

Clackamas Community College

Online Course/Outline Submission System

Date approved: April 19, 2013 Certified General Education Area(s): Science & Computer Science

Section #1 General Course Information**Department:** Sciences**Submitter**

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Course Prefix and Number: BI - 165T

Credits: 4**Contact hours**

Lecture (# of hours): 33

Lec/lab (# of hours):

Lab (# of hours): 33

Total course hours: 66

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Natural History of Tropical Ecosystems**Course Description:**

A field-based lab course studying plants, animals, ecology, geology, and environmental issues of tropical ecosystems. On-site study with varied locations.

Type of Course: Lower Division Collegiate**Reason for the new course:**

Enable students to gain transferable credit for field-based courses in the tropics. Currently we are offering the course under BI-199.

Is this class challengeable?**No**

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

Yes

Check which General Education requirement:

Science & Computer Science

Is this course part of an AAS or related certificate of completion?

No

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: None

Requirements: Instructor consent.

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: No

When do you plan to offer this course?

 Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

No

Will this course appear in the schedule?

No**Student Learning Outcomes:**

Upon successful completion of this course, students should be able to:

1. describe the scientific method and the tools and procedures used in generating hypothesis and solving scientific questions, (SC1) (SC2)
 2. design and run scientific experiments in the field and subsequently analyze and interpret the results, (SC1) (SC2)
 3. apply experimental results to broader ecological topics, (SC1) (SC2) (SC3)
 4. describe tropical ecosystems and their fragile nature,
 5. compare the strategies for plant and animal survival in tropical ecosystems,
 6. summarize the fundamental principles of geology which apply to tropics,
 7. recognize tropical processes and features and then collect and analyze data from field experimentation testing these processes, (SC2)
 8. illustrate the historical and current hydrology of the region being studied,
 9. describe the history of humans in the region and their impacts on the ecosystem, (SC3)
 10. create scientifically accurate field journals to document field observations, experiments and use correct taxonomic language. (SC1) (SC2)
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**AAOT/ASOT GENERAL EDUCATION OUTCOMES
COURSE OUTLINE MAPPING CHART**

Mark outcomes addressed by the course:

- Mark "C" if this course completely addresses the outcome. Students who successfully complete this course are likely to have attained this learning outcome.
- Mark "S" if this course substantially addresses the outcome. More than one course is required for the outcome to be completely addressed. Students who successfully complete all of the required courses are likely to have attained this learning outcome.
- Mark "P" if this course partially addresses the outcome. Students will have been exposed to the outcome as part of the class, but the class is not a primary means for attaining the outcome and assessment for general education purposes may not be necessary.

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

- P**
1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.
 2. Locate, evaluate, and ethically utilize information to communicate effectively.
 3. Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

1. Engage in ethical communication processes that accomplish goals.
2. Respond to the needs of diverse audiences and contexts.
3. Build and manage relationships.

MA: Mathematics Outcomes:

- P**
1. Use appropriate mathematics to solve problems.
- P**
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.
2. Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

1. Apply analytical skills to social phenomena in order to understand human behavior.
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

- S**
1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.
- S**
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

S

3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

CL: Cultural Literacy Outcome

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Outcomes Assessment Strategies:

:

Major Topic Outline:

1. Introduces a wide variety of natural history topics focused on tropical ecosystems.
2. Basic plant and animal communities by on-site field trips to a variety of areas. Important tropical plants are keyed out using reference materials.
3. Required to create cataloged lists and journals documenting all organisms and geologic formations encountered, all experiments done in the field (record and analyze data; discuss strengths and weaknesses of research) and relate to human impacts and conservation.
4. Designed to provide the student with an understanding of:
 - a. The physical components shaping the tropical ecosystem.
 - b. Tropical weathering processes.
 - c. The development of tropical soils and their fragile nature and human impacts on them.
 - d. The development of the present tropical region through its geologic history.
 - e. Plant adaptations to survive in a tropics ecosystem and distribution within the ecosystem.
 - f. Animal diversity and adaptations to survive in a tropical ecosystems.
 - g. Symbiotic relationships found in tropical ecosystems.
 - h. Non-native species and their ecological impacts.
 - i. Historical hydrology and current impacts (create water budgets and estimate human water usage in the area).
 - j. Human impacts on tropical ecosystems to include forestry, mining, water quality/quantity, archeology, and current human impacts.

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course Transferability

Concern over students taking many courses that do not have a high transfer value has led to increasing attention to the transferability of LDC courses. The state currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these questions.

1. Is there an equivalent lower division course at the University?
2. Will a department accept the course for its major or minor requirements?
3. Will the course be accepted as part of the University's distribution requirements?

If a course transfers as an elective only, it may still be accepted or approved as an LDC course, depending on the nature of the course, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

Identify comparable course(s) at OUS school(s)

How does it transfer? (Check all that apply)

:

Provide evidence of transferability: (minimum one, more preferred)

First term to be offered:

Next available term after approval

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