Course Change Request

Date Submitted: 02/27/18 1:23 pm

Viewing: **OCNG 252 : Oceanography Laboratory**

Last edit: 02/28/18 1:04 pm

Changes proposed by: ccover

<table>
<thead>
<tr>
<th>Catalog Pages referencing this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Oceanography</td>
</tr>
<tr>
<td>OCNG - Oceanography (OCNG)</td>
</tr>
<tr>
<td>Texas Common Course Numbering System</td>
</tr>
<tr>
<td>University Core Curriculum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS-WFSC-WEC: Wildlife and Fisheries Sciences - BS, Wildlife Ecology and Conservation Option</td>
</tr>
<tr>
<td>BS-ENGS: Environmental Geosciences - BS</td>
</tr>
</tbody>
</table>

Faculty Senate Number

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Thornton</td>
<td><a href="mailto:dthornton@tamu.edu">dthornton@tamu.edu</a></td>
<td>9798454092</td>
</tr>
</tbody>
</table>

Rationale for Course

The proposed changes are part of a routine curriculum review.

Course prefix: OCNG  
Course number: 252

Department: Oceanography
College/School: Geosciences
Academic Level: Undergraduate

Undergraduate course level justification (Select One)

**College/Program Course Level Rubric**

Academic Level: Graduate

Effective term: 2018-2019

Complete Course Title
Oceanography Laboratory

Abbreviated Course Title
OCEANOGRAPHY LAB

Catalog course description

Hands-on laboratory experiments and exercises demonstrating principles of ocean sciences; emphasis on the unique interdisciplinary nature of the ocean and current ocean issues relevant to today's society. Honors sections and contracts are also available.

Prerequisites and Restrictions

Concurrent Enrollment: No
Should catalog prerequisites / concurrent enrollment be enforced? No

Crosslistings: No  
Crosslisted With

In Workflow

1. OCNG Department Head
2. Curricular Services Review
3. GE Committee Preparer UG
4. GE Committee Chair UG
5. GE College Dean UG
6. UCC Preparer
7. UCC Chair
8. Faculty Senate Preparer
9. Provost II
10. President
11. Curricular Services
12. Banner

Approval Path

1. 02/27/18 1:35 pm  
   Shari Yvon-Lewis  (syvon-lewis): Approved for OCNG Department Head

2. 02/28/18 1:04 pm  
   Sandra Williams  (sandra-williams): Approved for Curricular Services Review

3. 03/01/18 10:44 am  
   Roxanna Russell  (rrussell): Approved for GE Committee Preparer UG

4. 03/01/18 10:48 am  
   Christian Brannstrom  (cbranst): Approved for GE Committee Chair UG

5. 03/01/18 10:50 am  
   Christian Brannstrom  (cbranst): Approved for GE College Dean UG

6. 03/05/18 9:07 am  
   Sandra Williams  (sandra-williams): Approved for UCC Preparer

7. 03/09/18 3:35 pm  
   Sandra Williams  (sandra-williams): Approved for UCC Chair
<table>
<thead>
<tr>
<th>Stacked</th>
<th>No</th>
<th>Stacked with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>1</td>
<td>Contact Hour(s) (per week):</td>
</tr>
<tr>
<td>Credit Hour(s)</td>
<td></td>
<td>Lecture: 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other: 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total: 2</td>
</tr>
</tbody>
</table>

Repeatable for credit? No
Three-peat? No
CIP/Fund Code 4006070002
Default Grade Mode Letter Grade (G)
Alternate Grade Modes Satisfactory/Unsatisfactory
Method of instruction Laboratory
Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education) Yes

**Learning Outcomes**

Meets traditional face-to-face learning outcomes.

Describe how learning outcomes are met or provide justification why they are not met.

Learning outcomes are met through a series on online labs delivered via eCampus. The online labs mimic the learning outcomes of the classroom taught laboratories in traditional sections of OCNG 252. The online course covers the same material as the traditional course taught on campus.

**Hours**

Meets traditional face-to-face hours.

Describe how hours are met or provide justification why they are not met.

For the online course, hours are met through class preparation (reading textbook [11 hours]; studying for quizzes [11 hours]) and engagement during class (course lectures [5.5 hours]; completing the labs and reports [27.5 hours]; quizzes [11 hours]). This results in 66 hours of learner time for the 1 credit hour course.

Will this course be taught as a distance education course? Yes

I verify that I have reviewed the FAQ for Export Control Basics for Distance Education. Yes

Is 100% of this course going to be taught in Texas? Yes

Will classroom space be needed for this course? Yes

This will be a required course or an elective course for the following programs:

<table>
<thead>
<tr>
<th>Required (select program)</th>
<th>Program(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(BS-OCNG) Oceanography - BS</td>
<td></td>
</tr>
</tbody>
</table>

Elective (select program)

Has/will this course be(e) submitted for core curriculum consideration? Yes

https://nextcatalog.tamu.edu/courseleaf/approve/
Course Syllabus

Syllabus: Upload syllabus

Upload syllabus  
252_web_syllabus_Summer2018.doc  
face-to-face.pdf

Letters of support or other documentation  
No

Additional information

Reviewer Comments  
Sandra Williams [sandra-williams] (02/27/18 8:30 am): Rollback: You need to attach a traditional syllabus and a non-traditional syllabus (if applicable).


Reported to state?  
No
Course title and number: OCNG 252 Section 501
Term: Spring 2018
Meeting times and location: Eller O&M Room 207, Monday, 9:10am-11:10 am

Course Description and Prerequisites

This course is a lab-based introduction to oceanography topics. There are no prerequisites for this course, but a general understanding of basic math is needed and some familiarity with Microsoft Excel is useful. While this class complements the oceanography 251 lecture course, OCNG 251 and 252 do NOT need to be taken in the same semester. However, many students find OCNG 252 helps them better understand concepts covered in OCNG 251. OCNG 252 may also be taken as a standalone course.

Learning Outcomes

After successfully completing the Introduction to Oceanography lab, students will be able to:

1) Describe the bathymetric variability of the seafloor and how to contour it.
2) Discuss the deposition and transport of sediments in the ocean.
3) Compare the different methods for determining salinity and assess which method is more accurate and precise.
4) Describe how density is determined and the role it plays in ocean circulation.
5) Explain how climate change impacts the ocean.
6) Describe the effects of seasonal variability on the surface ocean and the organisms in it.

Core Objectives

Students will develop critical thinking skills, communication skills, empirical and quantitative skills and teamwork throughout the semester through the following activities:

- Students demonstrate teamwork each week as they work in pairs or groups of four to make the necessary measurements for each lab.
- Students develop empirical and quantitative skills as they individually perform calculations to answer the problems assigned for the lab.
- Students hone critical thinking skills as they use the data and calculations to draw conclusions and answer the text questions.
- Communication skills are fostered as students write up their answers for the lab reports (forms).
Instructor/TA Information

TA Name: Mrs. Jenna Patten
Email address: Newmanj@tamu.edu **best way to contact me
Office hours: Monday 1:30-3:30 pm, Wednesday 12:50-1:50pm or by appointment
Office location: 508AAA, Eller O&M Building

Instructor of Record: Dr. Christina Wiederwohl
Telephone number: 979-845-7191
Email address: chrissyw@tamu.edu
Office location: 411a, Eller O&M Building

Textbook and/or Resource Material

REQUIRED: Oceanography 252 Laboratory Manual (eBook) by C.L. Wiederwohl, 2015. This is provided for free on eCampus.

REQUIRED: iClicker available for purchase at the bookstore if you do not already have one. iClicker 1, iClicker 2, and iClicker + are all acceptable. We will not be using iClicker-REEF or the iClicker mobile app. You must register your clicker here: https://www.iclicker.com/remote-registration-form-for-classic Please enter your UIN as “Student ID”.

Grading Policies

A total grade for each of the 11 labs will be composed by the following:

20% PreLab In Class Clicker Quiz (completed at the beginning of each class)
40% PostLab Online Assignments (completed through eCampus)
40% Forms and Participation

Grades are available at all times on eCampus except when the website is down for routine maintenance, therefore you will know your grade throughout the duration of this course.

If you miss a lab without a university excuse or fail to do make-up work when allowed, you will receive a zero for that lab. Nothing will be accepted late and it is your responsibility to watch due dates for online assignments.

Attendance policy:
If you miss a lab without documentation of a university excused absence or because of improper lab attire (not wearing long pants and closed-toe shoes), all associated assignments (online or forms) will be marked as zero even if completed.

Tardiness:
At the beginning of each class a QUIZ will be given followed by a brief presentation. The quiz will be used to assess your preparedness for the lab. If you miss the start of the quiz, you will not be allowed to complete it and will receive a zero. The presentation will inform you of any safety precautions, necessary procedural changes, equipment instructions or vital background information. You MUST be on time for this presentation. If you miss any part of this presentation, you will not be allowed to complete the lab exercises and no make-up opportunity will be offered.
University Excused Absences: – http://student-rules.tamu.edu/rule07
It is your responsibility to contact the instructor to make up the lab IF you have an excuse. You must turn in the appropriate excuse forms to the instructor before you make up the lab. You are responsible for getting any assignment due in that lab to the instructor before you make up the lab.

Make up labs:
If you miss a lab and have a University Approved Excuse, you will be allowed to make up the lab. Due to the nature of the lab schedule, in most cases you will ONLY be able to make up a lab DURING the SAME week you missed. **You may not simply attend whichever lab you choose, and must set up a makeup time through me.**

If you do not make up the lab during the agreed upon time, you will receive a zero for all associated assignments, including those completed online.

Safety:
In order to enable a safe learning environment, there are 18 cubbies available at the front of the room. ALL personal belongs must be stowed there for the duration of all labs. This includes cell phones, ipods, purses, book bags, etc. Since we are in a laboratory classroom setting, **everyone must wear closed-toe shoes and long pantsskirts for every meeting of this course,** and food and drinks are not allowed in the lab. You can bring track pants, scrub pants or the like and just put them on for the labs and take them off after. For the labs where simple chemicals (weak acid, silver nitrate, potassium chromate) are used, safety goggles, gloves and aprons are provided and must be used. These are kept in the lab, so you are welcome to use them at any other time you would like. The location of other safety equipment (fire extinguisher, broken glass container, eye wash, etc.) found in the lab will be brought to your attention by the instructor.

PreLab Quizzes and PostLab Assignments:
At the beginning of each lab, a clicker PreLab quiz will be given. The questions will generally be based on the lab manual for that lab, though they may contain information learned from previous labs. You should thoroughly read the manual prior to coming to lab. All PostLab Assignments are short, online assignments completed eCampus. The PostLab assignments are to be completed AFTER performing the in-class exercises for each topic. You are NOT permitted to work with anyone on this assignment. These assignments will focus on your understanding of the material presented during the lab exercise.

The PostLab Assignments will become available directly after the end of lab and will be due the following week **1hr before** the start of lab. There are 2 attempts available for each PostLab and the highest grade will be recorded. For each attempt, you will have 2 hours to complete the assignment.

Forms and Participation:
Each week while conducting your exercises you will be required to complete a form. This will include data collected during your exercises as well as answers to questions based upon the exercises. Participation will be lost for various reasons including, but not limited to: tardiness, lack of attentiveness, lack of preparation, and lack of participation in group activities. Failure to clean up your lab area before you leave can also result in the loss of participation points.

**Students will work in pairs or groups of 4 for each lab performing measurements, however all calculations and written lab reports will be done individually. Lab forms should be in your own words (not your lab partner's words).**
Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100-90%</td>
</tr>
<tr>
<td>B</td>
<td>89.99 - 80%</td>
</tr>
<tr>
<td>C</td>
<td>79.99 – 70%</td>
</tr>
<tr>
<td>D</td>
<td>69.99 – 60%</td>
</tr>
<tr>
<td>F</td>
<td>59.99% and below</td>
</tr>
</tbody>
</table>

There will be no rounding. There will be no curve.

Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topic Summary</th>
<th>Required Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/15</td>
<td>No LABS</td>
<td>Syllabus/Clickers/Ebook/eCampus</td>
</tr>
<tr>
<td></td>
<td>The expectations and requirements for this course will be discussed, and students will be introduced to the clickers, eBook (required), and eCampus.</td>
<td>Syllabus</td>
</tr>
<tr>
<td>1/22</td>
<td>Safety: no special Personal Protective Equipment (PPE) required. Isostasy and Rock Density</td>
<td>Isostasy and Rock Density</td>
</tr>
<tr>
<td>1/29</td>
<td>Using simple materials of various densities, the principles behind plate tectonics are revealed. Safety: no special Personal Protective Equipment (PPE) required. Bathymetry</td>
<td>Bathymetry</td>
</tr>
<tr>
<td>2/5</td>
<td>Simple box models show how dynamic the seafloor surface can be. Safety: no special Personal Protective Equipment (PPE) required. Salinity</td>
<td>Salinity</td>
</tr>
<tr>
<td>2/12</td>
<td>NO LABS THIS WEEK Density</td>
<td>Density</td>
</tr>
<tr>
<td>2/19</td>
<td>This fundamental property is measured for almost any study involving the ocean. Here the advantages and disadvantages of common methods will be reviewed. Safety: Silver Nitrate is used for a chemical titration – use caution and wear work clothes in addition to the required provided Personal Protective Equipment (PPE) Salinity</td>
<td>Salinity</td>
</tr>
<tr>
<td>2/26</td>
<td>Salinity and temperature control density, which in turn, drives the major circulation patterns in the ocean. This lab demonstrates this intrinsic physical property. Safety: Dry Ice is used – use the Personal Protective Equipment (PPE) provided. Ocean Circulation</td>
<td>Ocean Circulation</td>
</tr>
<tr>
<td>3/5</td>
<td>Waters of different temperature are used to demonstrate how density differences drive ocean circulation.</td>
<td>Ocean Circulation</td>
</tr>
</tbody>
</table>
**Safety:** Dry Ice is used – use the Personal Protective Equipment (PPE) provided.

3/12

**NO LABS – SPRING BREAK**

**Albedo and Sea Level Rise**

The light energy from the sun warms surface waters and is reflected by ice, but only a fraction reaches depths. Simple globes, tubes of water and earth surface samples provide exercises to study the sun’s effects on the ocean.

**Safety:** no special Personal Protective Equipment (PPE) required

3/19

**Plankton**

Although this group is small in size, almost all life in the oceans depends upon planktonic organisms. Various types will be identified by microscope, drawn or counted.

**Safety:** no special Personal Protective Equipment (PPE) required

3/26

**Seasonality**

The tilt of the earth that causes our seasons also affects the ocean. Simple statistics and color maps clarify how.

**Safety:** no special Personal Protective Equipment (PPE) required

3/26

**Sedimentation**

Different types of deep-sea sediment are examined for origin and age.

**Safety:** no special Personal Protective Equipment (PPE) required

4/2

**Ocean Acidification**

Weak acids demonstrate how carbon dioxide in the air affects the organism in the ocean.

**Safety:** Use the Personal Protective Equipment (PPE) provided.

4/9

**Ocean Pollution**

Simple exercises demonstrate how everyday materials can be harmful to the marine environment.

**Safety:** no special Personal Protective Equipment (PPE) required

4/16

4/23-4/30

**Lab Make-ups**

**There are no Final Exams**

**Americans with Disabilities Act (ADA)**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or
call 979-845-1637. For additional information, visit http://disability.tamu.edu.

**Academic Integrity**
*For additional information please visit: http://aggiehonor.tamu.edu*

“An Aggie does not lie, cheat, or steal, or tolerate those who do.”

**Copyright Notice**
All materials in this class are copyrighted. These materials include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problems sets. Because of these materials are copyrighted, you do not have the right to copy the handouts, unless permission is expressly granted.

**Plagiarism Statement**
As commonly defined, plagiarism consists of passing off as one’s own ideas, words, writing, etc., which belong to another. On accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academics, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.
Course title and number: OCNG 252 (Oceanography Laboratory) WEB section

Term: Summer II 2018

Meeting times and location:
This class is offered online through eCampus. There is no required in-person attendance at any time, and lab exercises can be completed as soon as they are posted. However, please note that completion of this course is paced. This means that quizzes and lab reports are required to be completed by/on a specific date/time, so online attendance throughout the semester is expected, even though in-person attendance is not.

Hardware Requirements:
All course materials will be hosted through eCampus. The computer you use for this course must have a reliable internet connection and work with eCampus. With regard to the scheduled quizzes, please respect Murphy’s Law: your computer might break at the least convenient time! Excuses of hardware failures will not be tolerated in this online course.

Course Description and Prerequisites:
This course is a lab-based introduction to oceanography topics. There are no prerequisites for this course, but a general understanding of basic math is needed and some familiarity with Microsoft Excel is useful. While this class complements the oceanography 251 lecture course, OCNG 251 and 252 do NOT need to be taken in the same semester. OCNG 252 may be taken as a standalone course.

Learning Outcomes:
After successfully completing the Introduction to Oceanography lab, students will be able to:

1) Describe the bathymetric variability of the seafloor and how to contour it.
2) Discuss the deposition and transport of sediments in the ocean.
3) Compare the different methods for determining salinity and assess which method is more accurate and precise.
4) Describe how density is determined and the role it plays in ocean circulation.
5) Explain how climate change impacts the ocean.
6) Describe the effects of seasonal variability on the surface ocean and the organisms in it.

Core Objectives:
Students will develop critical thinking skills, communication skills, empirical and quantitative skills and teamwork throughout the semester through the following activities:

- Students demonstrate teamwork, which includes the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.
• Students develop empirical and quantitative skills as they individually perform calculations to answer the problems assigned for the lab.

• Students hone critical thinking skills as they use the data and calculations to draw conclusions and answer the text questions.

• Communication skills are fostered as students write up their answers for the lab reports (forms).

Instructor Information
Name: Dr. Christina Wiederwohl
Telephone number: 979-845-7191
Email address: chrissyw@tamu.edu (best way to contact me)
Office Hours: Wednesdays 10-11 am or by appointment
Office location: 410, Eller O&M Building

Textbook and/or Resource Material
REQUIRED: Oceanography 252 Laboratory Manual (eBook) by C.L. Wiederwohl, 2015. This is provided for free on eCampus.

Grading Policies
A total grade for each of the 11 labs will be composed by the following:

20% PreLab Online Assignments (completed through eCampus)
40% PostLab Online Assignments (completed through eCampus)
40% Lab forms (completed through eCampus)

Grades are available at all times on eCampus except when the website is down for routine maintenance, therefore you will know your grade throughout the duration of this course.

If you miss a lab without a university excuse or fail to do make-up work when allowed, you will receive a zero for that lab. Nothing will be accepted late and it is your responsibility to watch due dates for online assignments.

Course Structure
This course is offered entirely online via eCampus. Students are expected to complete all components for each lab module. Lab modules will open every Monday at 8am and should be completed by 10pm on the following Sunday.

This lab utilizes adaptive release, meaning you must complete each step to gain access to the next step. Each lab module will contain six steps which must be completed in the following order:

1) Required Reading. Lab chapters containing background material are provided on eCampus.
2) PreLab Quiz. The prelab quiz is a short quiz over the required reading via eCampus.
3) Online mini lecture. Lectures will include a brief overview of the week’s lab topic, as well as any important procedural information.
4) Lab exercises and form. Lab exercises will be conducted via a virtual online laboratory. Each week while conducting your exercises you will be required to complete a form. This will include data collected during your exercises as well as answers to questions based upon the exercises.
5) **PostLab Quiz.** The postlab quiz consists of conceptual questions focusing on your understanding of material learned during the lab exercises. You can access it via eCampus.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100-90%</td>
</tr>
<tr>
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<tr>
<td>F</td>
<td>59.99% and below</td>
</tr>
</tbody>
</table>

**Grading Scale**
There will be no rounding. There will be no curve.

**Contact**
I will communicate with you using your university email address and/or eCampus. The best way to reach me is through email. I will hold office hours twice a week at different times to try to accommodate people’s schedules. For those on campus, you can stop by unannounced during office hours. For those not on campus, you can arrange a WebEx meeting (free conference software available through TAMU) during office hours, I will keep my email open and respond as quickly as possible to requests for videoconferences. For those who cannot make these office hours for valid reasons (taking course from off campus/live in different time zone/work/athletic commitments), please email me and I will arrange for a WebEx session or some other form of live communication.

**Course Topics, Calendar of Activities, Major Assignment Dates**

<table>
<thead>
<tr>
<th>Week of:</th>
<th>Topic Summary</th>
<th>Required Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/2</td>
<td><strong>Syllabus/Ebook/eCampus</strong></td>
<td>Syllabus</td>
</tr>
<tr>
<td></td>
<td>The expectations and requirements for this course will be discussed, and students will be introduced to the online system, eBook (required), and eCampus.</td>
<td></td>
</tr>
<tr>
<td>7/2</td>
<td><strong>Isostasy and Rock Density</strong></td>
<td>Isostasy and Rock Density</td>
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<tr>
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<td>Using simple materials of various densities, the principles behind plate tectonics are revealed.</td>
<td></td>
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<td><strong>Bathymetry</strong></td>
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<tr>
<td></td>
<td>Simple box models show how dynamic the seafloor surface can be.</td>
<td></td>
</tr>
<tr>
<td>7/9</td>
<td><strong>Salinity</strong></td>
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<td>This fundamental property is measured for almost any study involving the ocean. Here the advantages and disadvantages of common methods will be reviewed.</td>
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<td>Salinity and temperature control density, which in turn, drives the major circulation patterns in the ocean. This lab demonstrates this intrinsic physical property.</td>
<td></td>
</tr>
<tr>
<td>7/16</td>
<td><strong>Ocean Circulation</strong></td>
<td>Ocean</td>
</tr>
</tbody>
</table>
Surface currents and deep ocean currents will be examined in this lab. Waters of different temperature are used to demonstrate how density differences drive ocean circulation.

**Sedimentation**

Deep-sea underwater sediment flows are recreated in lab using saltwater solutions with food coloring to distinguish density.

**Albedo and Sea Level Rise**

The light energy from the sun warms surface waters and is reflected by ice, but only a fraction reaches depths. Simple globes, tubes of water and earth surface samples provide exercises to study the sun’s effects on the ocean.

**Plankton**

Although this group is small in size, almost all life in the oceans depends upon planktonic organisms. Various types will be identified by microscope, drawn or counted.

**Seasonality**

The tilt of the earth that causes our seasons also affects the ocean. Simple statistics and color maps clarify how.

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**Ocean Pollution**

Simple exercises demonstrate how everyday materials can be harmful to the marine environment.

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As commonly defined, plagiarism consists of passing off as one’s own ideas, words, writing, etc., which belong to another. On accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academics, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.