

Revised 7/23/07

PROPOSAL SUMMARY AND ROUTING FORM

Proposal Title: **Plastics Sustainability and the Environment (PPET-390)**

Initiating Unit or Individual: Plastics and Rubber Engineering Technology Department

Contact Person's Name: Prof. Ed Muccio e-mail: muccioe@ferris.edu phone: x2965

Date or Term of Proposal Implementation: Jan 2011

- Group I - A – New degree/major or major, redirection of a current offering, or elimination of a degree, major or minor
- Group I - B – New minors or concentrations
- Group II - A – Minor curriculum clean-up and course changes
- Group II - B – New Course
- Group III - Certificates
- Group IV – Off-Campus Programs

Group/Individual	Signature	Date	Vote/Action *
Program Faculty		2-24-10	<u>5</u> Support ___ Support with Concerns ___ Not Support
Department Faculty		2/24/10	___ Support ___ Support with Concerns ___ Not Support
Department Head / Chair		2/24/10	<input checked="" type="checkbox"/> Support ___ Support with Concerns ___ Not Support
College Curriculum Committee		2/25/10	<u>4</u> Support ___ Support with Concerns ___ Not Support
Dean		3/3/10	___ Support ___ Support with Concerns ___ Not Support
University Curriculum Committee			___ Support ___ Support with Concerns ___ Not Support
Senate			___ Support ___ Support with Concerns ___ Not Support
Academic Affairs		3/4/10	<input checked="" type="checkbox"/> Support ___ Support with Concerns ___ Not Support

* Support with Concerns or Not Support must include a list of specific concerns. Votes must be shown for faculty groups. Administrators check appropriate action taken.

To be completed by Academic Affairs		
_____ President (Date Approved)	_____ Board of Trustees (Date Approved)	_____ President's Council (Date Approved)



1. Proposal Summary

(Summary is generally less than one page. Briefly: state what is proposed with a summary of rationale and highlights. Additional rationale may be attached.)

This course is an overview of the issues, concerns, and responsibilities of individuals and companies involved in the development of materials, design of products, manufacturing of products, and consumption of products that utilizes plastics.

New global legislation is being established that impacts all the above. In addition, this course will cover recycling (see attached)

2. Summary of All Course Action Required*

a. Newly Created Courses to FSU:

Prefix	Number	Title
PLTS	390	Plastics Sustainability and the Environment

b. Courses to be deleted From FSU Catalog:

Prefix	Number	Title
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c. Existing Course(s) to be modified:

Prefix	Number	Title
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d. Addition of existing FSU courses to program

Prefix	Number	Title
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e. Removal of existing FSU courses from program

Prefix	Number	Title
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*Contact Senate Secretary or UCC Chair if spaces for additional courses are needed.

NEW COURSE INFORMATION FORM

See Sample – Limit to Two Pages Please

Course Identification:

Prefix:	Number	Title
PPET	390	Plastics Sustainability and the Environment

Course Description:

This is an overview of how plastics and polymer-related materials and products affect the environment. The course introduces impacting global legislation (e.g.WEEE and RoHS) and how it affects plastic product developers, manufacturers, and consumer. Recycling concepts of plastics parts will be reviewed.

New technologies such as biopolymers and biodegradable/photodegradable materials will be highlighted.

There will be a clear separation of truth versus misunderstanding of plastics and the environment

Course Outcomes and Assessment Plan:

Outcomes

1. The Student will be able to differentiate between the variety of polymer materials and plastics applications that both positively and negatively impact the environment
2. The student will be able to list and report on the myriad of recycling activities that are both internal and external to the application of synthetic materials
3. The student will be able to list and describe the variety of regulation both domestic and international that affect the application of polymers and plastic products

Assessments

1. Daily Quizzes
2. Homework Assignments,
3. Projects Assignments
4. Mid and Final Examinations

Instructional Unit Topic Descriptions and Time Allocations

NO.	UNIT TOPIC DESCRIPTION SUMMARY	LECTURE HOURS	
I.	Overview of the State of the Environment	3	
II.	The global status of laws and regulation	2	
III.	Post Consumer issues and concerns	2	
IV.	Design to meet environmental need	2	

V.	Plastic and health: issues and concerns	2	
VI.	Recycling Systems and trends	3	
VII.	Material Identification Issues	2	
VIII.	Material Separations Issues	2	
IX.	Thermoset Recycling Issues	2	
X.	Composite/Heterogeneous material recycling	2	
XI.	Design of recycling systems by product/process segment	2	
XII.	Biodegradation, photodegradation, thermal degradation	2	
XIII.	Exams/Project/field trip(s)	4	
XIV.	TOTAL	30	

CREATE NEW COURSE
Course Data Entry Form

FORM F

Create New Course
Rev. 07/23/07

I. ACTION TO BE TAKEN: CREATE A NEW COURSE

Notes

1. Complete each item in Section I and Section II.
2. If this course is to be used as a prerequisite for other university courses, Form Fs that reflect the prerequisite change must be submitted for those courses as well.

Term Effective (6 digit code only): 201101 (Spring)

II. PROPOSED FOR NEW COURSE: Complete all sections a through r, See manual for clarification.

a. Course Prefix

PPET

b. Number

390

c. Enter Contact Hours per week in boxes.

Lecture 2

LAB

INDEPENDENT Study – Check (x)

Practicum:

Seminar:

d. Course Title: **Plastics Sustainability and the Environment**

e. College Code: COT f. Department Code: PLRU

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: Variable Fixed h. Minimum Credit Hours 2 i. Maximum Credit Hours 2

j. May Be Repeated for Added Credit: Check (x) Yes No

k. Levels: Check (x) Undergraduate Graduate Professional

l. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

m. Does proposed new course replace an equivalent course? Check (x) Yes No

n. Equivalent course: Prefix Number See instructions on Replacement courses.

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

This is an overview of plastics and polymer-related materials and products affect the environment. The course introduces impacting global legislation (e.g. WEEE and RoHS) and how it affects plastic product developers, manufacturers, and consumer. Recycling concepts of plastics parts will be reviewed.

New technologies such as biopolymers and biodegradable/photodegradable materials will be highlighted.

There will be a clear separation of truth versus misunderstanding of plastics and the environment

p. Term(s) Offered: Spring (See instructions for listing.) q. Max. Section Enrollment: 30

r. Prerequisites/Co-requisites/Restrictions: Entry into BS Plastics or Permission

UCC Chair Signature/Date:

_____ / /

Academic Affairs Approval Signature/Date:

Donald F. [Signature] 3/15/10

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE ___ SCADTL ___ SCARRES ___ SCAPREQ ___

Course Outline

Last Revision Date:	
Department Curriculum Committee Chair:	

Course: PPET -390 Plastics Sustainability and the Environment

Credits: 2 Hours

Contacts: 2 Lecture,

Course Description: This is an overview of plastics and polymer-related materials and products affect on the environment. The course introduces impacting global legislation e.g.WEEE (Waster in Electric and Electronic products) and RoHS (Restriction of Hazardous Substances) and how it affects plastic product developers, manufacturers, and consumer. Recycling concepts of plastics parts will be reviewed.
New technologies such as biopolymers and biodegradable/photodegradable materials will be highlighted.
There will be a clear separation of truth versus misunderstanding of plastics and the environment

Course Prerequisites: Entrance in BS in PLTS/PPET or by permission

Required Textbooks:

Required Materials:

Student Learning Outcomes

Students satisfactorily completing this course will achieve/complete/demonstrate...:

1. The Student will be able to differentiate between the variety of polymer materials and plastics applications that both positively and negatively impact the environment
2. The student will be able to list and report on the myriad of recycling activities that are both internal and external to the application of synthetic materials
3. The student will be able to list and describe the variety of regulation both domestic and international that affect the application of polymers and plastic products

Instructional Unit Topic Descriptions and Time Allocations

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XIV.	TOTAL	30	

Learning Outcomes for Each Instructional Unit

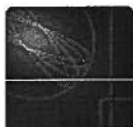
Upon Completion of each instructional unit, the learner will be able to satisfactorily:

I.	Topic: Overview of the State of the Environment A. List what are the factual and fictitious effects of the use of polymeric products
II.	Topic: The global status of laws and regulation A. Describe the domestic and international regulations that impact the plastics industry and related products
III.	Topic: Post Consumer issues and concerns A. Assess the impact of the handling of post-consumer waste by product and material

Ferris State University
College of Technology

Course Outline

IV.	<p>Topic: Design to meet environmental need</p> <p>A. Recognize the variety of product design methodologies the design products that minimize the environmental impact</p>
V.	<p>Topic: Plastic and health: issues and concerns</p> <p>A. List the health concerns relating to polymeric products and the impact of the perception versus valid impact</p>
VI.	<p>Topic: Recycling Systems and trends</p> <p>A. Describe the varieties of techniques (ex RFID) to identify materials for recycling</p> <p>B. Describe several recycling methodologies</p> <p>C. Differentiate between Internal and External Recycling Systems</p>
VII.	<p>Topic: Material Identification Issues</p> <p>A. Develop a comprehensive list of the new technologies and methods for identifying polymers in products</p> <p>B. List and describe new technologies such as nano0identification and RFID</p>
VIII.	<p>Topic: Thermoset Recycling Issues</p> <p>A. Point out the unique problems associated with recycling materials that cannot be remelted or easily reformed</p>
IX	<p>Topic: Composite/Heterogeneous material recycling</p> <p>A. Define the impact of the growing use of heterogeneous composite materials and how their end of life value can be used</p> <p>B. Describe the role of large composite product producers such as Aircraft , Automotive, and Marine in terms of end of life applications</p>
X	<p>Topic: Design of recycling systems by product/process segment</p> <p>A. Create a generic recycling model for use in the post consumer market</p>
XI	<p>Topic: Biodegradation, photodegradation, thermal degradation</p> <p>A. Compare the new biodegradable and photodegradable materials in a recycling scenario</p>
XII	Exams/Project/field trip(s)



Fw: PPET 390: Plastics Sustainability and the Environment

Ronald A Mckean to: Maureen Milzarski
Cc: Thomas E Oldfield, Larry L Schult, Edward Muccio

03/05/2010 05:11 PM

Mo,
Yes the error is on the Form F. Sorry we did not catch this.
It should be a two credit course. Max and Min = 2Cr

Thank you,
Ron

*Ron Mckean, Associate Dean
Ferris State University
College of Engineering Technology
Phone: 231.591.2893
Fax: 231.591.2946*

----- Forwarded by Ronald A Mckean/FSU on 03/05/2010 05:09 PM -----

From: Larry L Schult/FSU
To: Thomas E Oldfield/FSU@Ferris
Cc: Ronald A Mckean/FSU@FERRIS, Donna J Schmidt/FSU@FERRIS
Date: 03/05/2010 04:42 PM
Subject: Re: Fw: PPET 390: Plastics Sustainability and the Environment

Tom,
Out of the two, the outline will be correct. I believe that Ed just didn't change to 2 hours min/max on the Form F, those numbers were left over from when he did a Form F for a previous class. Knowing Ed, the outline will definitely be correct. Will you let Mo know this or do you want me to contact her?
Larry
Thomas E Oldfield/FSU

Thomas E Oldfield/FSU
03/05/2010 04:37 PM

To: Ronald A Mckean/FSU@FERRIS, Larry L
Schult/FSU@FERRIS
cc: Donna J Schmidt/FSU@FERRIS
Subject: Fw: PPET 390: Plastics Sustainability and the Environment

Ron/Larry,

Do you have the answer for Mo? She will make the changes.

Tom

----- Forwarded by Thomas E Oldfield/FSU on 03/05/2010 04:36 PM -----

From: Maureen Milzarski/FSU
To: Thomas E Oldfield/FSU@Ferris
Cc: Geri Johnson/FSU@FERRIS
Date: 03/05/2010 02:21 PM
Subject: PPET 390: Plastics Sustainability and the Environment

Tom, we have a Form F for the above course in our office. Under the Contact Hours this course is noted as having 2 hours lecture (On the Form E there is a total of 30 hours).
For the credit hours, they have a minimum of 3 credit hours and a maximum of 3 credit hours. Do you

want us to correct this to 2?

Mo