

**BSC 4205 - Topics in Organismal Diversity: Biodiversity and
Oceanography At Sea
Spring 2017**

3 credits
Prerequisites BSC 1010 + 1011 Preferred ZOO3205C
Online Blackboard Activities: Jan-April
Research Cruise: May 1 st -6 th
Biscayne Bay Campus

Dr. Heather Bracken Grissom Marine Biology Office MSB 353
Office Hours By Appt. Only
305-919-4190
hbracken@fiu.edu

Course Description: This course will provide undergraduate students an at-sea experience where they will 1) plan and organize a major research cruise 2) learn and conduct oceanographic techniques and 3) collect and identify variety of invertebrates and 4) formulate and carry-out an at-sea research project. To enroll students must have previously completed BSC1010, BSC1011, with a grade of C or better. Preference will be given to students who have also completed Invertebrate Zoology 3205C.

Required Material:

Online Assignments will be posted to Blackboard over the course of the semester including required readings.

Course Grading Policy: Grades will be based on the following:

1. Online Assignments: 50%
2. Research report: 25%
3. Final Presentation: 25%

Grading system

**A: 94-100%, A-: 90-93% B+: 87-89% B: 84-86% B-: 80-83%
C+: 77-79% C: 74-76% C-: 70-73% D+: 67-69% D: 64-66% D-: 60-63%
F: <60%**

A student who earns a failing grade based on the total number of points and fails to complete at least 60% of the course requirements will receive a grade of F (F zero). A grade of IN (Incomplete) will only be given in extremely rare circumstances where unusual circumstances occur after the Drop date (see below).

Course Website: Blackboard 4205

Courses materials (schedule details/updates, lecture notes, additional materials, and quiz, problem) will be available on the website. PDFs of powerpoints and required readings will be posted here.

General Course Policies

1. Attendance: Students are expected to come to every class, arrive on time and arrive having learned the material for the week by class time. This class follows standard FIU policy regarding student absence for sickness, religious observations, etc.
2. Plagiarism/Academic Honesty: Students are always expected to abide by the university's policies, particularly those governing academic honesty and plagiarism as they appear in the FIU Student Handbook. Students not familiar with how to avoid plagiarism, will find links to the FIU library tutorials and information in week one of the on-line materials. Additionally, if a student work cites data, research or information that he or she has not generated and which is not general knowledge it must be cited appropriately following one of the disciplinary conventions of the academic disciplines represented by the faculty teaching this course. More information about citation formatting will be provided via Blackboard. Students must become completely familiar with bibliographic styles and citation conventions. If others' work is not cited adequately by a student he or she can be accused of plagiarism, accusations FIU takes very seriously. The instructor reserves the right to use turnitin.com to check work and to alter the syllabus if needed to deter plagiarism. You will be notified of any changes.
3. Personal Electronics.: Cell phones, PDAs, MP3 players, or computers may be used in class only when allowed by the teachers for class-related activities specifically, not for personal use and amusement.
4. Special Needs Students: SNSs should notify the instructor prior to or immediately upon commencement of this course about accommodation needs in accordance with FIU policy.
5. Incomplete Grades: An incomplete grade is a temporary symbol given at the discretion of the instructor for work not completed because of serious interruption not caused by the student's own negligence. An incomplete grade must be made up as quickly as possible, but no later than two consecutive semesters or it will automatically default to the grade the student earned in the course. There is no extension to the two consecutive semester deadline. The student must not register again for the course to make up the incomplete. In order to receive an incomplete for this class, valid documentation must be provided for the reason the student is requesting the incomplete. The reason, again, must be out of the student's control.
6. Questions and Complaints: If a student has a question about the class material, assignment, or other requirement, he or she may call and make an appointment ahead of time. Failure to meet this deadline indicates the student's agreement with the grade received. Instructors' office hours and email contacts will be available and kept up to date.
7. Syllabus Changes:
Please note that the instructor reserves the right to alter the syllabus due to need and emergent circumstances. Students will be advised about any change made to the syllabus, but should also check the website for updates.

Weekly Schedule:

This course will be carried out over 10 weeks during the semester. Each week you will be assigned required readings and/or assignments that will need to be turned in the following week. The semester will end with a research project for which you will develop over the course of the semester, carry out while at-sea, write up a report, and provide a 15-minute presentation. The final project will be a group project with 2-3 members per group.

Week 1: Introduction to Invertebrates and Taxonomy

Activities: Review a series of powerpoints and required readings associated with taxonomy, identification and review of invertebrates

Homework Assignment #1: Curatorial, Taxonomic and Identification Worksheet

Week 2: Oceanographic Techniques at Sea

Activities: Review a series of powerpoints and required reading about oceanographic techniques and equipment.

Homework Assignment #2: Oceanography Worksheet

Lecture #1: Review of Last Week Activities/HW

Week 3: Logistics of planning a major research expedition

Activities: Download OPEN CPN software and familiarize yourself with this software.

Homework #3: Using OPEN CPN and the Global Biodiversity Information Facility to select sampling sites. Each group will be assigned a “taxonomic group” and in a group you will need to plan a cruise track to collect these organisms within an allotted time frame and spatial area.

Lecture #2: Review of Last Week Activities/HW

Week 4: Developing a research project to be carried out at sea: Part 1

Activities: Required reading on developing scientific questions and “the scientific method”

Homework #4: Develop 3 scientific questions and hypotheses as potential topics for research project

Lecture #3: Review of Last Week Activities/HW

Week 5: Developing a research project to be carried out at sea: Part 2

Online Assignment: Required reading on developing materials and methods.

Collection of data while at sea

Activity: Develop materials and methods for final project to be conducted while at sea

Lecture #4: Review of Last Week Activities/HW

Week 6: Cruise Preparation

Activity: Packing and prepping for research cruise

Homework: Prepare all the materials we will need while at sea and for your final

research project

Lecture #5: Review of Last Week Activities/HW and Cruise Logistics

Week 7: At-Sea Cruise

Activity: Participation in Research Cruise, identification of invertebrates with an emphasis on Decapoda, Data collection for research project

Cruise Dates for Spring 2017: May 2nd-5th

Tentative Schedule:

May 1st: Travel to port (Mobilization) Key West, Florida

May 2nd-5th: Cruisin

May 6th: Demobilization and travel home

Week 8/9: Post cruise analysis of data

Activity: Analyze data collected on ship and begin to write post cruise report

Homework: Work on final report and presentations

One-on-one meeting: Discussion of data and report/presentations

Week 10: Report and Presentations

Activity: Turn in cruise reports and give final presentation