



A.) Requested Classification for course  E2  E4  E6

B.) Writing Requirements:

1.) Number of papers, essays, etc. with word count specified. One, 2000 words

2.) Due Dates? Returned with feedback dates? April 7<sup>th</sup>, 2011, April 21<sup>st</sup>, 2011

3.) What type of feedback will be provided the student (in reference to writing skill)?

Grade  Corrections  Drafts  Other

4.) Assessment

a.) Will the written work be evaluated for grammar, punctuation and proper usage of standard written English? YES

b.) Will written work be evaluated for an effectiveness, organization, clarity and coherence of writing? YES

c.) Will a published rubric be used? YES

### III. Syllabus

Courses that offer students General Education and/or Gordon Rule credit must provide clear and explicit information for the students about the classification and requirements.

A.) For courses with a General Education classification, the syllabus should include:

- Statement of the General Education Purpose of the Course with attention to the General Education Classification requested
- List of assigned General Education Student Learning Outcomes
- List of any other relevant Student Learning Outcomes
- List of required and optional texts
- Weekly course schedule with sufficient detail (e.g. topics, assigned readings, other assignments, due dates)

B.) For courses with Gordon Rule (writing) classification, the syllabus should include:

- A description/list of Gordon Rule expectations for students (word count, page lengths and deadlines for assignments).
- A statement to the effect that students written assignments will be evaluated with respect to grammar, punctuation, and usage of standard written English, as well as clarity, coherence, and organization. Reference rubric.

- X A statement indicating that students will receive feedback on written assignments prior to the last class meeting.
- X Assessment note to include basis for grading (rubric) and a statement identifying the two components of the grading, letter grade for course and approved completion of the writing portion of the course.

IV. Submission and Approvals

A.) Submitted by (Signature of Instructor):

*Miriam M. Hay-Roe*

Date 08/19/2010

B.) Department Approval:

*D. Cruse, Director Honors Program*

C.) College Approval: \_\_\_\_\_

D.) Committee Action:  Approved  Denied  Tabled Date \_\_\_\_\_

**General Education and Gordon Rule Descriptions and Assessments**

**I. General Education**

**A. Description of Areas**

**Composition (C)**

Composition courses provide instruction in the methods and conventions of standard written English (i.e., grammar, punctuation, usage) and the techniques that produce effective texts. Composition courses are writing intensive, require multiple drafts submitted to the instructor for feedback prior to final submission, and fulfill 6,000 of the university's 24,000-word writing requirement.

**Diversity (D)**

Diversity courses provide instruction in the values, attitudes and norms that create cultural differences within the United States. These courses encourage you to recognize how social roles and status affect different groups and impact U. S. society. These courses guide you to analyze and to evaluate your own cultural norms and values in relation to those of other cultures, and to distinguish opportunities and constraints faced by other persons and groups.

**Humanities (H)**

Humanities courses provide instruction in the key themes, principles and terminology of a humanities discipline. The courses focus on the history, theory and methodologies used within that discipline, enabling you to identify and to analyze the key elements, biases and influences that shape thought. These courses emphasize clear and effective analysis and approach issues and problems from multiple perspectives.

**International (N)**

International courses provide instruction in the values, attitudes and norms that constitute the culture of countries outside the United States. These courses lead you to understand how geographic location and socioeconomic factors affect these cultures. Through analysis and evaluation of your own cultural norms and values in relation to those held by the citizens of other countries, you will develop a cross-cultural understanding of the rest of the world.

**Mathematical (M)**

Courses in mathematics provide instruction in computational strategies in at least one of the following: solving equations and inequalities, logic, statistics, algebra, trigonometry, inductive and deductive reasoning, and applying these concepts to solving problems. These courses include reasoning in abstract mathematical systems, formulating mathematical models and arguments, using mathematical models to solve problems and applying mathematical concepts effectively to real-world situations.

**IDH 3931 LEPIDOPTERA BIOLOGY**  
**T-R period 8-9 (3:00-4:55 pm)**  
**McGuire Center Conference Room, Florida Museum of Natural History**  
**Spring, 2011**

**Instructor:** Dr. Mirian M. Hay-Roe  
McGuire Center for Lepidoptera and Biodiversity, 2<sup>nd</sup> Floor  
E-mail: mmhr@ufl.edu

**Office Hours,** Friday 3-4 pm or by appointment.

**COURSE DESCRIPTION AND OBJECTIVES**

Lepidoptera, the butterflies and moths, are important indicators of a healthy environment. As development continues, we destroy - perhaps unwittingly in many cases - the habitat they need to find food and rear young. We will use this course in the Biology of Lepidoptera to explore broad biological principles, including evolution, the search for food, mates, and suitable habitats, migration, and conservation. We will look at how insects find and interact with their host plants as food and as suitable places to lay eggs and how plants fight back to avoid being eaten. We will see how natural enemies of moths and butterflies find them, and in turn how moths and butterflies try to avoid being victims of predation. We will discuss how pheromones, chemicals produced by one or both sexes, are used to find mates, and how they can sometimes be used by humans as less toxic ways to prevent crop losses due to insects. Some butterflies are on the endangered species list, and the loss of biodiversity and suitable habitat for butterflies are acute in our developing world, but can be minimized by butterfly gardens, butterfly farming, and education of the public. The class will make visits to the Butterfly Rainforest in the McGuire Center and will learn how museum collections of Lepidoptera are being used in research. Grades will be based upon completion of assigned readings, class attendance, short quizzes, and a term paper relating to the biology of Lepidoptera.

**COURSE REQUIREMENTS:**

Students are expected to be on time for classes. If absence or tardiness is unavoidable, students are expected to e-mail the instructor. Biology of Lepidoptera is a Gordon Rule course, and the writing requirement is 2000 words.

**ATTENDANCE REQUIREMENTS:**

A portion of the grade in the course will be based upon attendance. If the student is absent, he/she cannot contribute to the discussions and questions/answer sessions that will be a part of most classes.

**TEXTBOOK:** No suitable textbook exists. The instructor will provide Powerpoint presentations, handouts, reprints, and other materials during the course.

**READINGS:**

Reading assignments will be made available a week ahead of time.

**COURSE EVALUATION PROCEDURE**

Each Quiz (20 points, x 10 =	200 points
Paper draft	100 points
Final Paper	200 points
Preparedness/participation	50 points
Attendance	50 points
Student presentation	100 points

**Comments on grading system**

**Quizzes:** will consist of 4 to 5 questions. Each quiz will be worth 20 points. Missed quizzes will result in no credits for the quiz in question.

**Final paper draft:** Approximately 3 pages. This is a draft of your final paper and should include a literature review of any topic related to Lepidoptera biology that you are interested in, any topic that you want to investigate further. Why are you interested in the particular issue you chose? What research has been done on this topic? The issue might be something that you, just learned or know little about but want to learn more about by reading and researching the scientific literature. The professor will assist the students in selecting the topic and exploring the literature.

**Final Paper:** Approximately 5 to 6 double spaced pages, 12 point font. Students should read and cite at least 8 to 10 scientific articles related to the topic chosen.

The Writing Requirement (Gordon Rule) allows students to assimilate concepts explored in the course's content areas and to articulate their ideas clearly in standard written English for different audiences and contexts. Your course grade will have two components. To receive writing credit for the required 2000 words, you must earn a grade of C or higher for your writing, and satisfactorily complete the final paper. Each paper will be evaluated for content, organization, grammar, and sentence structure. The professor will provide feedback on each paper with track marked suggestions, corrections, comments, and an indication of the grade for the paper. Personal consultation with students who request aid in writing will be arranged by the professor.

**Student presentation:** should cover the topic of your final paper. The presentation should be 15 to 20 minutes long. Visual aids such as transparencies or a Power point presentation should be used.

A = 620 – 660 points; A- = 594 – 619; B+ = 574 – 593; B = 541 – 573; B- = 522 – 540; C+ = 495 – 539; C = 488 – 538; C- = 455 – 537 points

**COURSE OUTLINE: Some Changes may be desirable or necessary**

<b>DATE</b>	<b>TOPIC &amp; ASSIGNMENTS</b>
Jan 6	Introduction and course overview. Video
Jan 8	External morphology
Jan 13	Internal morphology
Jan 15	Classification, systematics
Jan 20	Collecting and preserving methods
Jan 22	Curating methods. Visit to the McGuire Center Museum collection
Jan 27	Lepidoptera adult diet. Visit to the Butterfly Rainforest in the McGuire Center
Jan 29	Lepidoptera larvae diet. Plant defense.
Feb 3	Herbivore offense. Paper reading and discussion.
Feb 5	Communication by sensorial receptors, tactile, tasting
Feb 10	Semiochemical communication. Pheromones
Feb 12	Visual communication
Feb 17	Communication by sound production. Visit to the McGuire Center Rearing Laboratory
Feb 19	Natural enemies: predators and parasitoid. Guest lecturer- Dr. Robert Meagher
Feb 24	Natural enemies: parasites and pathogens. Guest lecturer- Dr. Drion Boucias.
Feb 26	Physiology A (Structure and hormonal control of cuticle formation -Immune responses and the role of hemolymph)

Mar 3	Physiology B (The evolution and physiology of flight). Guest lecturer- Dr. Jim Nation.
Mar 5	Coevolution
Mar 7-14	<b>SPRING BREAK</b>
Mar 17	Behavior (A) (Coping with predators adaptively, mimicry and crypsis)
Mar 19	Behavior (B) (Sexual selection, parental investment, and species interactions)
Mar 24	Biogeography, variability of Lepidoptera fauna. Guest lecturer- Dr. Keith Wilmott.
Mar 26	Climate adaptations: migration, seasonal variation, diapause <b>PAPER DRAFT DEADLINE</b>
Mar 31	Population biology, biodiversity. <b>Nature walk to the University Natural Area*</b>
Apr 2	Conservation. Guest lecturer- Dr. Jaret Daniels
Apr 7	Butterfly gardening. Guest lecturer- Dr. Marc Minno <b>FINAL PAPER DEADLINE</b>
Apr 9	Student presentation
Apr 14	Student presentation
Apr 16	Student presentation
Apr 21	Student presentation

\*If weather allows.

### University of Florida Policies

**Honesty:** As a result of completing the registration form at the University of Florida, every student has signed the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."

**UF Counseling Services:** Resources are available on-campus for students having personal problems or lacking clear career and academic goals, which interfere with their academic performance. These resources include:

1. University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling;
2. Student Mental Health, Student Health Care Center, 392-1171, personal counseling;
3. Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161, sexual counseling; and
4. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

**Software Use:** All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against the University policies and rules, disciplinary action will be taken as appropriate.

**Disabilities Accommodations:** Students requesting accommodations must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

**BRIEF AUTOBIOGRAPHY:** Dr. Mirian Hay-Roe is a research associate at the McGuire Center for Lepidoptera and Biodiversity. Dr. Hay-Roe has taught several courses at the University of Florida, San Marcos State University and University of Texas at Austin, including ecology and evolutionary biology, genetics, entomology, animal behavior and animal physiology. Dr. Hay-Roe's research studies are broad and have centered primarily on the chemical ecology, behavior, physiology, diversity of tropical butterflies. However, in the last two years her expertise has broadened to include the study of noctuid moths and their interaction with parasitoids in agricultural crops at the U. S. Department of Agriculture, Agriculture Research Service. She has worked with Museum collections and conduct research studies in Peru, Costa Rica, Mexico, and Panama.

A brief narrative explaining your philosophy for the course; that is, what you expect students to gain and why the course is appropriate for the Honors Program

Lepidoptera Biology is a course I specifically designed for the Honors Program. I introduce different topics in science, chemistry, physics using butterflies and moths as a model for teaching science. Butterflies are spectacular insects, which captivate us with their beauty and variety. They are therefore effective in communicating complex scientific ideas to the students and also to the general public, generating popular support for conservation and as the focus of economically sustainable development such as butterfly houses and ecotourism. I use the McGuire Center for Lepidoptera and Biodiversity and the University Natural Area as a teaching laboratory. The students are able to observe and study various aspects of the butterflies' behavior, ecology, physiology and taxonomy to understand important issues in Biological Sciences and Conservation. This course has a writing requirement (Gordon Rule) which requires students to assimilate concepts explored in the course's content areas and to articulate their ideas clearly in standard written English. I initially ask my students to submit a rough draft of the final paper, and I then work with them to produce a polished final version. By correcting draft reports, both the students and I learn what to expect from each other. In addition, I think that students appreciate succeeding at something challenging, especially the analytical thought required to understand and interpret statistical data in scientific literature.

Lepidoptera biology also has an interdisciplinary component, guest lecturers are experts in different areas of biology but they study the Lepidoptera. Honors student from different majors will be learning science and have fun at the same time.