

DAVIDSON COLLEGE OFF-CAMPUS BIOLOGY SEMESTER

Duke University Marine Laboratory—PLUS Fall 2001 Course Descriptions

BIO 314 INVERTEBRATE BIOLOGY

LECTURE: Tu/F 0830-1000 Lab 1 West [one 10-15 minute break around 0930h]

LABORATORY: Tu/F afternoons (in the field at the dictates of wind and tide)

TEXT: INVERTEBRATE ZOOLOGY (6th ed) Ruppert/Barnes

REVIEWS: #1—9/7/01, #2—9/28/01, #3—10/23/01 consisting of short answer (ID's, fill-ins, matching, diagrams etc.) and variable, limited-answer-length essays

FINAL: Scheduled 10/29/01 0830h 3.5 hour, comprehensive, including same balance and question types as reviews

GRADING: $\frac{R-1 + R-2 + R-3 + 2E}{5} + X = \text{Course Grade}$ $X > 0 = \text{possible, positive, participation factor}$

BIO 361 SEMINAR IN CURRENT MARINE ECOLOGICAL LITERATURE

Organizational meeting 8/20/01 at 1000h in Lab 1 to compile list of topics. Each student will select, work up and present 2 papers on different topics during the course. Each Monday (8/27 through 10/15) 4 or 5 presentations (maximum of 45 minutes including discussion) grouped around a common theme, will be covered.

ATTENDANCE: Participation based on preparation is **expected** of all at each seminar.

EVALUATION: Seminar grades will be based equally on the two presentations and on the level and quality of appropriate questions and/or addition of supplementary material to the discussion of other students' topics.

PRESENTATIONS will be evaluated on: familiarity with the paper and background, comprehension of experiment and methodology, organization and clarity; and delivery, based on speech patterns, composure, eye contact with the group, appropriate visual aids and handling of questions and discussion.

BIO 371 INDEPENDENT RESEARCH

Student originated projects will be developed beginning with the research orientation session at 0900h on 8/22/01. From the search for a biologically interesting and appropriate question, hypothesis construction of a plausible answer or explanation and a suitable initial experimental design, this course in guided (**not directed**) independent research will proceed through selection of appropriate techniques, sampling or experimentation, data reduction and analysis, and finish with a 15 minute oral presentation to the rest of the class and the subsequent written research paper in the format of an appropriate journal.

EVALUATION: based on the following:

- I. Project design and conduct of experimental work; appropriate independence but with **at least one** meeting per week (TBA) with me on W or Th; and data quality, analysis, and completeness of conclusions (33%)
- II. The 15 minute oral presentation Saturday, 10/20/01 (10-12 min. for presentation and 3-5 for questions and discussion) evaluated as in the seminar, based on organization and presentation of the project plan, methods, data and conclusions (22%)
- III. The written research paper: in the style of a correct scientific paper (abstract, introduction, methods, results, discussion, conclusions, acknowledgements, literature cited) **DUE** by 1200h on 10/27/01 (45%)

BIO 351 GROUP INVESTIGATION IN APPLIED ZOOGEOGRAPHY

TEXT: BIOGEOGRAPHY AND ADAPTATION; PATTERNS OF MARINE LIFE Geerat Vermeij

Changes in faunal composition of selected habitats at 200 latitude mile increments from Beaufort, NC to the Florida Keys. Each student will be responsible for certain groups of invertebrates, will participate in the group field and lab work of collection and identification, and on or about 11/28/01, will present an oral summary (15-20 minutes) on the changes over the range studied. A short (6-9 pages) paper will consist of a comparison of the results of the class as a whole (compiled from the oral presentations and handouts) with patterns anticipated from the text reading.

EVALUATION: Course grade to be based equally on; level and quality of participation in the group study over the 3-4 weeks; the oral presentation as evaluated in the same manner as the seminars and research presentations; and the written paper, due at my office (Watson 287) at Davidson, by 1700h on 12/10/01.