

Syllabus for Biol 7270/6100 - Spring 2008

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Course Title: Reading, Analyzing, and Communicating Scientific Data

Meeting Times: Class will meet 1:50-4:50 PM, Friday afternoons in Room 124, Holland Hall. In addition, students will be required to attend Friday Seminars in Room 102 Holland Hall at 11:30AM-12:30PM on the days that invited speakers visit campus (10 speakers, see attached seminar schedule for name of presenter, topics, meeting place, and times)

Course Focus: **Frontiers in Ecology and Evolutionary Biology**

Readings:

1. Original research articles will be assigned throughout the term.
2. Stop Working and Start Thinking A Guide to becoming a scientist by Jack Cohen and Graham Medley, 2d Edition, 2005, Taylor & Francis; ISBN #0-4153-6830-8- Chapters assigned throughout term.

Course Objectives:

- To critically evaluate the global warming and climate change data
- To gain an understanding of the basic concepts and questions underlying ecology and evolutionary biology
- To demonstrate the ability to prepare for and ask relevant questions regarding approaches, methodologies, and findings of invited speakers during their formal and informal research presentations
- To acquire further insight into careers in fields related to ecology and environmental science

Grading Policy:

- Class Participation
 - 1, Seminar: submit questions before it begins
3 points per set of 3 questions x 10 speakers* 30 points
 2. Chalktalk: Ask questions and participate in discussion 1 point per class x 10 classes 10 points
- Assignments –
 1. Written Summaries: 3 points X 10 speakers* 30 points
 2. Focus The Nation Participation-January 30, 2008 6 points
 3. Brain Blast Participation-March 1, 2008 (optional) 6 points
- Final Exam 30 points

<i>[Total Points Possible]</i>	<i>112 points]</i>
Total Points Counted Towards Grade	100 points

A	100-90%
B	89.9-80%
C	79.9-70%
D	69.9-60%
F	Below 60%

Grade of C and below is unsatisfactory for graduate work

***Please familiarize yourself with the Department of Biology’s Policy on Academic Integrity and adhere to it. No points will be given for plagiarized work. Assignments completed for a different course should not be submitted for a grade in this class.**

Bloom's Taxonomy

Benjamin Bloom created this taxonomy for categorizing level of abstraction of questions that commonly occur in educational settings. The taxonomy provides a useful structure in which to categorize test questions, since professors will characteristically ask questions within particular levels, and if you can determine the levels of questions that will appear on your exams, you will be able to study using appropriate strategies.

Competence	S U B J E C T
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<p>Knowledge</p>	<ul style="list-style-type: none"> • observation and recall of information • knowledge of dates, events, places • knowledge of major ideas • mastery of subject matter • <i>Question Cues:</i> list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.
<p>Comprehension</p>	<ul style="list-style-type: none"> • understanding information • grasp meaning • translate knowledge into new context • interpret facts, compare, contrast • order, group, infer causes • predict consequences • <i>Question Cues:</i> summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
<p>Application</p>	<ul style="list-style-type: none"> • use information • use methods, concepts, theories in new situations • solve problems using required skills or knowledge • <i>Questions Cues:</i> apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover
<p>Analysis</p>	<ul style="list-style-type: none"> • seeing patterns • organization of parts • recognition of hidden meanings • identification of components • <i>Question Cues:</i> analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer
<p>Synthesis</p>	<ul style="list-style-type: none"> • use old ideas to create new ones • generalize from given facts • relate knowledge from several areas • predict, draw conclusions • <i>Question Cues:</i>

	<p>combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite</p>
<p>Evaluation</p>	<ul style="list-style-type: none"> • compare and discriminate between ideas • assess value of theories, presentations • make choices based on reasoned argument • verify value of evidence • recognize subjectivity • <i>Question Cues</i> assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize

* From Benjamin S. Bloom *Taxonomy of educational objectives*.
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Question Submission Format (must be typed).

Questions will only be accepted if submitted *before* the formal seminar on the day of the invited speaker's visit to TSU.

Your Name: _____

Course Number: _____

Date: _____

Name of Speaker: _____

Topic: _____

Question Number 1: *_(as many lines as necessary)_* _____

Reprint Reference: _____

Type of Question based on Bloom's Taxonomy: **_ Knowledge**

Question Number 2: _____

Reprint Reference: _____

Type of Question based on Bloom's Taxonomy: **_ Analysis**

Question Number 3: _____

Reprint Reference: _____

Type of Question based on Bloom's Taxonomy: **_ Evaluation**

WRITTEN SUMMARY: GO TO:
http://www.uaf.edu/csem/ashss/abstract_writing.html#example

Biol 7270/6100 Syllabus

SCHEDULE FOR BIOL 6100 and BIOL 7270 SPRING 2007

- JAN 18 - GRADUATE CLASS MEETS 2-5 PM
Intro to Class and Upcoming Speakers and Intro to “Stop Working and Start Thinking (assigned book for course). Introduce examples of internet sites for written summaries. Review Policy on Academic Integrity.
- JAN 25 - Dr. Katja Schultz –Seminar 11:30-12:30 PM
GRADUATE CLASS 2-5 PM Read pdfs and Chapter 4
- JAN 30 Focus The Nation at 6:45-8:15 PM in Room 102/124, Holland Hall
- FEB 1 - Dr. Melissa Armstrong – SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs and Chapter 3
Dr. James Campbell will speak during Chalktalk
- FEB 8 - Dr. Richard Norby – SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs
Dr. Dafeng Hui will speak during Chalktalk
- FEB 15 - Dr. Tom Byl – SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs and Chapter 5
Panel Discussion with TSU faculty during ChalkTalk
- FEB 22 - Dr. Mike Rosenzweig – SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs
- FEB 29 - Former Mayor, Bill Purcell – SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs
Panel Discussion with TBR and TSU Facility Management RE: Making a Green University
- MAR 1 - Brain Blast at 11AM-3:00PM at the Adventure Science Center, Nashville
- MAR 7 - No Class – Spring Break
- MAR 14 - GRADUATE CLASS 2-5 PM Read Chapters 7 and 9
- MAR 21 - No Class- University Holiday
- MAR 28 - Dr. Sam McNaughton – SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs and Chapter 6
- APR 4 - Dr. Margaret Riley– SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs
- APR 11 - Dr. Phil Ganter – SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs and Chapter 8
- APR 18 - Dr. Dan Simberloff – SEMINAR 11:30-12:30
GRADUATE CLASS 2-5 PM Read pdfs and Chapter 10
- FINALS WEEK: GRADUATE CLASS MEETS DURING SCHEDULED TIME