## NEW UNDERGRADUATE MINOR / CHANGE UNDERGRADUATE MINOR FORM

Please fill out Section I.	:			
SECTION I: GENERAL IN	FORMATION			
Program: <u>Biomedi</u>	cal Engineering			
Minor: <u>Biomedical Er</u>	ngineering			
College: <u>Engineering</u>		Department:	Biomedical Engineering	
Bulletin PP: p. 229		CIP Code:	<u>14.0501</u>	
Accrediting Agency (if a	oplicable):			
Fill out Section II if you	are proposing a <u>NEW</u> minor.			•
Section II: New Minor				
Minor Prerequisites (list	course prefix, number and title):			
Minor Requirements (lis	t course prefix, number and title):	Please see att	tachment .	,
Minor Electives (list cour	rse prefix, number and title): Plea	ise see attachn	<u>nent</u>	
Total Hours Required:	<u>18</u>			ŧ .
Rationale for Proposal:	Biomedical engineering (BME) is the associated with human health. Biomethe development of new devices, also new knowledge and understanding and BME is the youngest, but it continual because the youngest, but it continuals because the youngest	medical engine gorithms, processof physiological es to grow rapidas existed unoffor Biomedical department. With medical engined tremains focus ates in this excessoribed further their education of the field of biomedical engined tremains focus ates in this excessoribed further their education of the field of biomedical engined tremains focus ates in this excessoribed further their education of the field of biomedical engined tremains focus at the field of biomedical engine e	ers contribute to improved lesses and systems as well as all systems. Of the engineer dly.  Ticially since the late 1950s Engineering in 1985. In 207 With few exceptions, UK's beering and full undergradual and the engineering in 1985. In 207 well and full undergradual and the engineering and full undergradual and the engineering field will benefit the Cher in the attachment, the Buttonal experience by applying the engineering.	healthcare through the acquisition of ing disciplines, and was officially 013, the center was benchmark te degree and training, more College of ME minor is
Section III: Change in Mi	nor Requirements			
	Current		<u>Proposed</u>	
			. ———	

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Current Total Hours:	Proposea Total Hours:		
Rationale for Proposal:			
Will this program be printed in the Bulletin?		Yes 🔀	No 🗌

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### Signature Routing Log

#### **General Information:**

Proposal Name:

Minor in Biomedical Engineering

Proposal Contact Person Name:

David Puleo

Phone: 7-2405

Email: puleo@uky.edu

### **INSTRUCTIONS:**

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

## Internal College Approvals and Course Cross-listing Approvals:

	Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Bl	ME Faculty	2/12/14	David Puleo / 7-2405 / puleo@uky.edu	Jan Caro
. (	0E faculty	5-2-14	Kim Anderson/7-1864/ anderson@	Knywe
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#### **External-to-College Approvals:**

Council	Date Approved	Signature	Approval of Revision <sup>1</sup>
Undergraduate Council	3/3/15	Joanie Ett-Mims	
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	
Comments:			

<sup>&</sup>lt;sup>1</sup> Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

#### **Minor in Biomedical Engineering**

This minor is intended for undergraduate engineering students seeking to supplement their education by applying skills learned in their respective disciplines to the field of biomedical engineering (BME). The emphasis on upper level BME courses builds upon the foundation taught in core undergraduate engineering courses. Beyond the one required course, students will chose at least five elective courses in consultation with a Biomedical Engineering faculty advisor. Students and their advisor may select courses providing concentration in a particular subfield, or they may select courses providing breadth across the field of biomedical engineering. Examples of both types of curricula will be made available.

The minor in biomedical engineering requires: a) a minimum of 18 hours of coursework; b) a GPA of 2.5 in these courses; and c) no grade lower than a C in any BME course. At the discretion of the BME department chair (or designee), a limited number of equivalent course substitutions (i.e., 6 credit hours) may count toward the requirements for this minor. At least 12 credits must have the BME prefix.

### Required course

BME 301 Fundamentals of Biomedical Engineering (3 credits)

### Elective courses (select five from among the following<sup>#</sup>)

BME 395 Independent Research in Biomedical Engineering (1-6 credits)

BME 405 Introduction to Biomedical Signal Processing (3 credits)

BME 472 Human Biomechanics (3 credits)

BME 485 Fundamentals of Biofluid Mechanics (3 credits)

BME 488 Introduction to Biomaterials (3 credits)

BME 508 Cell Mechanics and Mechanobiology (3 credits)

BME 515 Modeling of Physiological Systems (3 credits)

BME 530 Biomedical Instrumentation (3 credits)

BME 540 Mechanical Modeling of Human Motion (3 credits)

BME 579 Neural Engineering (3 credits)

BME 580 Introduction to Biomedical Imaging (3 credits)

BME 481G Topics in Biomedical Engineering (Subtitle required) (3 credits)

BME 599 Topics in Biomedical Engineering (Subtitle required) (3 credits)

<sup>&</sup>lt;sup>#</sup> up to 6 credit hours of independent research (e.g., BME 395) or special topics courses (e.g., BME 481G or BME 599) may count as electives.