:

1. A working knowledge about the biology of amphibians and reptiles and an appreciation for their roles in the ecosystems and their evolutionary significance.
2. Knowledge about the taxonomic classification of amphibians and reptiles and diagnostic characteristics of each group.
3. To understand the phylogenetic relationship of amphibians, reptiles and other vertebrates.
4. To learn examples of representative life histories and reproductive modes typical of each taxonomic group.
5. To learn a variety of techniques on the collection, husbandry, and museum curation of amphibians and reptiles as biological specimens.
6. Familiarity and a working knowledge of local subspecific fauna representing each taxonomic group.
7. Familiarity and a working knowledge of all representative North America amphibian and reptile genera.
8. Familiarity and a working knowledge of all amphibian and reptile families of the World.
9. Familiarity and a working knowledge of all higher classifications of amphibians and reptiles.
10. A firm grasp on the diversity and biogeography of amphibians and reptiles.
11. An appreciation for vertebrates as research animals and to encourage discretion and selectivity for use in research.

C, D) Model Syllabus/Student Evaluation:

SYLLABUS – FALL 2010
Lecture MWF 0900-0950 in Holt 305
Laboratory W 1500-1750 in Holt 318

Dr. Thomas P. Wilson
(423) 425-4713 (Office and Voice Mail)
e-mail <Thomas-wilson@utc.edu>
Office Hours: 1000-1100 MWF Holt Hall 226

REQUIRED TEXTS:

Zug, G.R., Vitt, L.J., and J.P. Caldwell. 2001. Herpetology: An introductory biology of Amphibians and Reptiles, Second Edition. Academic Press, New York. 630 pp.

Conant, R., and J.T. Collins. 1998. Reptiles & Amphibians of Eastern/Central North America. 3rd. Ed. Expanded. Houghton Mifflin Co. 616 pp.

Powell, R., Collins, J.T., and E.D. Hooper Jr. 1998. A key to amphibians and reptiles of the continental United States and Canada. University of Kansas Press. 150 pp.

RECOMMENDED TEXTS:

Schneider, R.L., Kransy, M.E., and S.J. Morreale. 2001. Hands-On Herpetology: Exploring Ecology and Conservation. NSTA Press. 146pp.

Catalog Description: BIOL 4XX Herpetology (4)

The biology of amphibians and non-avian reptiles, with a strong emphasis on morphology, physiology, diversity, distribution, taxonomy, ecology, evolution and ethology. Laboratory includes problem solving, and an in-depth approach to the identification of regional to global diversity, as well as dissections, demonstrations and field trips. Lecture 3 hours, Laboratory 3 hours. Fall or spring semester alternate years. Prerequisites: Biology 122 with a minimum grade of C, and at least one 300-400 level course from the Biology or Environmental Science curriculum with a minimum grade of C, and Junior standing.

Course Objectives:

1. A working knowledge about the biology of amphibians and reptiles and an appreciation for their roles in the ecosystems and their evolutionary significance.
2. Knowledge about the taxonomic classification of amphibians and reptiles and diagnostic characteristics of each group.
3. To understand the phylogenetic relationship of amphibians, reptiles and other vertebrates.
4. To learn examples of representative life histories and reproductive modes typical of each taxonomic group.
5. To learn a variety of techniques on the collection, husbandry, and museum curation of amphibians and reptiles as biological specimens.

6. Familiarity and a working knowledge of local subspecific fauna representing each taxonomic group.
7. Familiarity and a working knowledge of all representative North America amphibian and reptile genera.
8. Familiarity and a working knowledge of all amphibian and reptile families of the World.
9. Familiarity and a working knowledge of all higher classifications of amphibians and reptiles.
10. A firm grasp on the diversity and biogeography of amphibians and reptiles.
11. An appreciation for vertebrates as research animals and to encourage discretion and selectivity for use in research.

Academic Honesty:

“Academic dishonesty is defined to include any form of cheating and/or plagiarism. Cheating includes, but is not limited to, such acts as stealing or altering testing instruments; falsifying the identity of persons for any academic purpose; offering, giving or receiving unauthorized assistance on an examination, quiz or other written or oral material in a course; or falsifying of written or oral material in a manner which conceals the true source of documentary material; or the presentation of material which uses hypotheses, conclusions, evidence, data, or the like, in a way that the student appears to have done work which he/she did not, in fact do.”

Attendance: WITH EXCEPTION OF SCHOOL HOLIDAYS, ATTENDANCE IS MANDATORY! NO WRITTEN MAKE UP EXAMS WILL BE GIVEN OR SCHEDULED!!! IF YOU MISS AN EXAM YOU HAVE ACHIEVED A ZERO FOR THAT EXAMINATION. THEREFORE, YOU MUST ATTEND THE SCHEDULED EXAM TO RECEIVE ANY CREDIT. HOWEVER, I DO REALIZE THAT FAMILY CRISES OCCUR (I.E., DEATH OF A LOVED ONE). THEREFORE, SO WE CAN CIRCUMVENT SUCH A PROBLEM PLEASE CONTACT ME IN PERSON AS SOON AS POSSIBLE (i.e., BEFORE THE EXAMINATION). IF YOUR ABSENCE IS *EXCUSED* BY ME THE SUBSTITUTION EXAM WILL BE ADMINISTERED AS SOON AS IT IS MUTUALLY CONVENIENT FOR ME AND WILL BE COMPRISED OF QUESTIONS WITH ORAL RESPONSES. THIS IS AND WILL BE THE ONLY EXCEPTION, AND ONLY ONE SUBSTITUTION EXAM WILL BE ALLOWED!!

Statement on Disruptive Students in the Classroom: “The University will not tolerate disorderly or disruptive conduct which substantially threatens, harms, or interferes with university personnel or orderly university processes and functions. A faculty member may require a student to leave the classroom when his/her behavior disrupts the learning environment of the class. A student found responsible for disruptive behavior in the classroom may be administratively withdrawn fro the course.” **(Student Code of Conduct)**

Late Policy: Lecture and laboratory session begin on time! Please avoid the embarrassment of arriving late. Habitual latecomers will be penalized by deducting PERCENTAGE POINTS FROM THEIR TOTAL POINTS EARNED.

SPECIFICALLY, THEY WILL LOSE 10% OF THEIR TOTAL EARNED POINTS FOR ARRIVING LATE A TOTAL OF THREE TIMES, 20% FOR SIX LATE ARRIVALS, 30% FOR NINE LATE ARRIVALS, ETC. ABSOLUTELY NO EXCEPTIONS!!!!

Other Policies: I would like to discourage distractions during our meeting times. Therefore, any student will be penalized ten (10) points for each incident involving disruption of the class. Specially, if their pager, cellular telephone or other electronic device emits any audible noise during the class that student will have 10 points deducted from their point total for incident.

Special Needs- If you have a disability that may require special assistance or special accommodations in this class or any other class, call the Office for Students with Disabilities at 425-4006 (110 First Hall). If you find that personal problems, career indecision, study and time management difficulties, etc. are adversely affecting your successful progress at UTC, please contact the Counseling and Career Planning Center at 425-4438. Additional academic assistance may be available through Student Support Services at 425-5235.

Academic help is available: Please utilize the instructors office hours if you have questions regarding course materials, objectives, etc.

University Policies and Procedures: Please refer to the student handbook for general policies on topics such as plagiarism, etc. If you have a disability which may require assistance or accommodations, or you have questions related to any accommodations for testing, note takers, readers, etc..., please see me directly. Students may also contact the office of Student Affairs (425-4534) with questions about such services and levels of assistance.

Please use your UTC email for all correspondence as well as your Blackboard account. See me if you encounter difficulties or have questions.

Correct **Spelling counts**, particularly on the laboratory examinations. I realize that we are not perfect, but we must try to be as specific and accurate as possible (i.e., **Clemmys guttata**, not **Clemmys guttatus**). Therefore, 1 point will be deducted for every 5 spelling errors.

GRADING: COURSE GRADE WILL BE BASED ON 650 POINTS for BIO 340

Two written lecture exams @ 100 points each	200 points
Ten Pop Quizzes @ 10 points each	100 points
In Class Discussions & Class Participation	025 points
Two laboratory practical exams @ 100 points each	200 points
Ten laboratory exercises, quizzes, and/or reports @ 10 points each	100 points
A field note book & catalog @ 25 points	025 points

Exams will not be curved. In other words the points that you earned reflect your score. At the close of the semester, your letter grade will be determined by a straight collegiate scale (***ABSOLUTELY NO EXCEPTIONS***)

Grading SCALE

A = 585 - 650

B = 520 - 584.999

C = 455 - 519.999

D = 390 - 454.999

F = 389.999 & BELOW

BONUS POINTS: Up to 25 bonus points will be made available for a combination of activities beyond the usual requirements mentioned above. These include: 5 points for each new species county record collected (i.e., with proper data, photograph, etc.); 1 point for each phenology record (the first record of each herp species to be documented in the UTC area during Fall 2008); 25 points will be given for a herp based manuscript suitable for publication (i.e., Herpetological Review: Natural history note, Bulletin of the Maryland Herpetological Society, etc.).

HERPETOLOGY (BIO 4XX)
TENTATIVE LECTURE SCHEDULE – FALL 2010

<u>WEEK</u>	<u>TOPIC</u>	
	<u>CHAPTER(S)</u>	
8/18 – 8/22	Int., Tetrapod Relationships & Evolutionary Systematics	Ch. 1
8/25 – 8/29	Anatomy of Amphibians and Reptiles	Ch. 2
9/1	<i>Labor Day Holiday NO CLASS</i>	
9/3 – 9/5	Evolution of Ancient and Modern Amphibians and Reptiles	Ch. 3
9/8 – 9/12	Modes of Reproduction and Parental Care	Ch. 4
9/15 – 9/19	Reproductive Ecology and Life Histories	Ch. 5
9/22 – 9/26	Water Balance and Gas Exchange	Ch. 6
9/29	<i>Midterm - Exam I (includes Ch. 1-6 & 15-17 from gorzugi)</i>	
10/1 – 10/3	Thermoregulation, Performance, and Energetics	Ch. 7
10/6 – 10/10	Spacing, Movements, and Orientation	Ch. 8
10/13 – 10/17	Communication and Social Behavior	Ch. 9
10/20 – 10/21	<i>FALL BREAK- NO CLASS</i>	
10/22 – 10/24	Foraging Ecology and Diets	Ch. 10
10/27 – 10/31	Defense and Escape	Ch. 11
11/3 – 11/7	Population Structure and Dynamics	Ch. 12
11/10 – 11/14	Community Ecology and Geographical Ecology	Ch. 13
11/17 – 11/21	Conservation Biology	Ch. 14
11/24 & 12/1	Conservation Biology Continued, etc.	
12/5	<i>FINAL EXAM (Exam II: Lecture- Ch. 7-14 and Laboratory- Ch. 18-21 from gorzugi) in HOLT 305 from 0800-1000)</i>	

HERPETOLOGY
TENTATIVE LABORATORY SCHEDULE – FALL 2010
Wednesday 1500-1750

<u>WEEK</u>	<u>TOPIC</u> <u>CHAPTER(S)</u>	
8/20	Introduction & Overview A. Methods of Preservation B. Field Notes & Catalog C. Herpetological Literature & Library Assignment D. Doing Science E. An Exercise in Observing F. KSA Take Home Exam	Lab 1a- Literature (10 pts.) Lab 1b- Statistics (10 pts.) Lab 1c- Observation (10 pts.) Lab 1d –KSA (10 pts.)
8/27	Amphibian Diversity and Dichotomous Keys	Lab 2; Powell et al.
9/3	Caecilians and Salamanders	Lab 3; Ch. 15 & 16
9/10	Sex Determination	Lab 4 (10 pts.);
9/17	Frogs	Lab 5; Ch. 17(10pts.) & SREL- Frog Calls
10/1	Life History Techniques & Amphibian Review	Lab 6; Karns Ch.3,(10pts) Measuring & Monitoring
10/8	<i>LABORATORY PRACTICAL I (AMPHIBIANS AND THE ABOVE) in HOLT 318</i>	
10/15	World of Reptiles	Lab 7
10/22	Chelonians & Crocodylians; Anatomy & Vet. Med	Lab 8; Ch. 18 & 19 (10 pts.)
10/29	Reproduction Laboratory	Lab 9 (10 pts.);
11/5	Rhynchocephalia, Lacertilia, Amphisbaenia	Lab 10; Ch. 20
11/12	Serpentes; Defense & Osteology	Lab 11; Ch. 21 Lab 12; Gans, et al, & Romer '54 (10pts.)
11/19	<i>LABORATORY PRACTICAL II (REPTILES AND THE ABOVE) in HOLT 318</i>	

****Note on Laboratory Practicals: The exam has a time limit of 60 minutes to be allotted during the hour of 1505-1605. Materials for the practical will be set up the day BEFORE the exam. Therefore, no material will be made available for students to study the day of the exam OR the night before. All laboratory practical materials will be made available for use during the week from 0900 on Monday to 1100 on Friday. All specimens that are not the PROPERTY of UTC are available for study by appointment only. (THESE ARE THE RULES - NO EXCEPTIONS)****

WARNING: When handling laboratory and museum specimens the utmost care should be taken to prevent any loss or damage. If any laboratory or museum specimens are lost or damaged during this semester, I will revoke all out of class use/privileges and viewing of specimens will be restricted to our scheduled laboratory time.

HERPETOLOGY (BIO 4XX)
TENTATIVE FIELD TRIP SCHEDULE* – FALL 2010

<u>WEEK</u>	<u>TOPIC</u>
10/3 – 10/5	Shawnee National Forest (3-Day Trip)
TBA	UTC Field Classroom
TBA	AZA- Tennessee Aquarium
TBA	AZA- Chattanooga Zoo
TBA	AZA- Knoxville Zoo

FIELD TRIPS: Tentatively we will plan on making three campus/near campus field trips with weather and time permitting. These will occur on selected Saturdays. I will announce the tentative Field Trip(s) 1 week prior to the event-- so listen up and dress appropriately. *Field Trips may be substituted or postponed as the discretion of the professor.

Tentative Exam Schedule:
9/29 Midterm (Lecture Exam I)
10/8 Laboratory Practical I
12/5 Cumulative Final (Exam II Lecture and Laboratory)
11/19 Laboratory Practical II

E) Rationale:

In Herpetology (currently Biology 340), students are introduced to broad based concepts in behavior, ecology, evolution and systematics pertaining to amphibians and non-avian reptiles. In the laboratory, students are also responsible for learning the diversity, distribution, and life-histories of amphibians and reptiles from around the world. The course was originally intended for biology majors seeking a 300-level course. However, the work load involving this course is comparable to any other upper level zoology course that that our department offers at the 400-level for 4 credit hours (i.e., Ichthyology, Mammalogy or Ornithology). For consistency sake, Herpetology (Biology 340) should be offered as a 400-level course because its original catalog description has all of the elements of those 400-level zoology courses, and Herpetology is no less rigorous. Offering Herpetology as a 400 level course clearly designates it as a more challenging course than the current 300-level numbering system would indicate. Furthermore, listing Herpetology as a 400-level course would allow graduate students to enroll in this course and receive graduate credit. To keep Herpetology consistent with our other 400-level zoology courses, the catalog description has been revised and parallels those courses. Also, the laboratory portion of the course has been increased from 2 to 3 hours in an effort to promote agreement and continuity between Ichthyology, Mammalogy, Ornithology and Herpetology. It is important to note that by increasing the laboratory portion of the course from 2 to 3 hours it does not change the number of credits that students earn. It is a 4 credit hour course no matter if the laboratory is 2 or 3 hours. However, to be fair to the students an extra hour in laboratory would provide them more time to master the material. All students taking this course must also have junior standing and at least one 300-level course from the Biology or Environmental Science curriculum. This is done in order to ensure that they already have some experience with upper-level courses, and the junior standing essentially ensures that they will be better equipped to deal with the rigors of Biology 4XX (Herpetology).

F) Consequences of the Proposal:

A change to the catalog description, course number or prerequisites will not impact course enrollment, so no additional sections, space, or staff will be required. The course is taught in alternating years so students and advisors must plan accordingly to ensure that the course can be taken during the student's junior or senior year. The current Instructor of Herpetology (currently Biology 340) has agreed upon and recommends the changes as described above.

G) Impact on Other Departments:

The change should have no effect on other departments.

H) N/A