BIOL 6000 PALEOLIMNOLOGY
SECTION A
SUMMER SEMESTER 2015
DEPT. OF BIOLOGY;
COLLEGE OF ARTS & SCIENCES;
VALDOSTA STATE UNIV.
CREDIT HOURS: 3

INSTRUCTOR: Dr. Matthew Waters
OFFICE: BSC 1106
OFFICE HOURS – MTWR 11-12
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EMAIL: mwaters@valdosta.edu
LECTURE HOURS: MTWRF 8-10:50 BSC 1025

REQUIRED TEXT: No text required. We will use the primary literature for each topic covered usually by the person who created the technique.

COURSE DESCRIPTION: An overview of reconstructing lake environments from information acquired from sediment cores through biological, geological, and chemical techniques. **Prerequisites: Admission into a Graduate Program at VSU.**

COURSE OBJECTIVES/EDUCATIONAL OUTCOMES:

Valdosta State University (VSU) Department of Biology graduate educational outcomes for this course include: #1 To demonstrate competency in factual content and interpretation of the major biological concept areas of cell and molecular biology, genetics, organismal biology, and evolution and ecology. and #2 To demonstrate the ability to identify significant biological research questions, develop research protocols, and properly analyze research questions through the use of the scientific method.

LECTURE EXAMS

Lecture exams will be essay, short answer, and vocabulary definitions. Exams are not strictly comprehensive, although you will need to know the previous material to answer some questions on the future exam(s). Later topics and concepts build on previously discussed material; thus, the course is much like a story that builds on previous chapters.

COURSE POLICIES

You are expected to attend all lectures, but attendance is not considered in grading policies. If a lecture is missed, **you** are responsible for obtaining any notes and handouts given that day. Reading of the appropriate lecture chapters and any lab materials should be completed prior to coming to class.

GRADING POLICIES/ASSESSMENT

Lecture:

A. Three (3) lecture exams will be given during the semester, including the final exam. The final exam will **not** be strictly comprehensive (as noted earlier). Each exam is worth 100 points **Make-up exams are not an automatic right**; you must notify me within **24** hours of the missed exam, and provide a **valid reason**, or you will forfeit your opportunity for a make-up. The professor is the final judge of what is an acceptable excuse. You can only make up **one** exam.

B. We will read multiple articles from the current literature. I will provide a sheet used to assess the students reading of the papers. These sheets must be turned in at the beginning of the class that the article is discussed and will not be accepted during or after class.

C. Students will be assessed on written responses to short articles provided in class as a blog format. Also, class participation is measured on the student's participation in discussions as well as the timely submission of all materials.

D. Graduate students will give a 30 minute presentation combining 3 related papers in paleolimnology. The presentation will be graded by fellow students and demonstrate a concise and detailed presentation of a particular proxy or problem in paleolimnology. The grade will be used to increase or decrease the graduate student's final average.

Grades:	3 Tests (100 points)	300
	Journal reflection papers	50
	Class Participation	20
	Blog/Journal/short assignments	30
	Grade Total	400

Final grades are determined as a percentage of total points possible (500):
450 and above (90-100%) =A
400-450 (80-89%) =B
350-399 (70-79%) =C
300-349 (60-69%) =D
299 and below (below 60%) =F

Midterm: **May 26th** is the last day to drop the class with a passing grade (W) regardless of your point total. You cannot drop the class after midterm unless there are extenuating circumstances that must be acceptable to the Professor, Biology Department Head, Dean of Arts and Sciences, and the Vice President for Academic Affairs.

Cheating: Don't cheat. If you do, you will fail.

Family Educational Rights and Privacy Act of 1974 (FERPA; also known as the Buckley Amendment): ***By law***, it is not legal to release personal information about an individual to others. This means that grades, averages, test scores, and other information can only be released to that individual; thus, **exam scores, point totals, or final grades will not be issued in any unsecure manner, such as being posted, given verbally via telephone, or emailed. This is to ensure your privacy.** Emails inquiring about the matters listed above will be politely ignored.

Students with Disabilities: Students requiring special classroom accommodations or modifications because of **documented** disabilities should discuss these needs with the professor at the beginning of the semester. Disabled students not registered with the Access Office for Students with Disabilities should contact the program officer. Phone numbers are listed in the Campus Directory.

Discrimination and Sexual Harassment: No student shall engender or create an atmosphere of discrimination based on race, ethnicity, religious beliefs, gender, sexual orientation, or other factors. No student shall sexually harass any individual(s). Discrimination and/or sexual harassment will not be tolerated in the classroom or laboratory.

Plagiarism: The Biology Department policy on plagiarism can be accessed via the departmental website. It should be printed, read, and understood.

***TENTATIVE* LECTURE SCHEDULE AND ASSIGNED PAPERS:**

Sediments and Coring
-Jon Smol Powerpoint from ASLO website (www.aslo.org)
-Fisher et al., 1992; Whitmore et al., 1996

Dating Chronologies and Models
-Appleby, 2001; Schelske et al.1994; Remier et al. 2014

Diatoms and Transfer Functions
-Smol et al. 2005, Dixit et al. 1992, Cuna et al. 2013

Nutrients and Biogeochemistry
-Schelske et al., 2010; Kenney et al., 2002; Brenner et al., 1999

Organic Matter (LOI, isotopes, Lignin, C/N)
-Meyers and Teranes, 2001; Bianchi et al., 2007; Filey et al., 2001

Photosynthetic Pigments
-Leavitt and Hodgson, 2001; Waters et al. 2010; McGowan et al. 2005

Pollen
-Bush et al., 1998; Livingstone 1971; Watts and Hansen, 1994

Charcoal
-Mohr et al. 2000; Rose, 2001

Chironomids
-Porinchu and MacDonald, 2003; Quinlan and Smol, 2001

Macrofossils
-Sayer et al., 2006a, 2006b, 2008

Climate Change
-Hodell et al., 1995; Leyden et al., 1984, Baker et al. 2001

Land Use Change
-Schelske et al. 2005, Pham et al. 2008, Waters et al. 2013