

ATTACHMENT 2B-1

LETTER OF INTENT - 1 (New Certificate or Degree Program)

1. Institution submitting request:

University of Arkansas, Fayetteville

2. Contact person/title:

Dr. Sharon Gaber
Provost and Vice Chancellor for Academic Affairs
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University of Arkansas
Fayetteville, AR 72701

3. Telephone number/e-mail address:

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4. Proposed Name of Certificate or Degree:

Bachelor of Science degree in Biomedical Engineering

5. Proposed Effective Date:

July 1, 2012

6. Requested CIP Code:

14.0501

7. Program Description:

Biomedical Engineering is a field at the interface of engineering, medicine and biological sciences. It combines the practical problem solving ability of engineering to diagnostic, monitoring, and therapy needs of medical sciences. Even though engineers have designed medical devices for a long time, Biomedical Engineering has only been established as a discipline within the past two decades.

The evolution of academic disciplines often follows the sequence of first being a multi-disciplinary program evolving into an interdisciplinary program and then becoming a discipline in itself with a variety of sub-disciplines. Biomedical

Engineering has followed that path and is now widely recognized as a separate discipline within engineering. In the United States, an undergraduate degree in Biomedical Engineering is offered at 99 universities of which three are in the SEC, but none in Arkansas. The SEC schools offering Biomedical Engineering include the University of Tennessee, University of South Carolina and Vanderbilt.

The Biomedical education and research at the University of Arkansas is currently embedded within the department of Biological and Agricultural Engineering which reports to both the College of Engineering and to the Dale Bumpers College of Agriculture and Food and Life Sciences. Undergraduate students have the opportunity to choose Biomedical Engineering as a concentration within a BS degree in Biological Engineering. This stream produces approximately ten such graduates per year. A MS degree in Biomedical Engineering was initiated in 2004 and was accredited by ABET (the national engineering accreditation board) in 2009. The number of graduates in this program range from two to three per year. Doctoral students can choose Biomedical Engineering as a research area but their degree is recognized within the Biological Engineering PhD concentration.

The numbers of graduates at all degree levels with biomedical concentration at the University of Arkansas have been much lower than the national averages. In the past ten years, enrollments at the national level in Biomedical Engineering programs have increased by more than 200% while the overall engineering enrollment increases during the same period have only been at the level of approximately 20%. Similar impressive increases in students have also occurred at the MS and PhD levels. Significantly larger numbers of female students and faculty are attracted to this discipline because of the exciting career opportunities in the health care field. The time is right for the University of Arkansas to re-examine its position on Biomedical Engineering and develop stand-alone degrees at all levels (BS, MS and PhD). This proposal is for creating a new Bachelor of Science degree in Biomedical Engineering. There are parallel proposals for creating a new Department of Biomedical Engineering and a new doctoral concentration in Biomedical Engineering within the existing PhD degree in Engineering. These two new degree programs will complement the existing MS degree and thereby create exciting educational opportunities in Biomedical Engineering for Arkansans at all levels.

8. Mode of Delivery: On-Campus

9. List existing certificate or degree programs that support the proposed program:

Engineering
Biological Engineering
Chemical Engineering
Computer Science
Electrical Engineering
Industrial Engineering
Mechanical Engineering

Fulbright College of Arts and Sciences

Biology

Chemistry

English

Mathematics

Physics

Various other humanities and social science departments for State Core

10. President/Chancellor Approval Date:

11. Chief Academic Officer:

12. Date: