

Revised 7/23/07

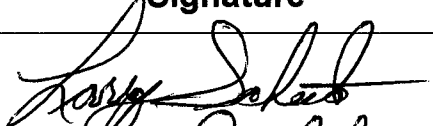
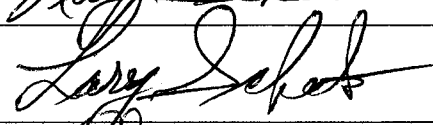
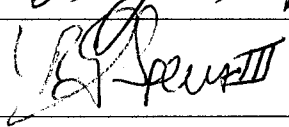
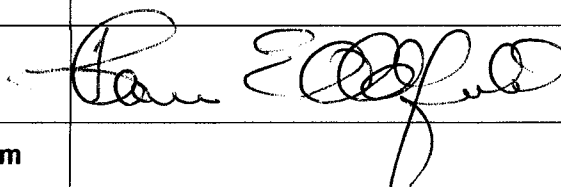

PROPOSAL SUMMARY AND ROUTING FORM

Proposal Title: Introduction To Packaging 390

Initiating Unit or Individual: Plastics Engineering Technology – Larry Schult
Contact Person's Name: Larry Schult e-mail: schultl@ferris.edu phone: 591-5261
Date or Term of Proposal Implementation: Spring '08

*Experimental
course*

- 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		10/31/07	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Department Faculty		10/31/07	<input type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Department Head / Chair		10/31/07	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
College Curriculum Committee			<input type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Dean		11/1/07	<input type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
University Curriculum Committee			<input type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Senate			<input type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Academic Affairs		11/5/07	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> 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)

REC'D NOV 02 2007

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 will provide the plastics student with an overview of plastics uses in the packaging industry. It is intended to be the first course within a proposed new curriculum for plastics packaging. It will cover an overview of the materials, testing/validation issues, applications for, processes used for, and design issues relative to plastics packaging in each of the industrial and consumer products applications. It will also explore available career positions for plastics packaging professionals.

2. Summary of All Course Action Required*

a. Newly Created Courses to FSU:

Prefix	Number	Title
PLTS	390	Introduction To Packaging

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
PLTS	390	INTRODUCTION TO PACKAGING

Course Description:

This is an introductory course in the Plastics Engineering Technology curriculum which is offered as a core plastics class that will satisfy the “Directed Elective” 2-4 credit hour program requirement. The student taking this course will have prior basic knowledge of the processes used in the plastics manufacturing industry. The course is a basic knowledge level course focused at introducing the student to the Plastics Packaging Industry. The course will study current industry trends in packaging design, materials, processing methods, shipping specifications, and pack performance. It will also expose the plastics student to career opportunities within this fast-growing segment of the plastics industry. Plastics material will be compared to other materials and methods used today for the packaging of industrial as well as consumer goods.

Course Outcomes and Assessment Plan:

Each student will be assessed using the following methods: daily quizzes, homework/study assignments, standard unit tests (3 spread across the semester), and a comprehensive written final examination.

Course Outline including Time Allocation:

**FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY
PLASTICS & RUBBER ENGINEERING TECHNOLOGY DEPARTMENT**

COURSE OUTLINE

COURSE TITLE: PLTS390: INTRODUCTION TO PACKAGING

COURSE DESCRIPTION: This is an introductory course in the Plastics Engineering Technology curriculum which is offered as a core plastics class that will satisfy the “Directed Elective” 2-4 credit hour program requirement. The student taking this course will have prior basic knowledge of the processes used in the plastics manufacturing industry. The course is a basic knowledge level course focused at introducing the student to the Plastics Packaging Industry. The course will study current industry trends in packaging design, materials, processing methods, shipping specifications, and pack performance. It will also expose the plastics student to career opportunities within this fast-growing segment of the plastics industry. Plastics material will be compared to other materials and methods used today for the packaging of industrial as well as consumer goods.

NOTE: It is the intent of this outline to structure the course in a logical manner. However, each faculty teaching this course reserves the right to make necessary modifications to reflect issues such as equipment availability, changes in technology, and the needs of the student as time evolves. The topic sequence, time spent per topic, and the methods of delivery are all instructor specific. Evaluation-related activities (i.e. tests, quizzes, etc.) and their time allocation are considered to be a component of the lecture times. However, evaluations, evaluation materials, and specific time allocations are also at the discretion of the faculty member teaching the course.

CREDIT HOURS:	3 SEMESTER HOURS
CONTACT HOURS:	LECTURE: 3 HOURS/WEEK
PREREQUISITES:	INSTRUCTOR ACCEPTANCE/PERMISSION
TEXTBOOK:	NONE
COURSE CAPACITY:	36 STUDENTS IN LECTURE SECTION

COURSE OBJECTIVES:

1) UPON COMPLETION OF THE COURSE THE STUDENT WILL KNOW:

- The basic history and heritage of using plastics for packaging intent
- The major products of and markets of the packaging industry
- Types of job positions that are typical for the degree(s) and salary history
- The chemical make-up of and performance generalities for plastics as they apply to packaging for consumer or industrial use
- The basic testing methods used to evaluate products within their packs
- The industry standards and specifications as they apply to typical types of packaging
- The classifications used within this industry for the major types of packaging materials and products
- The basic process parameters and issues of the processes used to make current packaging types
- General design considerations for products and tooling for the process
- The common terminology of the packaging industry
- The considerations and issues relative to designing packaging for the protection of plastics products
- Current applications for plastics materials and types of packaging products
- Typical working environments and job responsibilities that packaging professionals do on a daily basis

2) THIS COURSE WILL PROVIDE THE TECHNICAL FOUNDATION WHICH WILL ALLOW THE STUDENT TO:

- Build on the basic knowledge the student learned in previous classes
- Prepare for a successful internship within the packaging industry
- Explore the requirements for perusing a successful packaging career
- Grow to higher levels of employment within the industry if starting at an entry level

THE COURSE IS COMPRISED OF THE FOLLOWING UNITS OF INSTRUCTION:

I.	COURSE INTRODUCTION	2 HRS
II.	PACKAGING DEVELOPMENT RATIONALE	2 HRS
III.	PACKAGING MATERIALS EXPLORATION	6 HRS
IV.	ADVANTAGES/DISADVANTAGES/CURRENT ISSUES OF PLASTICS PACKS	3 HRS
V.	TYPES OF AND CLASSIFICATIONS OF INDUSTRIAL PLASTICS PACKAGING	2 HRS
VI.	TYPES OF AND CLASSIFICATIONS OF CONSUMER PLASTICS PACKAGING	5 HRS
VII.	PACKAGING DESIGN OVERVIEW	4 HRS
VIII.	PACKAGING VALIDATION AND TESTING	3 HRS
IX.	PROCESSING METHODS FOR PLASTICS PACKAGING PRODUCTS	6 HRS
X.	AUTOMATION USED WITHIN THE PACKAGING INDUSTRY	2 HRS
XI.	FOOD PACKAGING ISSUES AND PARAMETERS	4 HRS
XII.	PACK IDENTIFICATION ISSUES	2 HR
XIII.	PACKAGING ENVIRONMENTAL ISSUES	3 HRS
XIV.	FINAL EXAM REVIEW	1 HR

NOTE: Time for quizzes, tests, guest speakers, etc. is included within the hour breakdown given.

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): 200801 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
Note: The first four digits indicate year, the next two digits indicate month in which term begins.

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

a. Course Prefix PLTS b. Number 390 c. Enter Contact Hours per week in boxes.
LECTure 3 LAB INDEpendent Study – Check (x)
Practicum: Seminar:
d. Course Title: Introduction To Packaging (Limit to 30 characters/spaces.)

e. College Code: T f. Department Code: PLTS
Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: Variable Fixed h. Minimum Credit Hours 3 i. Maximum Credit Hours 3

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 course introduces the student to the Plastics Packaging Industry. The course will study current industry trends in packaging design, materials, processing methods, shipping specifications, and pack performance. It will also expose the student to career opportunities within this fast-growing industry. Plastics will be compared to other materials and methods used today for the packaging of industrial as well as consumer goods.

p. Term(s) Offered: 200801 (See instructions for listing.) q. Max. Section Enrollment: 30

r. Prerequisites/Co-requisites/Restrictions: (If none, leave blank.) Limited to 100 spaces. Instructor Permission.

UCC Chair Signature/Date: _____

Academic Affairs Approval Signature/Date:

Daniel F. Sticher 10/15/07

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 ___ SCADETL ___ SCARRES ___ SCAPREQ ___

REC'D NOV 02 2007

**FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY
PLASTICS & RUBBER ENGINEERING TECHNOLOGY DEPARTMENT**

COURSE OUTLINE

COURSE TITLE: PLTS390: INTRODUCTION TO PACKAGING

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CREDIT HOURS: 3 SEMESTER HOURS
CONTACT HOURS: LECTURE: 3 HOURS/WEEK
PREREQUISITES: INSTRUCTOR ACCEPTANCE/PERMISSION
TEXTBOOK: NONE
COURSE CAPACITY: 36 STUDENTS IN LECTURE SECTION

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THE COURSE IS COMPRISED OF THE FOLLOWING UNITS OF INSTRUCTION:

I.	COURSE INTRODUCTION	2 HRS
	A. INSTRUCTOR INTRO, AND COURSE RATIONALE	
	B. SYLLABUS OVERVIEW	
	C. PACKAGING INDUSTRY & HISTORY OVERVIEW	
II.	PACKAGING DEVELOPMENT RATIONALE	2 HRS
	A. OBJECTIVES OF PACKAGING	
	B. KEY ELEMENTS OF PACK PERFORMANCE	
III.	PACKAGING MATERIALS EXPLORATION	6 HRS
	A. PAPER AND PAPERBOARD APPLICATIONS	
	B. GLASS APPLICATIONS	
	C. METAL CONTAINER APPLICATIONS	
	D. PLASTICS APPLICATIONS	
	E. DIFFERENTIAL PROPERTIES - CONTRASTS AND COMPARISONS	
IV.	ADVANTAGES/DISADVANTAGES/CURRENT ISSUES OF PLASTICS PACKS	3 HRS
	A. EXTERIOR STRESS REQUIREMENTS	
	B. INNER PACK STRESS ISSUES	
	C. GENERAL INDUSTRY PERFORMANCE REQUIREMENTS	
	D. HEALTH AND SAFETY ISSUES	
V.	TYPES OF AND CLASSIFICATIONS OF INDUSTRIAL PLASTICS PACKAGING	2 HRS
	A. TERMS AND DIFINITIONS	
	B. OUTSIDE CONTAINERS	
	C. INNER DUNNAGE	
	D. STORAGE AND MOVEMENT COMPONENTS (SKIDS/AUTOMATION)	
VI.	TYPES OF AND CLASSIFICATIONS OF CONSUMER PLASTICS PACKAGING	5 HRS
	A. TERMS AND DEFINITIONS	
	B. FILMS, FLEXIBLE PACKS, AND FOILS	
	C. BAGS, SACKS, AND POUCHES	
	D. TUBES AND DRUMS	
	E. CARTONS AND CONTAINERS	
	F. FOAMS	
	G. CLOSURES AND CAPS	
VII.	PACKAGING DESIGN OVERVIEW	4 HRS
	A. NORMAL PLASTICS GUIDELINES	
	B. ISSUES SPECIFIC TO BOXES AND CONTAINERS	
	C. PACK DENSITY CONSIDERATIONS	
	D. CLOSURE AND SEAL DESIGN REQUIREMENTS	
	E. FLUID CONTAINERS/BOTTLE DESIGN	
	F. DUNNAGE DESIGN ISSUES	
VIII.	PACKAGING VALIDATION AND TESTING	3 HRS
	A. LAWS AND REGULATIONS	
	B. LOADS AND STRESSES FOR INDUSTRIAL PACKAGING	
	C. LOADS AND STRESSES FOR CONSUMER PACKAGING	
	D. PERFORMANCE TESTING FOR TYPICAL PRODUCTS	
IX.	PROCESSING METHODS FOR PLASTICS PACKAGING PRODUCTS	6 HRS
	A. PLASTICS PROCESSES OVERVIEW	
	B. PROCESSING METHODS FOR FILMS AND COATINGS	
	C. PROCESSING METHODS FOR SOLID PLASTICS PRODUCTS	
	D. PROCESSING METHODS FOR HOLLOW PLASTICS PRODUCTS	
	E. ASSEMBLY METHODS AND TECHNIQUES	
	F. DECORATION METHODS AND TECHNIQUES	

X.	AUTOMATION USED WITHIN THE PACKAGING INDUSTRY	2 HRS
	A. APPLICATIONS FOR AND USES OF	
	B. AUTOMATION COMPONENTS – STOCK AND CUSTOM	
	C. SYSTEM CONFIGURATIONS FOR AUTOMATION	
XI.	FOOD PACKAGING ISSUES AND PARAMETERS	4 HRS
	A. STERILITY AND RETORT ISSUES	
	B. BLOW/FILL/SEAL APPLICATIONS	
	C. PRESSURIZATION ISSUES/PARAMETERS	
	D. STORAGE GUIDELINES	
XII.	PACK IDENTIFICATION ISSUES	2 HR
	A. LABELS AND LABELING	
	B. INFORMATION REGULATIONS	
	C. COMSUMER AND INDUSTRIAL ISSUES	
XIII.	PACKAGING ENVIRONMENTAL ISSUES	3 HRS
	A. RECYCLING AND CONSUMER WASTE	
	B. POST CONSUMER MATERIALS	
	C. POST CONSUMER PRODUCTS	
	D. MULTI-LAYER PROCESSING FOR REGRIND USAGE	
XIV.	FINAL EXAM REVIEW	1 HR

NOTE: Time for quizzes, tests, guest speakers, etc. is included within the hour breakdown given.