USF St. Petersburg
NEW Undergraduate Course Proposal Form
(non-Gen Ed)

Date Submitted | Date/Term Change is Requested to Become Effective
---------------|--------------------------------------
1/13/2012      | Spring 2013

Contact Person | Phone        | Email               
---------------|--------------|---------------------
Melanie Whitmore | (727) 873-4834 | mariedin@mail.usf.edu |

Do the attached changes mirror changes to USF Tampa Curriculum?  No  Yes

Comments: Changes are independent of USF Tampa

Description of Change (attach supporting documents if necessary):
The Biology degree program will offer BOT 4404C **Phycology** as an elective.

Estimated Impact on University Resources:

<table>
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<tr>
<th>Library</th>
<th>Faculty/Staff</th>
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</thead>
<tbody>
<tr>
<td>None</td>
<td>Melanie Whitmore will teach this course as part of her contracted teaching load</td>
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</table>

<table>
<thead>
<tr>
<th>APPROVALS  (if Disapprove, Note and attach Comments)</th>
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<tr>
<td>Title (print name)</td>
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<td>---------------------</td>
</tr>
<tr>
<td>Chair, College Academic Programs Comm.</td>
</tr>
<tr>
<td>College Dean</td>
</tr>
<tr>
<td>Chair, USFSP UGC Committee</td>
</tr>
<tr>
<td>USFSP Regional V.C. Academic Affairs</td>
</tr>
<tr>
<td>Norine E. Noonan</td>
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### 1. Department and Contact Information

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<th>Department</th>
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<td>AP</td>
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<table>
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<tr>
<th>Contact Person</th>
<th>Phone</th>
<th>Email</th>
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</thead>
<tbody>
<tr>
<td>Melanie Whitmore</td>
<td>(727) 873 – 4834</td>
<td><a href="mailto:mariedin@mail.usf.edu">mariedin@mail.usf.edu</a></td>
</tr>
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</table>

### 2. Course Information

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Number</th>
<th>Full Title</th>
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</thead>
<tbody>
<tr>
<td>BOT</td>
<td>4404C</td>
<td>Phycology</td>
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</table>

- Is the course title variable? No
- Is a permit required for registration? No
- Are the credit hours variable? No
- Is this course repeatable for credit? No
- If yes, Maximum Number of Times?
- Maximum Number of Credits?

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Section Type</th>
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<tbody>
<tr>
<td>4</td>
<td>Class Lecture</td>
<td>Regular Grading</td>
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**Total Clock Hours:** Abbreviated Title (30 characters maximum)

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<th>Credit Hours</th>
<th>Section Type</th>
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<tr>
<td>60</td>
<td>Phycology</td>
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### 1. Prerequisites

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<td>BSC 2010 / C-</td>
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<tr>
<td>OR</td>
<td></td>
<td>BSC 2011 / C-</td>
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<tr>
<td>OR</td>
<td></td>
<td>BOT 3015C / C-</td>
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### 2. Co-requisites

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### 3. Registration Restrictions

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<td>Major</td>
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<tr>
<td>Class</td>
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</table>
4. **Course Description (255 character maximum for state submission)**

   An introduction to freshwater and marine algae, their classification, distribution and ecology. Lecture and laboratory. This course is a combined lecture and lab class. A lab fee will be assessed.

5. **Gordon Rule**

<table>
<thead>
<tr>
<th>Does this course meet the <strong>writing</strong> portion of the Gordon Rule?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you indicated &quot;yes&quot; above, specify how the 6,000 words will be covered (exams, papers).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does this course meet the <strong>computation</strong> portion of the Gordon Rule?</td>
<td>Yes</td>
<td>No</td>
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</table>

6. **Justification**

   a. Indicate how this course will strengthen the Undergraduate Program. Is this course necessary for accreditation or certification?

   This taxonomy and ecology course is an elective for Biology majors. It is not necessary for accreditation or certification.

   b. What specific area of knowledge is covered by this course which is not covered by courses currently listed?

   Taxonomy and classification of algae.

   c. What is the need or demand for this course? (Indicate if this course is part of a required sequence in the major.) What other programs would this course service?

   Currently, there is no taxonomic botany course at USFSP. This course satisfies part of that need by providing an introduction to freshwater and marine algae. It will be of practical use for those students planning careers or research in freshwater or marine biology. This course may be of interest to undergraduate students in other programs within the College of Arts and Sciences.

   d. Has this course been offered as Selected Topics/Experimental Topics course? If yes, what was the enrollment?

   No.

   e. How frequently will the course be offered? What is the anticipated enrollment?

   Once every other year in the fall semester until demand requires each year; 24

   f. What effect will this new course have on the program (major, minor, cognate, etc.)?

   This course is an elective for Biology majors, and will enhance the choice of botany electives available to students.

   g. What effect will this new course have on the students currently in the program?

   The biology program is scheduled to begin Fall 2012, so there are currently no students officially in the program.
h. What qualifications for training and/or experience are necessary to teach this course? (List minimum qualifications for the instructor.)

Graduate degree and 18 hours of graduate course credit in biology, with some course work or graduate research in plant biology or aquatic ecology.

7. Other Course Information

A. Objectives

To provide an introduction to the algae, their diversity, taxonomic classification, and their ecology.

B. Learning Outcomes

Students completing this course will be able to: a) identify the key distinguishing factors defining the main freshwater and marine algal groups, b) identify and describe cellular, morphological, physiological, and genetic features of algae, c) discuss algal adaptations to marine and freshwater environments, d) discuss the evolution of algae; e) discuss factors which influence algal ecology and distribution.

a. Major Topics

See Syllabus:
Introduction to Algae; Algal Diversity; Cyanobacteria; Endosymbiotic algae and Euglenoids; Cryptomonads and Haptophytes; Dinoflagellates; Diatoms; Chrysophyceans and other stramenopiles; Red Algae; Green algae – prasinophyceans, Ulvophyceans; Charophyceans; Algal ecology – phytoplankton, periphyton, Macro, and terrestrial algae

b. Textbooks


8. Proposed UG Catalog Language

An introduction to freshwater and marine algae, their classification, distribution and ecology. Lecture and laboratory. This course is a combined lecture and lab class. A lab fee will be assessed.

9. Syllabus

Note: all data in RED represents changes to submitted document to complete and/or correct required information prior to submission.
63. Syllabus

**BOT 4404C – Phycology**

**Instructor:** Melanie Riedinger-Whitmore, Ph.D.
**Class meets:** TR, 12:30-1:45 pm (lecture), R, 2 – 4:45 pm (lab).
**Office hours:** Tuesday 9:30 – 11 am, 2:30- 4 pm, and by appointment.
**Office:** Davis 222  **Phone:** 727-873-4971  **E-mail:** mariedin@stpt.usf.edu

**Course description:** An introduction to freshwater and marine algae, their classification, distribution and ecology. Lecture and laboratory.

**Course prerequisites:** CI. Minimum prerequisites: Completion of BSC 2010, BSC 2011, BOT 3015C.

**Required Texts:**
Note: No current laboratory manual is commercially available for the study of algae. Handouts and Reference books will be available during lab to help with algal identifications and descriptions.

**Course Objectives:** To provide an introduction to the algae, their diversity, taxonomic classification, and their ecology.

**Student Learning Outcomes:** Students completing this course will be able to: a) identify the key distinguishing factors defining the main freshwater and marine algal groups, b) identify and describe cellular, morphological, physiological, and genetic features of algae, c) discuss algal adaptations to marine and freshwater environments, d) discuss the evolution of algae; e) discuss factors which influence algal ecology and distribution.

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**Tentative Schedule**

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<tr>
<th>Date</th>
<th>Readings</th>
<th>Chapter</th>
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<tr>
<td>Week 1</td>
<td>Introduction to Algae</td>
<td>1, 2, 3</td>
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<tr>
<td></td>
<td>Lab: Introduction to microscopes, Morphology of algae</td>
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<tr>
<td>Week 2</td>
<td>Algal Diversity</td>
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Lab: Algal collection and preservation

Week 3
Cyanobacteria

Lab: Cyanobacteria

Week 4
Endosymbiotic algae and Euglenoids

Lab: Euglenoids

Exam 1

Week 5
Cryptomonads and Haptophytes

Lab: Cryptomonads, Haptophytes

Week 6
Dinoflagellates

Lab: Dinoflagellates, Harmful Algal Blooms

Week 7
Diatoms

Lab: Diatoms

Week 8
Chrysophyceans and other stramenopiles

Lab: Stramenopiles, 1st lab practical

Week 9
Continued,

Week 10
Red Algae, Exam 2

Lab: Red algae

Week 11
Green algae - prasinophyceans

Lab: green algae

Week 12
Green algae: Ulvophyceans, etc.

Lab: green algae, continued

Week 13
Charophyceans
Lab: Charophyceans

Week 14
Algal ecology – phytoplankton, periphyton, Macro, and terrestrial algae  
21, 22, 23

Week 15
Review, 2nd lab practical

Week 16
Exam week, 3rd Exam

Examinations
Three lecture exams will be given. Each will be worth 100 points, and will consist of a mixture of short and long essay questions. Two laboratory practical exams will be given, each worth 100 pts. All answers should reflect the student’s own, independent work and writing.

Total exam points = 500.

Research Paper
Each student will develop a small research project investigating some aspect of algal classification, distribution, or ecology. Using data collected throughout the semester, each student will prepare a short (~ 10 page) research paper based on the results of their research. This research paper should have the following sections: introduction, methodology, results (including figures, tables, and illustrations), discussion, conclusion, references cited. Papers should be typed, proofread for errors, and should be written in the student’s own words. The paper is due Week 14. Time will be available during the lab portion of this course for data collection, and analyses. This paper is worth 100 pts.

Course Policies
1) Academic Conduct
All work turned in must be your own, original, independent work. Cheating in any form will not be tolerated, and students suspected of cheating (on an exam, or plagiarizing someone else’s work review paper), will not receive credit for the assignment. Please refer to the USF catalog for information on the university policy on academic dishonesty and its consequences.

2) Attendance
Attendance is required and expected for all lectures and labs. I understand that work or personal obligations might result in a student occasionally missing a lecture or lab. If you miss a class,
you are responsible for obtaining missed handouts, announcements etc. from me or from another student. It is strongly encouraged that students who miss significant blocks of material or who anticipate that they will not be able to arrive on time for class, or must leave class before its scheduled end, consider withdrawing from the course. Excessive unexcused absences (three or more) may result in the lowering of the final grade.

3) Grading
The total course points = 600. The following grading scale will be used in assigning final grades

A+ = 98-100%
A   = 94-97%
A-  = 90-93%
B+  = 87.5-89%
B   = 84-87%
B-  = 80-83%
C+  = 77.5-79%
C   = 74-77%
C-  = 70-73%
D   = 60-69%
F   = < 60%
### Base Course Record

**Subject:** BOT  Botany  
**Course Title:** Phycology  
**Course:** 4404C  
**Term:** 201308  
**College:** Arts and Sciences USFSP  
**Division:**  
**Department:** Biology  
**Status:** Active  
**Approval:**  
**Prerequisite:** 260301 Botany, General  
**Duration:**  

**Hours**  
- **CEU or Credit:** 4.00 CEU  
- **Billing:** 4.00  
- **Lecture:** 4.00  
- **Lab:** None  
- **Other:** None  
- **Contact:** None  

**Repeat Details**  
- **Limit:**  
- **Repeat Status:** NR  

### Course Level Record

**From Term:** 201308  
**Level:** Undergraduate  
**CEU:**  
**Description:**  

**To Term:** 999999
### Grading Mode Record

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### Course Schedule Type Record

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<th>Or</th>
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USF St. Petersburg - New Undergraduate Course Proposal Form

1. Department and Contact Information

<table>
<thead>
<tr>
<th>Tracking Number</th>
<th>Date &amp; Time Submitted</th>
<th>Department</th>
<th>College</th>
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<th>Phone</th>
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<tbody>
<tr>
<td>crossman</td>
<td>7278734143</td>
<td><a href="mailto:crossman@usfsp.edu">crossman@usfsp.edu</a></td>
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2. Course Information

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<tbody>
<tr>
<td>BOT</td>
<td>4404C</td>
<td>Phycology</td>
</tr>
</tbody>
</table>

| Is the course title variable? | N |
| Is a permit required for registration? | N |
| Are the credit hours variable? | N |

<table>
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<th>Credit Hours</th>
<th>Section Type</th>
<th>Grading Option</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>Class Lecture (Primarily)</td>
<td>Regular</td>
</tr>
</tbody>
</table>

Abbreviated Title (30 characters maximum)
Phycology

5. Prerequisites
BSC 2010 / C- OR BSC 2011 / C- OR BOT 3015C / C-

6. Corequisites
none

7. Co-Prerequisites
none

8. Course Description
An introduction to freshwater and marine algae, their classification, distribution and ecology. Lecture and laboratory. This course is a combined lecture and lab class. A lab fee will be assessed.

9. Gordon Rule

Does this course meet the writing portion of the Gordon Rule?
N

If you checked "yes" above, specify how the 6,000 words will be covered (exams, papers).
N/A

Does this course meet the computation portion of the Gordon Rule?
N
10. **Justification**

A. Indicate how this course will strengthen the Undergraduate Program. Is this course necessary for accreditation or certification?

This taxonomy and ecology course is an elective for Biology majors. It is not necessary for accreditation or certification.

B. What specific area of knowledge is covered by this course which is not covered by courses currently listed?

Taxonomy and classification of algae.

C. What is the need or demand for this course? (Indicate if this course is part of a required sequence in the major.) What other programs would this course service?

Currently, there is no taxonomic botany course at USFSP. This course satisfies part of that need by providing an introduction to freshwater and marine algae. It will be of practical use for those students planning careers or research in freshwater or marine biology. This course may be of interest to undergraduate students in other programs within the College of Arts and Sciences.

D. Has this course been offered as Selected Topics/Experimental Topics course? If yes, what was the enrollment?

no

E. How frequently will the course be offered? What is the anticipated enrollment?

Once every other year in the fall semester until demand requires each year;

24

F. Do you plan to drop a course if this course is added? If so, what will be the effect on the program and on the students? (Please forward the nonsubstantive course change form regarding the course to be deleted to the Council secretary.)

no

G. What qualifications for training and/or experience are necessary to teach this course? (List minimum qualifications for the instructor.)

Graduate degree and 18 hours of graduate course credit in biology, with some course work or graduate research in plant biology or aquatic ecology.

11. **Other Course Information**

A. Objectives
To provide an introduction to the algae, their diversity, taxonomic classification, and their ecology.

B. Learning Outcomes

Students completing this course will be able to: a) identify the key distinguishing factors defining the main freshwater and marine algal groups, b) identify and describe cellular, morphological, physiological, and genetic features of algae, c) discuss algal adaptations to marine and freshwater environments, d) discuss the evolution of algae; e) discuss factors which influence algal ecology and distribution.

C. Major Topics

Introduction to Algae; Algal Diversity; Cyanobacteria; Endosymbiotic algae and Euglenoids; Cryptomonads and Haptophytes; Dinoflagellates; Diatoms; Chrysophyceans and other stramenopiles; Red Algae; Green algae prasinophyceans, Ulvophyceans; Charophyceans; Algal ecology phytoplankton, periphyton, Macro, and terrestrial algae

D. Textbooks