

# Cover Sheet: Request 13173

## Packaging Engineering Certificate

### Info

Process	Certificate New Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	James Leary drleary@ufl.edu
Created	10/12/2018 2:07:57 PM
Updated	3/11/2020 9:40:56 AM
Description of request	The Agricultural & Biological Engineering Department proposes a new Packaging Engineering Certificate. Packaging Engineering is inherently multi-disciplinary. Virtually every company that produces physical products employs "Packaging Engineers." In industry, a packaging engineer refers to a graduate of an engineering discipline who works to solve problems related to packaging. The majority of packaging engineers in industry are biological, chemical, mechanical, materials and industrial engineers. The proposed Packaging Engineering certificate will be exclusive to students enrolled in the Herbert Wertheim College of Engineering.

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	ENG - Agricultural and Biological Engineering 514907000	Kati Migliaccio		10/13/2018
No document changes					
College	Conditionall Approved	ENG - College of Engineering	Heidi Dublin	Conditionally Approved by the HWCOE Curriculum Committee. Update verbiage to read "15 credits required from the list below..." as discussed in meeting. Please note in comments when this item is sent back up that this has been addressed.	10/30/2018
No document changes					
Department	Approved	ENG - Agricultural and Biological Engineering 514907000	Kati Migliaccio		10/30/2018
No document changes					

Step	Status	Group	User	Comment	Updated
College	Conditionally Approved	ENG - College of Engineering	Heidi Dublin	Approved by the Curriculum Committee and conditionally approved by the HWCOE Faculty Council pending one adjustment--"Define the person or persons in the department who will decide the substitution related to the sentence in the course syllabus, "Engineering students may substitute ... a packaging-related internship or coop for a required packaging engineering course." Please note in the comments that this has been addressed when you return the item to the college level.	12/5/2018
No document changes					
Department	Approved	ENG - Agricultural and Biological Engineering 514907000	Kati Migliaccio	Approvers of course substitutions have been identified.	12/11/2018
No document changes					
College	Approved	ENG - College of Engineering	Heidi Dublin	Approved by HWCOE and Faculty Council	1/4/2019
No document changes					
Office of Institutional Planning and Research	Approved	PV - Office of Institutional Planning and Research	Cathy Lebo		5/6/2019
No document changes					
Associate Provost for Undergraduate Affairs	Approved	PV - Associate Provost for Undergraduate Affairs	Casey Griffith		9/24/2019
No document changes					
University Curriculum Committee	Commented	PV - University Curriculum Committee (UCC)	Lee Morrison	Added to the October agenda. If approved at this meeting, this will go into effect for the Summer B 2020 term with the publication of the 2020-2021 undergraduate catalog.	10/10/2019
No document changes					
University Curriculum Committee	Recycled	PV - University Curriculum Committee (UCC)	Casey Griffith	Please respond to UCC comments regarding prerequisites and other issues (email to follow).	10/15/2019
No document changes					
Associate Provost for Undergraduate Affairs	Recycled	PV - Associate Provost for Undergraduate Affairs	Casey Griffith		10/18/2019
No document changes					
Office of Institutional Planning and Research	Approved	PV - Office of Institutional Planning and Research	Cathy Lebo		2/3/2020
No document changes					

Step	Status	Group	User	Comment	Updated
Associate Provost for Undergraduate Affairs	Approved	PV - Associate Provost for Undergraduate Affairs	Casey Griffith		2/19/2020
No document changes					
University Curriculum Committee	Commented	PV - University Curriculum Committee (UCC)	Lee Morrison	Added to the March agenda. If approved, this will go into effect for the Summer B 2020 term with the publication of the 2020-2021 undergraduate catalog.	3/11/2020
Packaging Engineering Certificate r3(4).docx					2/20/2020
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			3/11/2020
No document changes					
Office of the Registrar					
No document changes					
OIPR Notified					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
Academic Assessment Committee Notified					
No document changes					
College Notified					
No document changes					

# Certificate|New for request 13173

## Info

**Request:** Packaging Engineering Certificate

**Description of request:** The Agricultural & Biological Engineering Department proposes a new Packaging Engineering Certificate. Packaging Engineering is inherently multi-disciplinary. Virtually every company that produces physical products employs "Packaging Engineers." In industry, a packaging engineer refers to a graduate of an engineering discipline who works to solve problems related to packaging. The majority of packaging engineers in industry are biological, chemical, mechanical, materials and industrial engineers. The proposed Packaging Engineering certificate will be exclusive to students enrolled in the Herbert Wertheim College of Engineering.

**Submitter:** Casey Griffith cgriffith@aa.ufl.edu

**Created:** 2/20/2020 11:30:58 AM

**Form version:** 11

## Responses

### Certificate Name

*Enter the name of the certificate. Example: Urban Pest Management.*

Response:  
Packaging Engineering

### Transcript Title

*Enter the transcript title of the certificate. This is limited to 50 characters, including spaces.*

Response:  
Packaging Engineering Certificate

### Credits

*Enter the total number of credit hours needed to complete the certificate program.*

Response:  
15

### Level

*Enter the program level of the certificate.*

Response:  
Baccalaureate

### CIP Code

*Enter the six digit Classification of Instructional Programs (CIP) code for the degree program associated with the proposed certificate. The code has the numerical format XX.XXXXX. Contact the [Office of Institutional Planning and Research \(OIPR\)](#) to verify the CIP code for the existing degree program.*

Response:  
14.4501

**Degree Program**

Enter the degree program associated with the CIP code entered above (e.g. Accounting).

Response:  
Biological Engineering

**Effective Term**

Enter the term (semester and year) that the certificate would start. Please keep in mind that this may be adjusted depending on University deadlines for approval process.

Response:  
Earliest Available

**Effective Year**

Response:  
Earliest Available

**Certificate Description**

Enter a description of the certificate. This is limited to 50 words or fewer.

Response:  
The packaging engineering certificate emphasizes engineering solutions to problems associated with packaging systems related to design, functionality and sustainability of packaging and product distribution.

**Requirements for Admission**

List any requirements for admission to this new certificate program such as grade point average, background in the discipline, current enrollment status, etc.. Please indicate if the certificate only accepts students of a particular status: for example, current UF graduate students, graduate students in a specific college, non-degree seeking students, or any student status.

Response:  
This certificate is limited to undergraduate engineering students in the Herbert Wertheim College of Engineering.

**Requirements for Completion**

List all of requirements for completion of the certificate program, such as courses, internships, projects, etc. For each course, indicate prefix, number, title, # credits, and established grading scheme (letter graded, and/or S/U). The title should be identical to the official title of the course as listed in the Graduate Catalog at <http://gradcatalog.ufl.edu>.

Response:  
  
Students will be required to successfully complete 15 credit hours of the packaging engineering courses listed below to earn the Packaging Engineering Certificate. Engineering students may substitute one advisor-approved engineering elective, or a packaging-related internship or coop for a required packaging engineering course, where the student's engineering academic advisor for her/his major, or Dr. Bruce Welt in the ABE Department, can approve the substitution as described.  
The minimum grade of a C is required in all classes used for this certificate or an S (satisfactory) if substituting internship or coop credit for a course.

Packaging Engineering courses offered:  
PKG3001 Principles of Packaging (Credits 3)  
PKG3103 Food Packaging (Credits 3)  
Prerequisite for PKG3103: CHM2045 General Chemistry I (Credits 3)  
PKG4008 Distribution and Transport Packaging (Credits 3)  
PKG4011 Packaging Production and Processing (Credits 3)  
PKG4101C Computer Tools for Packaging (Credits 3)

### **Rationale and Place in Curriculum**

*Describe the rationale for offering this new certificate and having it on the transcript, its place in the curriculum, how it will enhance the quality of the existing program or department. Also describe its overlap with any existing certificates and programs, and a justification for any such overlap. Note that documentation of consultation will be expected for any certificate with overlapping content.*

Response:

All companies that produce physical products employ engineers to solve packaging problems. Increasingly these companies are seeking college graduates with specialized education in packaging. However, most packaging education programs in North America are not rooted in engineering, but rather arts and science. UF's program has been designed to specifically address the need for graduates from a variety of engineering disciplines with specialized education and training in packaging. Engineering students who successfully complete the Packaging Engineering Certificate will enhance their competitiveness and opportunities for employment as a packaging engineer.

### **Student Learning Outcomes**

*List each student learning outcome with its associated courses, assessment type (e.g. course-related exam/assignment/grade, final paper/project/presentation, standardized exam, capstone) and method (e.g. rubric, faculty committee, single faculty member).*

Response:

Content – PKG4008 Distribution & Transport Packaging

Apply knowledge of mathematics, science and engineering to packaging engineering problems. Students will be able to design and conduct packaging engineering experiments and then analyze, interpret and use experimental data to optimize packaging designs and systems. The individual faculty course instructor shall assess learning outcomes in the form of laboratory reports and/or standard examinations.

Critical Thinking – PKG3103 Food Packaging

Design packaging and packaging systems to meet performance specifications within realistic economic, environmental, social, ethical, health and safety, manufacturing and sustainability constraints. The individual course instructor shall assess learning outcomes in the form of homework and standard examinations.

Communication – PKG4101C Computer Tools for Packaging

Communicate packaging designs and technical data effectively to related packaging stakeholders. Individual course instructor shall assess learning outcomes in the form of project reports and final oral poster presentation.

Packaging Engineering Program  
Agricultural & Biological Engineering Department

Bruce A. Welt, Ph.D.  
Professor  
PO Box 110570  
Gainesville, FL 32611-0570  
352-392-1864 x 229  
352-392-4092 Fax

December 11, 2018

**Subject: Proposal to Packaging Engineering Certificate**

Dear HWCOE Curriculum Committee:

The Agricultural & Biological Engineering Department proposes a new Packaging Engineering Certificate. Packaging Engineering is inherently multi-disciplinary. Virtually every company that produces physical products employs "Packaging Engineers." In industry, a packaging engineer refers to a graduate of an engineering discipline who works to solve problems related to packaging. The majority of packaging engineers in industry are biological, chemical, mechanical, materials and industrial engineers. The proposed Packaging Engineering certificate will be exclusive to students enrolled in the Herbert Wertheim College of Engineering.

Requirements: Students will be required to successfully complete 15 credit hours of the packaging engineering courses listed below to earn the Packaging Engineering Certificate. Students must have completed CHM2045 General Chemistry 1 which is a prerequisite for a required course. Engineering students may substitute one advisor-approved engineering elective, or a packaging-related internship or coop for a required packaging engineering course, where the student's engineering academic advisor for her/his major, or Dr. Bruce Welt in the ABE Department, can approve the substitution as described.

Packaging Engineering courses offered:

PKG3001 Principles of Packaging (Credits 3)

PKG3103 Food Packaging (Credits 3)

- Prerequisite for PKG3103: CHM2045 General Chemistry I (Credits 3)

PKG4008 Distribution and Transport Packaging (Credits 3)

PKG4011 Packaging Production and Processing (Credits 3)

PKG4101C Computer Tools for Packaging (Credits 3)

Please feel free to contact me with any questions or comments.

Sincerely,

Bruce A. Welt, Ph.D.

Professor, Coordinator – Packaging Engineering Program