NEW COURSE PROPOSAL INFORMATION

(Must be submitted for evaluation prior to C & I approval)

Division: **School of Technology & Human Services**

Course Designator: **EHMT 105** Course Title: **EcoMundo: Environmental Technology and Issues**

Same as (course(s) designator(s), ,

Effective Catalog Year: **2000-2001**

I. Curriculum Mix:

A. How does this course fit into the total curricular framework of the college or other departments?

1. **Course is a proposed General Education requirement.**
2. **Course is a substitute requirement for EHMT 100 in the Environmental Technology program.**
3. **Course is proposed to be part of the Baja Studies Certificate Program, Vecinos.**

B. What effect, if any, might this course have on the enrollment in other courses/programs across the college curriculum?

This course is part of the proposed Baja Studies Certificate Program, which will draw additional students to Southwestern College. Otherwise, this course will have no significant impact on other programs.

II. Class Maximum:

A meeting composed of **Robert Evangelista, Teresa Thomas, and ~~Marie Stimpson~~** Margery Stinson and held on **10/18/99** established the following maximum class enrollment: 30

III. Fiscal Impact

A. Staffing:

1. Certificated **One instructor at three LHE**
2. Classified

B. Facility Requirements

1. Room(s):
   a. Lecture [✓] Laboratory [ ] Other [ ]
   b. Presently Available: Yes [✓] No [ ]
2. Capital Outlay/Equipment
   a. Now available in department [✓]
   b. Estimated cost to acquire: ____
3. Supplies
   a. Now available in department [ ]
   b. Estimated cost to acquire: **$500**
4. Library/LRC
   a. Adequate Library support [ ]
   b. Adequate LRC support [ ]
   c. Estimated cost to acquire: **$1,000** [signature] 11/8/99
   Dean/Library/LRC Date
5. Technology Resources (if necessary)
   a. Now available [ ]
   b. Estimated cost to acquire **$4,000** ____________ ________
   Subcommittee E Date

[signature] (pending a source of funding) 10/18/99

Instructional Administrator Date Vice President for Academic Affairs Date

NEW/MODIFIED/ACTIVATED/INACTIVATED COURSE

Division: **School of Technology & Human Services** Date **10/18/99**

Course Designator: **EHMT 105**

Title: **EcoMundo: Environmental Technology and Issues**

Same as (other course(s) designator(s), ,

Effective Catalog Year: **2000-2001**

Faculty Originator: **Robert Evangelista**

New Course [✓]

Course Classification Code: **I2**

Course Modification* [ ]

SAM Classification Code: **D**

Inactivate Course [ ]

Activate Course [ ]

Requires Board Approval:

Units of Credit	From:	To:
Lecture Hours	From:	To:
Laboratory Hours	From:	To:
Degree Status	From:	To:

Prerequisite [ ] (attach change)

Co-requisite [ ] (attach change)

Course Designator: [ ]
From:
To:

Board Approval Not Required:

Course Description	[ ]
Grading Basis	[ ]
Recommended Preparation	[ ]
Other:	

Title: [ ]
From:
To:

Rationale for Modification or Activation or Inactivation:

***NOTE: Attach new or modified course outline for all course modifications.**

Division Dean — Date: 10/18/99

Vice President for Academic Affairs — Date

Academic Senate Vice President — Date

Instructional Office Use Only:

Approved by:

C & I Sub A Date:_____

C& I Committee Date:_____

Governing Board Date:_____

Catalog Number Date:_____

GENERAL INFORMATION

A. Need for course
   1. **This course complements other proposed courses in EcoMundo: Biol 145, 146, 147, & 148. EHMT 105 emphasizes the "brown" side of the environment, while the emphasis in Biol 145, 146, 147, & 148 is on the "green" side of the environment.**
   2. **This course is a component of the Baja Studies Certificate Program, Vecinos.**
   3. **This course will provide an additional general education option in Natural Science, Section B.**
   4. **This course will provide an additional option for students majoring in Environmental Technology.**

B. Specific student population for whom this course is designed
   1. **General population of Southwestern College students**
   2. **Students in Baja Studies Certificate Program, Vecinos**
   3. **Students majoring in Environmental Technology**

C. Parallel courses offered elsewhere in: **(MUST BE COMPLETED)**

   (a) Community Colleges

Course Title	College
Environmental Tech 100	**El Camino Community College**
EnvT 100, Intro to Environmental Tech.	**Imperial Valley College**

   (b) Four-year Institutions

Course Title	College/University
ENVT 200. Intro to Environmental Studies	**Cal State, Hayward**
Pol S 596 Environmental Crisis in Latin America	**San Diego State University**

   ***See attached California College/University Programs in Environmental Sciences, Environmental Technology (waste and pollution technology), Environmental Studies (architectural and environmental design), and Chicano Studies (area and ethnic studies).**

   For vocational courses only:
   Recommended by Advisory Committee: Yes [ ] No [✓]

D. Scheduling Characteristics:
   Fall [ ] Spring [ ] Variable [✓]

E. Check One: Degree applicable [✓] Non Degree applicable [ ]

F. Course Challengeable by Exam: Yes [✓] No [ ]
   If no, rationale:

G. Graduation Requirements
   Recommended for:
   1. Plan A--General Education Requirements for the Associate Degree Under [✓]
   2. Plan B--General Education Breadth Requirements, California State University Under [✓]
   3. IGETC UC/CSU General Education Breadth Requirements, University of California Under [ ]

H. Transferability
   1. Recommended for California State University (course number must be three digits) [✓]
   2. Recommended for University of California (course number must be three digits) [ ]
   3. Non Transferable (course number must be two digits) [ ]
   4. 295 Course Transferable [ ] Non Transferable [ ]

I. FSA (Faculty Service Area Number) **029**

SOUTHWESTERN COLLEGE
COURSE OUTLINE

Division: **School of Technology & Human Services**

Origination Date: **10/18/99**

Modification Date:

Effective Date: **Summer 2000**

Course Designator And Number	Title	Units	Lec	Lab
EHMT 105	**EcoMundo: Environmental Technology and Issues**	**3**	**3**	**0**

Same as (other course(s) designator(s), ,

Grading Basis: **Credit/No Credit Option Available**

Prerequisite:

Co-requisite:

Recommended Preparation:

Course Description & Scope: (50 words or less)
Provides a general overview of environmental issues affecting Mexico and the U.S., with emphasis on Baja California and California. Specific topics include: water and wastewater, air pollution, hazardous waste, Latin America, health effects, laws and regulations, and pollution prevention, with an emphasis on sustainable development in the border region. Field trips included. (Not open to students with credit in EHMT 100.) [CSU]

Measurable Course Objectives and Minimum Standards, as Determined by Standards set by the instructor, at 70% Proficiency for a Grade of "C":

1. Student will **demonstrate, in a written exam, an appreciation and understanding of the history of the environmental movement.**

2. Student will, **through a written exam and essays, identify different types of contaminants that affect human health and the environment in Mexico and the U.S., with emphasis on Baja California, Latin America, and California.**

3. Student will **critically analyze the biological, chemical, and physical interactions of pollutants and draw conclusion(s) from the data.**

4. Student will **compare and contrast Mexican, Latin America, U.S. federal, and California State environmental laws and regulations in classroom discussions, written exams, and/or written essays.**

5. Student will, **through written exam and essays, demonstrate a basic understanding of the effect(s) on environmental protection, and worker health safety of the international agreements between Mexico and the U.S., and Latin America and the U.S.**

EXAM → ASSESSMENT

6. Student will demonstrate, through written exam, knowledge of where to find Mexican, Latin American, U.S. federal, and California state laws and regulations.

7. Student will learn how to do research on Mexican, Latin American, and U.S. environmental protection and occupational health and safety topics, and demonstrate this knowledge in written essays and/or oral reports.

8. Student will identify the chemical components of air pollution, especially those contaminants of concern for Baja California and California, and demonstrate, through written exam, an understanding of the physiological effects of these air pollutants.

9. Student will understand the chemistry of and critically analyze the global implications of stratospheric ozone depletion and global warming as caused by the continued use of chloroflurocarbons and the continued emissions of greenhouse gases respectively, and understand the political and economic ramifications of international treaties designed to mitigate the global damage.

10. Student will identify and describe, in written exam and/or essay, the critical engineering, political, and economic issues of water resources in the arid, but high growth, Southern California, and Northern Baja California Bioregion, and in arid regions of Latin America.

11. Student will list and explain, through written exam, basic physical, chemical, and biological treatment of drinking water and wastewater.

12. Student will demonstrate basic knowledge of the generation and management of hazardous wastes and their effects on human health and the environment in written exams.

13. Student will describe, through classroom discussion and written exam, how the three states of contaminants (solid, liquid, and vapor) can influence its toxicity, mobility, and mitigation.

14. Student will identify, through written exam, the potential route of entry into the human body and the resulting toxicological effects of harmful chemical, biological, and physical agents.

15. Student will demonstrate a basic knowledge of pollution prevention techniques and apply this knowledge to the Maquiladora (offshore assembly industries) in the Baja California/California border region and in Latin America.

16. Student will demonstrate environmental ethics in written essay of a research topic.

17. Student will understand the issues of sustainable development and apply this knowledge to a project concerning the Baja California, California border region, and Latin America.

18. Student will identify and be aware of competencies and skills needed for a variety of career and employment opportunities within the environmental technology field.

Core Content to be Covered in all Sections:

1. Approximately 3 % of course
   Overview and scope of environmental technology. Historical perspective of the environmental movement.

2. Approximately 5.5 % of course
   Sustainable Development in the Border Region of Baja California, California, and Latin America: Water resource, water and wastewater transportation, energy conservation, alternative energy generation, waste management and recycling, food production, population, and the underlying "eco-nomic" principles.

3. Approximately 5.5 % of course
   Research using: Environmental periodicals; Proquest, Academic Index and other data bases; and the Internet at the Southwestern College library. Essay writing including brainstorming, outline development and writing resources at SWC.

4. Approximately 16.5 % of course
   Air Pollution: Pollutants, chemical interactions, physical dispersion, physiological and environmental effects, transboundary issues, and global issues.

5. Approximately 8 % of course
   Water Resources: Meteorological, geographical, and geological patterns; water engineering; water conservation; and water politics and economics in California, Baja California, and Latin America.

6. Approximately 16.5 % of course
   Water and wastewater treatment: Physical, chemical, and biological technologies. Transboundary wastewater issues between Baja California, California, and within Latin America.

7. Approximately 8 % of course
   Solid waste and hazardous waste management in the U.S. and California.

8. Approximately 8 % of course
   Pollution prevention and waste minimization techniques. Application of these techniques for California and Maquiladora (offshore assembly industries.) The economic cost/benefit of pollution prevention.

9. Approximately 4.5 % of course
   Health effects of chemical, biological, and physical agents; routes of exposure; dose-response curves; exposure limits

10. Approximately 4.5 % of course
    Mexican, Latin American, U.S. federal, and California environmental and occupational health and safety laws and regulations.

11. Approximately 20 % of course: Supplemental
    Assessments and/or oral reports

NOTE: For Specific Details, see Instructor's Syllabus.

Method of evaluation to determine if objectives have been met by students:
(Check all that apply)

Exams:

Essay	[✓]	Class Activity	[✓]	Written Assignments	[✓]
Problem Solving Exercise	[ ]	Skill Demonstration	[✓]	Lab Activity	[ ]
Objective Test	[✓]	Oral Assignments	[✓]	Quizzes	[✓]

Other

Instructional Methodology: (Check all that apply)

Lecture	[✓]	Demonstration	[✓]	Discussion	[✓]
Audiovisual	[✓]	Individual Assistance	[✓]	Group Activity	[✓]

Computer Assisted Instruction [✓]

Requires a minimum of three (3) hours of work per unit, including class time [✓]

Required and Major Optional Reading(s), Including Textbook(s) and Software: (Author-last name, first name. Title. Location: Publisher, Year)

Bell, Jim. Achieving Eco-nomic Security On Spaceship Earth. ELSI Publication, 1994.

Southwestern College

CHECKLIST FOR CLASSIFICATION

Course: EHMT 105

Title: EcoMundo: Environmental Technology and Issues

[✓] Degree Credit [ ] Non Degree Credit

			Documentation			
	Yes	No			Yes	No	
GRADE	■	☐	Culminates in a format grade based on uniform standard 55002a6.	Course Proposal	☐	☐	Culminates in a formal grade based on uniform standard 55002c4.
PRE/CO-REQUISITES	■	☐	Language & computation or other entrance skills, if needed, are sufficient for enrollment in Associate Degree level courses 55002a9	Pre- or Co-requisites developed by advisory committee, articulation agreement, sequential course or student data available.	[redacted]		
OUTLINE Objectives Scope Content	■	☐	Common to all students 555002a4	Course Proposal	☐	☐	Common to all students 5502b4
	■	☐	Covered by 55805.5a-e ♦Transfer ♦Non-baccalaureate occupational major ♦If English: 1 level below Engl 115 or less ♦If Math: Algebra or above ♦Equivalent English or Math 55085.5		☐	☐	Prepares students to succeed in types of courses in 55805.5 OR
					☐	☐	One of sequenced series of courses with final objective being the acquisition of such skills OR
	■	☐	Introduces students to the key concept and methods of a discipline (55002a12 "College Level")	Course Outline	☐	☐	A special class the facilitates measurable progress toward an educational goal 56030c OR
					☐	☐	Prepares students for noon-college oriented occupation
					☐		None of the above
QUALITY OF ASSIGN-MENTS	■	☐	Appropriate college level educational materials 55002a 11 & 12	Measurable objectives and/or method of evaluation contained in the course outline.	☐	☐	Measures student performance in terms of stated objective.
	■	☐	Critical Thinking: Requires analysis, synthesis, evaluation &/or problem solving 55002a10.				
QUANTITY OF ASSIGN-MENTS	■	☐	Scope & intensity of work requires independent study outside of class 55002a7	Syllabus and/or course outlines	☐	☐	Specifies amount of student work that must be completed per unit of credit earned 55002b6
	■	☐	Requires a minimum of 3 hrs. of work per week, including class time, per unit of credit 55002a6				
REPEAT-ABILITY	■		Repeatable only under 51000, 55761-3, 56044, 58161, 55002a13	College policy stated in Catalog	☐		Repeatable only under 51000, 55761-3, 56044, 58161, 55002b8

Signatures

Faculty Reviewer: [signature] ☑ Approved ☐ Disapproved

Date 10/18/99

Instructional Administrator [signature] ☑ Approved ☐ Disapproved

Date 10·18·99

C & I Subcommittee 'A': _____ ☐ Approved ☐ Disapproved

Date _____

C & I Committee: _____ ☐ Approved ☐ Disapproved

Date _____

Vice President for Academic Affairs: _____ ☐ Approved ☐ Disapproved

Date _____

Academic Senate President: _____ ☐ Approved ☐ Disapproved

Date _____

Approved by Governing Board: Date _____

OFFICE USE ONLY:

Mailed to Chancellor's Office Date _____

Approved by Chancellor's Office Date _____

☐ COMMENTS ON BACK