

**TOPIC:                    PROPOSAL TO OFFER A MASTER OF SCIENCE AND A  
DOCTOR OF BIOENGINEERING DEGREE AT THE  
UNIVERSITY OF COLORADO, DENVER**

**PREPARED BY:    MARGOT PLOTZ**

**I.        SUMMARY**

The College of Engineering and Applied Sciences (CEAS) of the University of Colorado, Denver has submitted a program proposal to offer a Master of Science degree and a Doctor of Bioengineering degree. The flagship campus, the University of Colorado Boulder, has outstanding faculty in bioengineering. Several of its programs have tracks or focus areas in bioengineering, but the institution has no bioengineering degree. The university leadership and faculty at Boulder see proposed Bioengineering program at Denver as an opportunity for further collaboration, a source of possible research grant placements for their graduate students and an opportunity to recruit new graduate students into their research programs.

**II.        BACKGROUND**

The following is summarized from the University of Colorado's proposal for the Master of Science and doctoral degrees in Bioengineering:

This program will be highly cross-disciplinary and will involve faculty and graduate students from the University of Colorado, Denver and from the University of Colorado, Boulder. Future collaborations are possible with the University of Colorado, Colorado Springs, Colorado State University, Colorado School of Mines and the University of Denver. Specialty areas in Bioengineering range from medical imaging to biomechanics and from orthopedic surgery to tissue engineering and rehabilitation engineering. The program will be housed in a newly created Department of Bioengineering in CEAS. The creation of the bioengineering program is very much in line with the University's Strategic Plan for 2008-2020.

**ROLE AND MISSION SUPPORT:**

The MS and PhD degrees in Bioengineering support the role and mission of the University of Colorado, Denver as well as the health sciences campus. The statutory mission for both state:

*The Denver campus of the university of Colorado shall be an urban comprehensive undergraduate and graduate research university with selective admissions standards. The Denver campus shall offer baccalaureate, masters, and a limited number of doctoral degree*

*programs, emphasizing those that serve the needs of the Denver metropolitan area. C.R.S. 23-20-101(b)*

*The health sciences campus of the university of Colorado shall offer specialized baccalaureate, first-professional, masters, and doctoral degree program in health-related disciplines and professions. C.R.S. 23-20-101(d)*

#### **EVIDENCE OF DEMAND:**

Evidence of student demand exists from the large number of applications for existing quality MS and Ph.D. programs across the nation. Only a small number of those applicants are accepted. At the University of Colorado, Denver and Boulder, many highly qualified students flock to the existing degree programs that contain elements of bioengineering. For many, their preference would be to have the focus primarily on bioengineering and a degree in bioengineering. Industry demand grows daily, as advances in bioengineering fuel the development of new companies needing skilled professional workers. For example, Covidien, a local bioengineering firm, has written a letter of support for the new program and expressed interest in supporting opportunities for training and research collaborations.

#### **DUPLICATION/SIMILAR PROGRAMS IN THE STATE**

Colorado State University (CSU) has an MS and Ph.D. in Biomedical Engineering. This program has strengths in engineering and veterinary medicine but, due to the lack of a medical school, it cannot offer the depth of interdisciplinary training in engineering and human medicine that UC Denver can. The CSU program does not view these proposed degrees as competition, rather as a valued source of collaboration and CSU has written a letter of support.

### **III. STAFF ANALYSIS**

Department staff have reviewed this proposed program to ensure that it meets the State's performance measures outlined in C.R.S. 23-1-107. The program meets all performance measures.

### **IV. STAFF RECOMMENDATIONS**

**Staff recommends that the Commission approve Master of Science and Doctor of Bioengineering degree to be offered by the University of Colorado, Denver.**

### **V. STATUTORY AUTHORITY**

C.R.S. 23-1-107

**VI. ACCOMPANYING MATERIALS**

Copies of all relevant materials are on file in the Academic Affairs office and are available upon request.

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