UNIVERSITY FACULTY SENATE FORMS

Academic Program Approval

This form is a routing document for the approval of new and revised academic programs. Proposing department should complete this form. For more information, call the Faculty Senate Office at 831-2921.

Submitted by: ___Melinda K. Duncan_____phone number__0533___

Action: ____Request for New Concentration in Ecology and Evolution for the M.S. in Biological Sciences

(Example: add major/minor/concentration, delete major/minor/concentration, revise major/minor/concentration, academic unit name change, request for permanent status, policy change, etc.)

Effective term___08J_____

(use format 04F, 05W)

Current degree_____MS _____

(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed change leads to the degrees of: __MS _____

(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed names:___ MS in Biological Sciences with a concentration in Ecology and Evolution; **_____**

Proposed new name for revised or new major / minor / concentration / academic unit (if applicable)

Revising or Deleting:

Undergraduate major / Concentration:_____

(Example: Applied Music – Instrumental degree BMAS)

Undergraduate minor:_____

(Example: African Studies, Business Administration, English, Leadership, etc.)

Graduate Program Policy statement change:__ _____

(Attach your Graduate Program Policy Statement)

Graduate Program of Study:_____

(Example: Animal Science: MS Animal Science: PHD Economics: MA Economics: PHD)

Graduate minor / concentration:_____

List program changes for curriculum revisions:

None, this proposal seeks to codify our ongoing departmental policies at the level of the University.

List new courses required for the new or revised curriculum:

(Be aware that approval of the curriculum is dependent upon these courses successfully passing through the Course Challenge list. If there are no new courses enter "None")

None

Other affected units:
(List other departments affected by this new or revised curriculum. Attach permission from the affected units. If no other unit is affected, enter "None")

None

Rationale:
(Explain your reasons for creating, revising, or deleting the curriculum or program.)

Our department has required all of our graduate students to complete the curricular requirements of a "track" for many years although the track curricular requirements were never approved at the university level. At the request of the Office of Graduate Studies, we submitted our graduate program policy to through the appropriate channels for approval. In February of 2008, it was suggested by the University Graduate Studies Committee that we further revise our curriculum to change the term "Track" to "Concentration" so that the student's curriculum is noted on their transcript. This new proposal is in response to this request by the University graduate studies committee.

Program Requirements:
(Show the new or revised curriculum as it should appear in the Course Catalog. If this is a revision, be sure to indicate the changes being made to the present curriculum.)

See Attached.

ROUTING AND AUTHORIZATION: (Please do not remove supporting documentation.)

Department Chairperson _____ Date _____

Dean of College _____ Date _____

Chairperson, College Curriculum Committee _____ Date _____

Chairperson, Senate Com. on UG or GR Studies _____ Date _____

Chairperson, Senate Coordinating Com. _____ Date _____

Secretary, Faculty Senate _____ Date _____

Date of Senate Resolution _____ Date to be Effective _____

Registrar _____ Program Code _____ Date _____

Vice Provost for Academic Programs & Planning _____ Date _____

Provost _____ Date _____

Board of Trustee Notification _____ Date _____

Revised 11/03/04 /khs

Concentration in Ecology and Evolution

Policy and Curriculum

The prospective student must meet all of the requirements for the M.S. degree in the Department of Biological Sciences, as shown in the departmental Graduate Program Policy. In addition to the departmental requirements, the specific curriculum required for the Ecology and Evolution concentration, for M.S. students is:

Fall, Year One

Course Name(s) and Number(s)	Credits
Graduate level statistics (core)[1]	3
BISC 637 (core)- Population Ecology-	3
BISC 864 or 868[2] - Research	2
BISC 827-[3] - Graduate Research Seminar, course in oral presentation skills (core)	1
Teaching assistantship, development of oral presentation and teaching skills[4]	0

Total: 9 credits

Winter, Year One[5]

Spring, Year One

Course Name(s) and Number(s)	Credits
Graduate level statistics (core)[1]	3
BISC 868 - Research in the laboratory of chosen thesis/dissertation advisor	3
BISC 827 - Graduate Research Seminar, course in oral presentation skills (core)	1
Teaching assistantship, development of oral presentation and teaching skills	0

Total: 7 credits

Summer, Year One

June

Preliminary examination

July and August[5]

2 credits: BISC 868 - Research in the thesis/dissertation laboratory

Fall, Year Two

Course Name(s) and Number(s)	Credits
One graduate level evolution course (core)[6] . .	3
BISC 827 - Graduate Research Seminar, course in oral presentation skills (core)	1
BISC 869[8] – MS thesis	3

Total: 7 credits

Spring, Year Two

Course Name(s) and Number(s)	Credits
BISC 827 - Graduate Research Seminar, course in oral presentation skills (core)	1
BISC 869 - Master's thesis (research, in thesis/dissertation laboratory)	3
elective[7] (core)	3

Total: 7 credits

30 credits total for degree

Notes

1. One year of graduate level statistics, specific courses to be decided in consultation with the major advisor (core).

2.M.S. students are encouraged to identify an advisor without tutorials. In this case, they would register for the appropriate number of BISC 868 credits instead of tutorial research. Such students should also form their thesis committee and have their first meeting by March of the first year.

3. BISC 827 - Graduate Seminar is required every fall and spring semester. Students will present oral summaries of their laboratory tutorials or ongoing research.

3. MS students are not explicitly required to serve as departmental teaching assistants but will do so in most cases.

5. Students are expected to spend winter and summer sessions in full time research towards the thesis

6. Courses at University of Delaware that currently meet this requirement are BISC 656 - Evolutionary Genetics, and CHEM 647 - Biochemical Evolution

7. In consultation with the Advisement Committee, students may elect to take other graduate level courses appropriate to their degree program. These may include but are not limited to: BISC 641 - Microbial Ecology, BISC 660 - Environmental Physiology, ENWC 814 – Advanced Ecology and ENWC 620 – Behavioral Ecology, and a graduate level course in molecular methods.

8. BISC 869 - Master's Thesis, should be taken by M.S. students who have passed the Graduate Preliminary Exam.

9. BISC 801 - Seminar in Ecology and Evolution must be taken whenever it is taught.

If any graduate courses equivalent to those listed above have been taken in previous graduate degree programs and have been accepted as graduate level transfer credit by the University, the transferred courses may be used to satisfy the Concentration requirements with the approval of the Concentration coordinator.

Other courses in addition to those listed above may be taken upon the advice of the student's advisor and thesis/dissertation committee, but these will not substitute for approved electives

The Preliminary Examination

Procedure

Students will be provided with at least four sets of papers from the primary literature selected by faculty from which they must choose one set as the basis for their oral examination. These papers will be available at least six weeks before the exam, usually no later than May 1 [for students admitted in the summer or fall], so that the exam can be administered the second or third week of June. Students admitted in the Spring will usually have paper sets available by December 10 so that the exam can be administered in late January. Four weeks prior to the exam, the student should inform the Concentration coordinator of the chosen paper set and arrange the time of the exam. Prior to the exam, the student should prepare transparencies of all of the figures and tables presented in the papers so that they will available for discussion during the exam.

During the exam, the student will be tested by a committee of four to six faculty on his/her comprehension of all aspects of the paper including background and related information. Students present a 10 minute synopsis of the primary paper, then the examination committee will ask questions pertaining to the paper's background material, methodology, experimental results and their significance, the article's overall significance to the field as well as field specific topics . It therefore is imperative that the student searches and reads the literature for background and related information. While a good starting point is the bibliography at the end of the chosen paper set, it is likely that other primary literature sources will need to be consulted. Prior to the exam, students are encouraged to contact faculty to discuss the topics they are responsible for and to clarify difficult concepts.

Grading

After the oral examination, the examination committee will determine an appropriate grade. Four grades are possible at the initial exam: unconditional pass, conditional pass, re-examination or failure. If the student receives an unconditional pass, the exam was completed satisfactorily and no conditions are applied. In a conditional pass, the student performed marginally in one or more areas and may be asked to complete (with a grade of B or better) one or more courses as a condition for changing the grade to pass. The examination committee may prescribe conditions in addition to, or in lieu of, course enrollment. Once the condition is fulfilled, the student is responsible for informing both the Biology Graduate Program Director and the Concentration Coordinator so that the grade can be changed officially. If the student receives a re-examination, the student's performance was unsatisfactory and the exam should be repeated within three months, but no later than six months after the initial examination. Only one retake will be permitted. This would normally be prior to the start of the fall semester for June examinations, and during Spring break for January examinations. If the student receives a failure, the student's performance strongly indicated an inability to complete an independent research project and the student will be terminated from the Ecology and Evolution concentration without the possibility of a retest. If the student does not perform satisfactorily in a re-examination, the student will be terminated from the Concentration in Ecology and Evolution and recommended to the Graduate Affairs Committee for dismissal from the graduate program.

Once the student passes the preliminary examination, he/she becomes eligible to register for Master’s thesis credit.