

**CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS**

**COURSE MODIFICATION PROPOSAL**

**Courses must be submitted by October 15, 2014, and finalized by the end of the fall semester to make the next catalog (2015-16) production**

DATE (CHANGE DATE EACH TIME REVISED): DECEMBER 4, 2015

PROGRAM AREA(S): ECON

COURSE NO: 464

**Directions:** All sections of this form must be completed. Use **YELLOWED** areas to enter data. All documents are stand-alone sources of course information.

**1. Indicate Changes and Justification for Each.** [Mark all change areas that apply]

- |  |   |
|--|---|
| <input type="checkbox"/> Course title                                      | <input type="checkbox"/> Course Content                 |
| <input type="checkbox"/> Prefix/suffix                                     | <input type="checkbox"/> Course Learning Outcomes       |
| <input type="checkbox"/> Course number                                     | <input type="checkbox"/> References                     |
| <input type="checkbox"/> Units   | <input type="checkbox"/> GE                             |
| <input checked="" type="checkbox"/> Staffing formula and enrollment limits | <input type="checkbox"/> Other <input type="checkbox"/> |
| <input type="checkbox"/> Prerequisites/Corequisites                        | <input type="checkbox"/> Reactivate Course              |
| <input type="checkbox"/> Catalog description                               |   |
| <input type="checkbox"/> Mode of Instruction                               |   |

**Justification:** The enrollment benchmark has been adjusted to reflect the nature of the course and current budgetary realities. (Please provide justification(s) for each marked item above). Be as brief as possible but use as much space as necessary.]:

**2. Course Information.**

[Follow accepted catalog format.] (Add additional prefixes if cross-listed)

OLD	NEW
Prefix ECON Course# 464 Title <b>NATURAL RESOURCE ECONOMICS</b> Units (3)	Prefix ECON Course# 464 Title <b>NATURAL RESOURCE ECONOMICS</b> Units (3)
3 hours lecture per week	3 hours lecture per week
<input type="checkbox"/> hours blank per week	<input type="checkbox"/> hours blank per week
X Prerequisites: ECON 310 or 329	X Prerequisites: ECON 310 or 329
<input type="checkbox"/> Consent of Instructor Required for Enrollment	<input type="checkbox"/> Consent of Instructor Required for Enrollment
<input type="checkbox"/> Corequisites: <input type="checkbox"/>	<input type="checkbox"/> Corequisites: <input type="checkbox"/>
<b>Catalog Description</b> (Do not use any symbols): Microeconomics and capital theory applied to problems of conserving and managing natural resources. Analysis of public policies affecting renewable and nonrenewable resources including price controls, taxation and leasing. Representative topics include: forestry, fishery, energy, water and mineral economics.	<b>Catalog Description</b> (Do not use any symbols): Microeconomics and capital theory applied to problems of conserving and managing natural resources. Analysis of public policies affecting renewable and nonrenewable resources including price controls, taxation and leasing. Representative topics include: forestry, fishery, energy, water and mineral economics.
General Education Categories: <input type="checkbox"/>	General Education Categories: <input type="checkbox"/>
Grading Scheme (Select one below):	Grading Scheme (Select one below):
X A – F	X A – F
<input type="checkbox"/> Credit/No Credit	<input type="checkbox"/> Credit/No Credit
<input type="checkbox"/> Optional (Student's Choice)	<input type="checkbox"/> Optional (Student's Choice)
Repeatable for up to <input type="checkbox"/> units	Repeatable for up to <input type="checkbox"/> units
Total Completions <input type="checkbox"/>	Total Completions <input type="checkbox"/>
Multiple Enrollment in Same Semester Y/N N	Multiple Enrollment in Same Semester Y/N N
Course Level:	Course Level:
X Undergraduate	X Undergraduate
<input type="checkbox"/> Post-Baccalaureate	<input type="checkbox"/> Post-Baccalaureate
<input type="checkbox"/> Graduate	<input type="checkbox"/> Graduate

### 3. Mode of Instruction (Hours per Unit are defaulted)

Hegis Code(s) \_\_\_\_\_  
(Provided by the Dean)

#### Existing

#### Proposed

	Units	Hours Per Unit	Benchmark Enrollment	Graded		Units	Hours Per Unit	Benchmark Enrollment	Graded	CS No. (filled out by Dean)
Lecture	<b>3</b>	<b>1</b>	<b>25</b>	X	Lecture	<b>3</b>	<b>1</b>	<b>40</b>	X	
Seminar		<b>1</b>			Seminar		<b>1</b>			
Lab		<b>3</b>			Lab		<b>3</b>			
Activity		<b>2</b>			Activity		<b>2</b>			
Field Studies					Field Studies					
Indep Study					Indep Study					
Other blank					Other blank					
Online					Online					

### 4. Course Attributes:

**General Education Categories:** All courses with GE category notations (including deletions) must be submitted to the GE website: <http://summit.csuci.edu/geapproval>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

#### **A (English Language, Communication, Critical Thinking)**

- A-1 Oral Communication
- A-2 English Writing
- A-3 Critical Thinking

#### **B (Mathematics, Sciences & Technology)**

- B-1 Physical Sciences
- B-2 Life Sciences – Biology
- B-3 Mathematics – Mathematics and Applications
- B-4 Computers and Information Technology

#### **C (Fine Arts, Literature, Languages & Cultures)**

- C-1 Art
- C-2 Literature Courses
- C-3a Language
- C-3b Multicultural

#### **D (Social Perspectives)**

#### **E (Human Psychological and Physiological Perspectives)**

UDIGE/INTD Interdisciplinary

Meets University Writing Requirement (Graduation Writing Assessment Requirement)

Meets University Language Requirement

**American Institutions, Title V Section 40404:** Government US Constitution US History  
Regarding Exec Order 405, for more information: <http://senate.csuci.edu/comm/curriculum/resources.htm>

**Service Learning Course** (Approval from the Center for Community Engagement must be received before you can request this course attribute).

**Online Course** (Answer YES if the course is ALWAYS delivered online).



### 5. Justification and Requirements for the Course. [Make a brief statement to justify the need for the course]



OLD

NEW

Natural Resource Economics is a survey course that examines the use of natural resources within our economic system. It examines both renewable (for example, water, renewable energy, forestry and fisheries) and non-renewable resources (coal, crude oil, natural gas and metals). It is an applied intermediate level microeconomics course. It is an elective course in both the Environmental Science and Resource Management major and the Economics minor.

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 Requirement for the Major/Minor  
 Elective for the Major/Minor  
 X Free Elective

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 Elective for the Major/Minor  
 X Free Elective

**Submit Program Modification if this course changes your program.**

**6. Student Learning Outcomes.** (List in numerical order. Please refer to the Curriculum Committee's "Learning Outcomes" guideline for measurable outcomes that reflect elements of Bloom's Taxonomy: <http://senate.csuci.edu/comm/curriculum/resources.htm>. The committee recommends 4 to 8 student learning outcomes, unless governed by an external agency (e.g., Nursing).

Upon completion of the course, the student will be able to:

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OLD	NEW
<ol style="list-style-type: none"> <li>1. Apply optimization techniques to economic problems involving natural resources. (1)</li> <li>2. Perform calculations using the mathematics of finance including compounding and discounting. (1,3)</li> <li>3. Use the tools from the mathematics of finance and economic optimization to determine the optimal usage of natural resources across time. (1,2,3)</li> <li>4. Predict natural resource pricing and usage using supply and demand. (1,2)</li> <li>5. Predict the effects of government policy on natural resource pricing and usage. (1,2)</li> </ol> <p>*Program Learning Goals: 1) Apply economic analysis to evaluate everyday decisions and policy proposals. 2) Propose viable solutions to practical problems in economics. 3) Use empirical evidence to support an economic argument. 4) Conduct statistical analyses of data, and interpret statistical results. 5) Communicate effectively in written, spoken and graphical form about economic issues.</p>	<ol style="list-style-type: none"> <li>1. Apply optimization techniques to economic problems involving natural resources. (1)</li> <li>2. Perform calculations using the mathematics of finance including compounding and discounting. (1,3)</li> <li>3. Use the tools from the mathematics of finance and economic optimization to determine the optimal usage of natural resources across time. (1,2,3)</li> <li>4. Predict natural resource pricing and usage using supply and demand. (1,2)</li> <li>5. Predict the effects of government policy on natural resource pricing and usage. (1,2)</li> </ol> <p>*Program Learning Goals: 1) Apply economic analysis to evaluate everyday decisions and policy proposals. 2) Propose viable solutions to practical problems in economics. 3) Use empirical evidence to support an economic argument. 4) Conduct statistical analyses of data, and interpret statistical results. 5) Communicate effectively in written, spoken and graphical form about economic issues.</p>

**7. Course Content in Outline Form.** (Be as brief as possible, but use as much space as necessary)

**OLD**

*Introduction to Economic Optimizaton*

The three components of economic optimization problems  
 Marginalist decision-making  
 Applications involving the use of natural resources

*Introduction to the Mathmatics of Finance*

Compounding and discounting  
 Applications involving the timing of natural resource usage

*The Model of Markets (Supply and Demand)*

The nature of demand  
 The nature of supply  
 Price and output determination using supply and demand  
 Analysis of government natural resource policy using supply and demand

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*Analysis of Natural Resources (topics may vary, examples listed below)*

Renewable resources

Water

Renewable energy- Solar power, wind power, tidal power and the like

Forestry

Fisheries

Non renewable resources

Onshore and offshore oil and natural gas

Coal

Metals

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**Does this course content overlap with a course offered in your academic program? Yes**

**No**

**X**

**If YES, what course(s) and provide a justification of the overlap.**

**Does this course content overlap a course offered in another academic area? Yes**

**No X**

**If YES, what course(s) and provide a justification of the overlap.**

**Overlapping courses require Chairs' signatures.**

**8. Cross-listed Courses (Please note each prefix in item No. 1)**

**A. List cross-listed courses (Signature of Academic Chair(s) of the other academic area(s) is required).**

**B. List each cross-listed prefix for the course:**

**C. Program responsible for staffing:**

**9. References. [Provide 3-5 references]**

**OLD**

Clark, Colin. *Mathematical Bioeconomics*, 2<sup>nd</sup> edition. Wiley. 1990. (classic reference, advanced)

Howe, Charles. *Natural Resource Economics*. Wiley. 1979. (classic reference)

Muraoka, Dennis. "A Student's Guide to Economic Optimization." 2002.

Muraoka, Dennis. "A Student's Guide to Capital Theory and Intertemporal Choice." 2002.

Nicholson, Walter. *Intermediate Microeconomics and Its Application*, 8<sup>th</sup> Edition. Harcourt. 1999.

Thomas H. Tietenberg, *Environmental and Natural Resource Economics*, 6<sup>th</sup> edition, Addison- Wesley, 2002

**NEW**

Clark, Colin. *Mathematical Bioeconomics*, 2<sup>nd</sup> edition. Wiley. 1990. (classic reference, advanced)

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**10. Tenure Track Faculty qualified to teach this course.**

Prof. Dennis Muraoka

**11. Requested Effective Date or First Semester offered: Fall 2016**

**12. New Resource Requested: Yes No X**

**If YES, list the resources needed.**

**A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)**

**B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)**

**C. Facility/Space/Transportation Needs:**

**D. Lab Fee Requested: Yes No ( Refer to the Dean's Office for additional processing)**

**E. Other.**

**13. Will this course modification alter any degree, credential, certificate, or minor in your program? Yes No X**

**If, YES attach a program update or program modification form for all programs affected.**

Deadline for New Minors and Programs: **October 1, 2014.**

Deadline for Course Proposals and Modifications, and for Program Modifications: **October 15, 2014.**

Last day to submit forms to be considered during the current academic year: **April 1, 2015.**

Jared Barton



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Proposer(s) of Course Modification

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Date

Type in name. Signatures will be collected after Curriculum approval.

# Approval Sheet

## Course: ECON 300 Fundamentals of Economics

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

The CI program review process includes a report from the respective department/program on its progress toward accessibility requirement compliance. By signing below, I acknowledge the importance of incorporating accessibility in course design.

Program Chair		
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Signature

Date

Program Chair		
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Signature

Date

Program Chair		
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Signature

Date

General Education Chair		
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Signature

Date

Center for Intl Affairs Director		
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Signature

Date

Center for Integrative Studies Director		
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Signature

Date

Center for Multicultural Engagement Director		
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Signature

Date

Center for Community Engagement Director		
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Signature

Date

Curriculum Chair		
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Signature

Date

AVP		
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Signature

Date