

# Cover Sheet: Request 14991

## Materials Science and Engineering Biomaterials Certificate

### Info

Process	AAPs/SLO New/Change Ugrad/Grad/Pro
Status	Pending at PV - Academic Assessment Committee
Submitter	Tanner Nestle tnestle@ufl.edu
Created	5/8/2020 11:19:45 AM
Updated	7/20/2020 11:16:04 PM
Description of request	Approval of Biomaterials Certificate Assessment Plan

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	ENG - Materials Science and Engineering 011909000	John Mecholsky		5/8/2020
No document changes					
College	Approved	ENG - College of Engineering	Heidi Dublin		5/8/2020
No document changes					
Academic Assessment Committee	Commented	PV - Academic Assessment Committee	Timothy Brophy	The Academic Assessment Committee will review this at its May 12, 2020 meeting.	5/8/2020
No document changes					
Academic Assessment Committee	Conditionally Approved	PV - Academic Assessment Committee	Timothy Brophy	The Academic Assessment Plan reviewed this request at its May 12, 2020 meeting. They conditionally approved this plan. Here is the condition: "The assessment plan states that course grades are used as the SLO assessment. This is not permitted by SACSCOC. Please identify the specific assessment methods that are used". Once these changes are made, I will review these and proceed accordingly.	5/13/2020
Biomaterials.docx					5/8/2020
College	Conditionally Approved	ENG - College of Engineering	Heidi Dublin	See comments from Academic Assessment Committee. Resubmit when all have been addressed.	5/14/2020
No document changes					
Department	Approved	ENG - Materials Science and Engineering 011909000	John Mecholsky		5/14/2020
No document changes					
College	Approved	ENG - College of Engineering	Heidi Dublin	Department indicates all have been addressed.	7/20/2020
No document changes					
Academic Assessment Committee	Pending	PV - Academic Assessment Committee			7/20/2020

Step	Status	Group	User	Comment	Updated
No document changes					

# SLO-AAP|New for request 14991

## Info

**Request:** Materials Science and Engineering Biomaterials Certificate

**Description of request:** Approval of Biomaterials Certificate Assessment Plan

**Submitter:** Tanner Nestle tnestle@ufl.edu

**Created:** 5/14/2020 12:17:56 PM

**Form version:** 2

## Responses

**Name of Major** Materials Science and Engineering

**College** Engineering

**Effective Term** Earliest Available

**Effective Year** Earliest Available

**Request Type** New Certificate Academic Assessment Plan

**Campus Labs Planning** The AAP has not been submitted into Campus Labs Planning

**New SLO or SLOs** Name of the certificate:

Biomaterials

Program (Certificate) Mission:

The Herbert Wertheim College of Engineering is pleased to offer a Biomaterials Engineering Certificate for engineering undergraduate students. The Certificate primarily serves students who are majoring in Materials Science and Engineering, but can be completed by students in any major. This Certificate consists of a sequence of courses in the area of Biomaterials offering broad and deep coverage of processing, structure, processing, and performance for these materials.

Program Goal

Title

PG1: Increase enrollment in the certificate program

Evaluation Method

The number of students enrolled in the certificate will be tabulated each spring. This tabulation will be interpreted in light of the fact that there are 5 certificates offered (Advanced Engineering Ceramics, Biomaterials, Metallurgical Engineering, Polymer Science and Engineering, and Semiconductor Materials) that can be completed by students pursuing a major in Materials Science and Engineering with careful, but mutually-exclusive selection of electives.

Student Learning Outcome

Title

SLO1: Apply principles of engineering, math, and science to solve complex problems in biomaterials

Evaluation Method

Evaluation of selected problem(s) in the course indicated below using the following rubric:

- 1) No solution is proposed or minimal progress towards a solution is made
- 2) Solution is fundamentally incorrect due to inaccurate application of one or more principles
- 3) Significant progress is made to a solution, but the problem is not solved in its entirety
- 4) Only a few minor errors are found in path to solution
- 5) Solution is correct and complete

The threshold of acceptability is 80% of students scoring 3 or higher.

Assessment Timeline for Biomaterials

Key: Introduced Reinforced

Assessed

Courses

SLOs EMA

3066 EMA

4061 EMA

4062

Content Knowledge  
#1 I R A

Assessment Cycle  
Year  
SLOs 18-19 19-20 20-21 21-22 22-23 23-24  
Content Knowledge  
#1 X X X X X

#### Assessment Oversight

Name Department Affiliation Email Address Phone Number  
Hans van Oostrom HWCOE oostrom@ufl.edu 352-392-1345

#### Program Type Undergraduate

**Indicate the areas of the SLOs (undergraduate)** Content

**Indicate the areas of the SLOs (graduate and professional)** N/A request is Undergraduate

**What types of assessments will be used?** Other

**Describe other type of assessment:** SLO1: Apply principles of engineering, math, and science to solve complex problems in biomaterials

#### Evaluation Method

Evaluation of selected problem(s) in the course indicated below using the following rubric:

- 1) No solution is proposed or minimal progress towards a solution is made
- 2) Solution is fundamentally incorrect due to inaccurate application of one or more principles
- 3) Significant progress is made to a solution, but the problem is not solved in its entirety
- 4) Only a few minor errors are found in path to solution
- 5) Solution is correct and complete

**What assessment methods will be used?** Other

**Describe other type of assessment:** The threshold of acceptability is 80% of students scoring 3 or higher.

**Who applies the method?** Faculty Committee

**Academic Learning Compact Statement** The Herbert Wertheim College of Engineering is pleased to offer a Biomaterials Engineering

Certificate for engineering undergraduate students. The Certificate primarily serves students who are majoring in Materials Science and Engineering, but can be completed by students in any major. This Certificate consists of a sequence of courses in the area of Biomaterials, offering broad and deep coverage of processing, structure, processing, and performance for these materials.

**ALC Graduation Requirement Statement** Student must have taken 4 required courses with a grade of C or better and have a GPA > 2.0.

**ALC Standard Learning Outcomes** Content Knowledge

EMA3066 - Introduced

EMA4061 - Reinforced

EMA4062 - Assessed

**ALC Types of Assessment** Exams, Projects, Reports

# New Undergraduate Certificate Academic Assessment Plan

Name of the certificate:

Biomaterials

Program (Certificate) Mission:

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Program Goal

Title

PG1: Increase enrollment in the certificate program

Evaluation Method

The number of students enrolled in the certificate will be tabulated each spring. This tabulation will be interpreted in light of the fact that there are 5 certificates offered (Advanced Engineering Ceramics, Biomaterials, Metallurgical Engineering, Polymer Science and Engineering, and Semiconductor Materials) that can be completed by students pursuing a major in Materials Science and Engineering with careful, but mutually-exclusive selection of electives.

Student Learning Outcome

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- 5) Solution is correct and complete

The threshold of acceptability is 80% of students scoring 3 or higher.

## Assessment Timeline for Biomaterials

Key: I ntroduced                      R einforced

A ssessed

Course:	EMA 3066	EMA 4061	EMA 4062
SLOs			
Content Knowledge			
#1	I	R	A

## Assessment Cycle

Year	18-19	19-20	20-21	21-22	22-23	23-24
SLOs						
Content Knowledge						
#1		X	X	X	X	X

## Assessment Oversight

Name	Department Affiliation	Email Address	Phone Number
Hans van Oostrom	HWCOE	oostrom@ufl.edu	352-392-1345