CLEMSON					
UNIVERSITY Curricu	lum and Course Cha	ange Syst	tem - Print Change/Del	ete Course Form	000005
X Change a Course - Abbre		-	J ,		7 9 9 9 9
Corresponding Lab Course:					
Corresponding Honors course:					
Add Honors course:					
Corresponding Graduate cours	se:				
Add Graduate course:					
Course Title: Field Training	in Natural Res				
Brief Statement of Change:	<u>.</u>				
Change from pass/fail course		has move	d from a simple internship)	
to a experiential learning expe	-		,		
reviews which now facilitate a	grade. This had not b	een the c	ase in the past.		
Last Term taught: 201308 C					
Effective Term: 0\$/201\$ C	Change Number to:		Maringan tempat parahan pampan paman paman pampa pamar pamban pamban pamban pamban pamban pamban pamban pamban		
Change Catalog Title: C	hange Transcript T	itle:			•
	m: Field Training in Na	atural Res			
to: to:					
	d Credit: 3 (0,0) To: F				
Change of Credit Variable Cr	•		:: - (-),(-)		
Add cross-listing with the					
Delete cross-listing with		course(s	<u>):</u>		
Reverse Parent/Child rel					
Change Method of Instruction	X Change Course M	iodifier	Change General Edu	cation Designation	
from: to:	: from:	to:	from:	to:	
A-Lecture Only	X Pass/Fail Only		Creative Inquiry	••	
B-Lab (w/fee)	Graded	Х	English Composition		
D-Seminar	Variable Title		Oral Communication	**	
X E-Independent Study	Creative Inquiry	**	Mathematics		
F-Tutorial (w/fee)	Repeatable	••	Natural Science w/Lab		
	maximum credits		Natural Science w/Lab	••	
H-Field course I-Study Abroad	from: to:		Math or Science A&H (Literature)	••	
L-Lab (no/fee)	1		A&H (Non-Literature)	••	
N/B-Lecture/Lab(w/fee)	1		Social Science		
N/L-Lecture/Lab(no fee)	ľ		CCA	41	
			STS	*1	
Change Catalog Descripti	on:		•		
from:					
to:					
Change Prerequisite(s):					
from:					
to:					
Learning Objectives: The st				**	
(1) learn new tasks by acquiri	-			**	
(2) work well with others by w(3) take initiative by taking or	_			entation in journal);	
(4) take classroom knowledge				mino field work that had	heen discussed
the state of the s				ming new work that had	acen discussed
Topical Outline: This is a fiel	d work course and as	such has	/////Abili-		
Evaluation: 90-100=A, 80-89					
The grade is based on evaluat				eflection paper at the end	l of the internship (30%).
and two field training supervis					
Form Originator: PLAYTON,	, .		reated: 1/21/2014		
Form Last Updated by: PLA				3/2014	
Form Number: 6972			,		
Approval					

Date Chair, Undergraduate Curriculum Committee Chair, Department Curriculum Committee Date / Provost

Date

1 of 2

Chair, College Curriculum Committee



🖔 Curriculum and Course Change System - Print Minor Form

000010

Change Minor: Entomology Effective Catalog Year:

- .. Change Minor Name to:
- X Change Minor Requirements:

Current Catalog Description: A minor in Entomology requires ENT (BIOL) 3010 and 12 credits in entomology courses at the 3000 level or higher.

Proposed Catalog Description: A minor in Entomology requires ENT (BIOL) 3010 and 12 credits in ENT or IPM courses at the 3000 level or higher.

Summary/ Explanation: Integrated Pest Management (IPM) is an essential component of Applied Entomology and we deem it necessary to add this option to the minor requirements.

Form Originator: PAGUDEL, Agudelo, Paula Date Form Created: 1/14/2014

Form Last Updated by: PAGUDEL, Agudelo, Paula Date Form Last Updated: 1/14/2014

Form-Number: 6951

Approval			
Alan R. Joh	2/28/14	Parice W. Merchan	4412014
Chair, Department Curriculum Committee 1	Date	Chair, Undergraduate Curriculum Committee	Date
Faturat Kay tor	2/26/4		
Department Chair \	Date	Chair, Graduate Curriculum Committee	Date
Robert D. Kosinski	3/24/14	Nadi Me Aved	7/8/14
Chair, College Curriculum Committee	Date	Provost	Date
Led Whiteners	3/24/14	James P. Clements	7/11/14
College Dean	Date	Prodident	Date

CLEMSON

Curriculum and Course Change System - Print Minor Form

00001

Add Minor: Precision Agriculture

Effective Catalog Year: 201\$

Catalog Description: A minor in Precision Agriculture requires AGM 2060 and 4100; and FOR 4340 or GEOL 4210; and at least nine credit hours selected from the following: CSEN 4210, 4220, 4230, 4260, 4330, 4460, or 4520; ENT 4070; FOR 4330; IPM 4010; or APEC 3020 or 4020, ------Justification/Summary: Precision Agriculture includes a collection of emergent technology-based management strategies for crop production where agricultural field operations are adjusted for site-specific variations in any of the following: soil type, moisture content, plant vigor, nutrient requirements, yield monitoring, and a variety of other quantifiable production measures. A fundamental understanding of agricultural field machinery is necessary for effective application of Precision Agriculture technologies and is provided through AG M 2060 Machinery Management, Specific applications of Precision Agriculture practices are provided through AG M 4100 Precision Agriculture. Because many of the site-specific and variable rate technologies employed in Precision Agriculture rely on spatial data collection and analysis, a fundamental understanding of Geographical Information Systems is provided through FOR 4340 Geographic Information Systems for Landscape Planning or GEOL 4210 GIS Applications in Geology. This "core" of nine hours provides students with the fundamentals required for general application of precision agriculture technologies. The remaining, or supporting, nine hours is proposed here to be chosen from a select list of CSEN, ENT, FOR, IPM, or APEC courses. The CSEN, ENT, and IPM courses will enable students to gain a key understanding of specific field crop production and agronomy principles and practices, which are prerequisites to applying the principles of precision agriculture. Integration of these specific principles with the general "core" will enable the student to customize their focus in applications of Precision Agriculture to specific types of crops and/or management techniques. The APEC courses included in the supporting nine hours are provided because they provide the student with an ability to evaluate the economic benefit of investing in precision agriculture technologies.

Form Originator: KIRK2, Kendall Kirk Date Form Created: 2/13/2013

Form Last Updated by: KIRK2, Kendall Kirk Date Form Last Updated: 9/10/2013

Form Number: 5916

Approval

Alam R. John Z/28/14 Pawice W. Mireland
Chair, Department Curriculum Committee

Date

Date

Chair, Undergraduate Curriculum Committee

Date

Date

Chair, Graduate Curriculum Committee

Date

Chair, College Curriculum Committee

Date

Alam A. July

Date

Chair, Graduate Curriculum Committee

Date

Alam A. July

Chair, College Curriculum Committee

Date

CLEMSON

Y Curriculum and Course Change System - Print New Course Form

000014

Course Abbreviation & Number:

X New Undergraduate Course: PKSC- 4230

.. New Honors Course: --

X New Graduate Course: PKSC- 623

Effective Term: 05/2014

Catalog Title: 3D Parametric Design Online Transcript Title: 3D Parametric Design

Fixed Credit Course: 3 (3,0) Variable Credit Course: - (-), (-)

Method of Instruction	Course Modifier	General Education Designation	
X A-Lecture Only	Pass/Fail Only	Creative Inquiry	
B-Lab (w/fee)	X Graded	English Composition	
D-Seminar	Variable Title	Oral Communication	
E-Independent Study	Creative Inquiry	Mathematics	
F-Tutorial (w/fee)	Repeatable	Natural Science No Lab	
G-Studio	maximum credits:	Natural Science w/Lab	
H-Field course		Math or Science	
I-Study Abroad		A&H (Literature)	
L-Lab (no/fee)	ļ	A&H (Non-Literature)	
N/B-Lecture/Lab(w/fee)		Social Science	
N/L-Lecture/Lab(no fee)	***	CCA	
		STS	
A state assessment that the second the last			

Add cross-listing with the following child course(s):

Catalog Description: An overview of techniques for designing 3D parametrics solid parts for Packaging Science applications. Course starts with a basic overview of the design software and progresses to advanced applications (simulation, surfacing, tooling, photo-rendering and sustainability) and prepares students for a professional certification exam. Recommended for students who have experience with design software.

Prerequisite(s): None. The course is specialized, but does not rely on any prior knowledge of 3D parametric design.

Projected Enrollment:

Year 1 - 40 Year 2 - 60 Year 3 - 80 Year 4 - 100

Required course for students in:

Statement of need and justification based on assessment results of student learning outcomes: Course has run for 9 semesters as a special topics course and shows increasing enrollment from over 20 degree programs. The primary programs utilizing this course are: Packaging Science, Graphic Communications, Art, Architecture, Mechanical Engineering, Industrial Engineering, Civil Engineering, and Communications. Even though this is not a required course or an approved elective for most degrees, students demand for this course remains high and student feedback and responses have remained very positive.

This will be a part of a certification program by The Sonoco Institute of Packaging Design and Graphics. There is a major demand for this course by the packaging industry.

Textbook(s): none

Learning Objectives: 1. To fully be proficient in the following areas within Solidworks (version = current year):

- * Basic concepts
- * Advanced sketching
- * Advanced modules
- * Add-in applications

2. To be prepared to take the national certification exam in Solidworks

Topical Outline: Minimum course hours: 45

*indicates optional or extra-credit topic.

Course Topics:

Introduction and Installation (1)

Sketching (3)

Sketched Features and Parts (3)

Applied Features (3)

Assemblies (3)

Drawings (3)

Advanced Sketching (4)

Advanced Sweeping (3)

Advanced Lofting (3)

Advanced Fillets (3)

Indent (1)			
Multibodies (3)		j	3636363-37-
Core and Cavity (3)			000015
Fastening Features (3)			
Surfacing (3)			
PhotoWorks (3)*			
Simulation (3)*			
Sustainability (2)			
Evaluation: Undergraduate:			
80% Assessments (short projects that overview 5-6 20% Independent project	tools covered	d in lecture. Typically require 3-4 hours to con	nplete)
Graduate			
50% Assessments (short projects that overview 5-6 25% Independent project, with methodological paper	tools covered	in lecture. Typically require 3-4 hours to con	nplete)
25% Advisor-driven project (requires the student an	ad major advis	for to select a project to model in the coffware	a along with mitantal
in the second of the control of the	ia major auvi:	sol to select a biolect to model in the soliman	e along with criteria)
Grading Scale (undergraduate): A 90-100% B 80-89% C 70-79% D 60-69% F Below 60%			
Grading Scale (graduate): A 90-100% B 80-89% C 70-79% F Below 70%	•		
Add course requirements for honors and/or 60	0-level cour:	ses (if applicable): see evaluation	
Form Originator: RUPERTH,Hurley,Rupert A Date I Form Last Updated by: RJKSN, Kosinski,Robert J C Form Number: 7040	Form Create Date Form La	d: 1/31/2014 ast Updated: 3/24/2014	
Approval			
Kay Cooksen	3/24/14	Parice W. Murhose	44/2014
Chair, Department Curriculum Committee	Date	Chair, Undergraduate Curriculum Committee	Date
- Alem Madelland	3/24/14		1
Department Chair	Date /	Chair, Graduate Curriculum Committee /	Date /
Robert & Korniki	3/24/14		7/8/14
Chair, College Curriculum Committee	Date	Provost	Date
Tell Cultituent	3/24/14	James P. Clemente	7/11/14
College Dean	Date /	President	Date
			Pare
Director, Calhoun Honors College	Date		



Tourriculum and Course Change System - Print New Course Form

000016

Course Abbreviation & Number:

X New Undergraduate Course: PKSC- 4240

.. New Honors Course: --

X New Graduate Course: PKSC- 6240

Effective Term: 05/2014

Catalog Title: Structural Packaging Design Online Transcript Title: Structural Packaging Design

Fixed Credit Course: 3 (3,0)
Variable Credit Course: - (-), (-)

	\ // \ /	
Method of Instruction	Course Modifier	General Education Designation
X A-Lecture Only	Pass/Fail Only	Creative Inquiry
B-Lab (w/fee)	X Graded	English Composition
 D-Seminar	Variable Title	Oral Communication
 E-Independent Study	Creative Inquiry	Mathematics
F-Tutorial (w/fee)	Repeatable	Natural Science No
G-Studio	maximum credits:	Lab
H-Field course		Natural Science w/Lab
I-Study Abroad		Math or Science
L-Lab (no/fee)		A&H (Literature)
N/B-Lecture/Lab(w/fee)		A&H (Non-Literature)
N/L-Lecture/Lab(no fee)		Social Science
		CCA
		STS

Add cross-listing with the following child course(s):

Catalog Description: A comprehensive overview of how to design structural packaging for paperboard and corrugated mediums. Course starts with a basic overview and transitions into advanced applications. Access to design software is required for the course (vector-based 2D CAD software such as Illustrator or ArtiosCAD). Recommended for students with design software experience.

Prerequisite(s): None. The course is specialized, but does not rely on any prior knowledge of structural packaging design.

Projected Enrollment:

Year 1 - 40 Year 2 - 45 Year 3 - 50 Year 4 - 55

Required course for students in:

Statement of need and justification based on assessment results of student learning outcomes: The department of Food, Nutrition and Packaging Sciences has been offering this course as a 'selected topics' course for over 5 years. Demand continues to increase with full sections each semester, including the summer sessions. With the development of the Sonoco Institute of Packaging Design and Graphics along with a significant number of students (~40%) enrolling in the "Packaging Design Emphasis Area," it is important to the faculty and chair that a few design-related classes are established to solidify this critical area.

Lastly, this is a part of a certification program by The Sonoco Institute of Packaging Design and Graphics. There is a major demand for this course by the packaging industry.

Textbook(s): none. Course is self-contained online

Learning Objectives: 1. Develop a working knowledge in basic 2D concepts

- 2. Become proficient in advance sketching techniques
- 3. Apply advanced modules within paperboard and corrugated packaging design software
- 4. Utilize various add-in applications within 2D concepts

Topical Outline: Hours (minimum 45 hours)

*indicates optional lecture if students do not have prior experience with topic

Course Topics:

Getting Started (3)

Creating and Working with Design Files (3)

Working with Standards (3)

Project week: Running Modifying and Prototyping a Standard Design (5)*

Creating your own designs (3)

Working in the 3D (part 1) (3)

Working in the 3D (part 2) (3)

Project week: Running a 3D Part (3)

Projects (part 1) (3)

Projects (part 2) (3)

Stylemaker (part 1) (3)

Stylemaker (part 2) (3)

CapePack and Outputs (3)
Project Week (Final Project) (3)

Portfolio Project and Upload (3)

Final Exam (3)

			! ! — -		
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80% Assessments (short projects that overview 5-6 tools covered in lecture. Typically require 3-4 hours to complete)
20% independent project

Graduate

50% Assessments (1 assessment each week of the course)

25% independent project, with methodological paper

25% graduate thesis project (requires the student and major adviser to select a project to model in the software along with criteria)

Gradino	Scale	(Undergraduate)	١.
OI GUILIY	Jeale	CHILLE HE GOOGLE	

A 90-100%

B 80-89%

C 70-79%

D 60-69%

F Below 60%

Grading Scale (Graduate):-

A 90-100%

B 80-89%

C 70-79%

F Below 70%

Add course requirements for honors and/or 600-level courses (if applicable): see evaluation

Form Originator: RUPERTH, Hurley, Rupert A Date Form Created: 1/31/2014

Form Last Updated by: RUPERTH, Hurley, Rupert A Date Form Last Updated: 3/13/2014

Form Number: 7039

App	roval
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Kay Cooksey	3/18/14	Parice W. Merhosen	4/4/2014
Chair, Department Curriculum Committee	Date	Chair, Undergraduate Curriculum Committee	Date
E. Goffey Plastellow	3/13/14		
Department Chair	Date	Chair, Graduate Curriculum Committee	Date
Robert I. Korinski	3/13/14	Nadi M. Avid	18/11
Chair, College Carriculum Committee	Date	Provost	Date \
Led Whitenery	3/24/19	James P. Clemento	7/11/14
College Dean	Date	Plesident	Date
Director, Calhoun Honors College	Date		