

## General Oceanography - Geology 105

### Marine Fish Stock Assessment & Management Methods Assignment

**Part I - Quiz - 60 points - See date and time in greensheet**

**Part II - Essay - 120 points - - See greensheet for submission deadline**

#### Assignment Objectives:

1. Students will demonstrate an understanding of the methods and limits of scientific investigation of marine fisheries (Learning outcome #1 under Area R GE courses);
2. Students will read multiple sources, and integrate and synthesize knowledge to address specific questions in a logical, coherent manner without prejudice or bias;
3. Students will use critical thinking skills through an examination of complex, multi-faceted issues in science that impact public policy and economics;
4. Students will meet the Area R writing requirement, which states: "Writing shall be assessed for correctness, clarity, conciseness and coherence. A maximum word limit is in effect on this assignment to meet the "conciseness" requirement.

#### What to Study and Be Prepared to Discuss:

**In this assignment, students will address the following two questions or topics, as described in the required reading assignments and expeditions:**

1. **What are the scientific methods used to estimate the size of a particular fish stock in a region? Each method of stock assessment should be described, including the strengths, difficulties and limitations of these methods, and any disagreements between scientists on the validity of a particular method or theory. (Students should include information on the sampling and assessment techniques, and compare theories and models used by scientists).**
2. **The essay should next describe the relationship of fish stock assessment to effective fish stock management, followed by descriptions of some traditional stock management methods and more recent practices to improve stock management.**

### **Materials to Use in Preparing for this Assignment:**

**In this assignment you will combine information and knowledge gained from:**

- Expeditions 2, 3 and 4 on course web site
- Required reading assignments
  1. Twilight of the Cod
  2. Oceans of Trouble series: Scientists Confounded by nature, politics;
  3. Oceans of Trouble series: Managers maneuver at cliff's edge;
  4. Oceans of Trouble series: Quotas might save both fish and fishers;
  5. Oceans of Trouble series: Bold new 'chaos theory' says fishery experts way off track
  6. New Calif. commercial fishing quota begins Jan. 1

**Students must read the articles listed above.**

### **Components of Assignment - Part I and II**

A common method of writing an essay is to first do some research, which in this case, involves completing the required expeditions and reading assignments in this class, then gather the information to address the required objectives of the assignment.

We will do these activities in two parts:

**Part I - Preparing for Quiz (60 points):** Prior to taking the quiz, students should compose a list of the methods of fish stock assessment and management, and their definitions, as described in reading assignments and web-based expeditions. These definitions will be helpful during a ten-question, very short answer quiz on the identifying the methods of fish stock assessment and management. Students must work alone during the quiz and sharing of information with other student, either before, during or after the quiz, is a violation of the *SJSU Policy on Academic Integrity*.

**Part II - Essay Submission (120 points):** After receiving feedback from Quiz, students will write a double-spaced, 1150 to 1250 word essay that describes the methods of fish stock assessment and management as outlined in the required reading assignments. The minimum word limit is no less than 1100 words and the maximum limit is 1300 words!!! (between 3 and 4 pages, if you use 12 point Arial font and double line spacing). **Count your words when you are done!**

**Do not use any quote from any article in the essay -- use your own words!!! Plagiarism will be dealt with severely! You are to think critically, synthesis and integrate concepts discussed in the required reading assignments. I am looking for quality, not quantity - keep it focused on the questions asked below! Make sure that you provide your own informed, **personal insight** into the essay!**

**Make sure your essay has a title, include your name below the title, AND THE WORD COUNT (number of words in essay).** Call the name of the file "essay\_yourlastname.doc" or "essay\_yourlastname.rtf" depending on the format.

Upload this file to dropbox in course section of Desire2Learn. All uploaded essays are automatically submitted to [www.turnitin.com](http://www.turnitin.com) for an originality check. Remember to upload as a **WORD document (Microsoft Word format ".doc") or in rich text format (.rtf).**

### **Grading Criteria**

GE guidelines now require that writing assignments be assessed for both content and writing style. The point allocation on this assignment will be 60 points for Quiz and 100 points for essay.

As per SJSU GE requirements, essays will be graded for both content (60 points) and writing quality (40 points). **Writing ability shall be assessed for "correctness, clarity, conciseness and coherence."** This is a university requirement.

Essay content will be assessed for quality and appropriateness of introduction, descriptions of each (and all) methods, personal insight, and appropriateness of concluding remarks at end.

Grading criteria for writing quality will include: organization, clarity, grammar, spelling, diction, sentence and paragraph construction, and punctuation.

<b>Content Score</b>		<b>Writing Score</b>	
60-54	Exceptional work beyond the expectations of the assignment; clear comprehension of material; significant personal insight and analysis; clear separation of facts, prejudices, perceptions and speculations; lists all methods discussed in reading assignments, examines the role of ocean science in management	40-36	Well organized presentation; absence of spelling or writing errors; seamless integration of information from multiple sources
53-48	Meets criteria of assignment; precise work indicating full understanding of subject; lists most of methods discussed in reading assignments; some personal insight; omitted one or two key methods	35-32	A few writing and spelling errors; generally well organized
47-42	General conceptual understanding, although some errors in understanding subject; unable to keep prejudices, bias or preconceptions out of work, little or no personal insight; omitted two or three key methods	31-28	Minor writing errors and/or spelling error, organization needs to improve, careless effort, needs spell check
41-0	Omitted three or four key methods; Many errors in general conceptual understanding; poor writing; sloppy	27-0	Poor writing; sloppy organization, many errors

**Make sure that your essay is within the minimum and maximum word length requirements** as there will be penalties for being under the minimum work length and over the maximum word length.

**Examples of point deductions for word length,**

Between 1050-1100 words: 0-5 point deduction

Less than 1100 words: 5-20 point deduction, depending on brevity

More than 1350 words: 0-10 point deduction