Catalog Description:

**BE 191 Introduction to Applications in Bioengineering (var:1-3 cr)** Discussion and investigation of special topics, problems, and applications of Bioengineering. Consent.

**Course Justification**

A new course is being proposed to provide a vehicle by which regular or visiting bioengineering faculty can introduce hands on projects or special topics to promote a greater understanding of Bioengineering to lower division students within the program and throughout the university.

1. **What is the course modification?**
   
   BE 191 is a new course.

2. **Why is the course being requested?**
   
   The course is being requested to enable BE faculty to offer special unique courses directed at lower division undergraduate students to introduce topics and problems addressed by the discipline of Bioengineering. This will allow students to see beyond the engineering core requirements during the first two years into some of the exciting applications of Bioengineering.

3. **How will the content be organized?**
   
   The course organization will depend on the instructor and the topic(s) to be covered.

4. **What other courses at UHM closely parallel the proposed course, and in what way will the latter make a distinct contribution?**
   
   The proposed course expose undergraduate students at the university to the field of bioengineering and some example applications. No similar course exists at UHM.

5. **Where or how does the proposed course fit into the current and future curriculum?**
   
   The course will allow special topics to be covered in the first two years of an undergraduate study. This will improve the level of awareness of Bioengineering on campus to improve recruitment into the program, and also enhance interaction with Bioengineering faculty while students complete core requirements in Math, Science, and basic engineering. This interaction and exposure to emerging Bioengineering topics can improve the retention of undergraduates within the program.

6. **Why is the number of credits and level justified? Explain the prerequisites and the absence thereof.**
   
   The credit count (1-3) will depend on the topic(s) and the scope of the material covered. Because these would be taught at an introductory level and open to all undergraduates expressing an interest in Bioengineering, no pre-requisites would be required.

7. **How will the course assist students to achieve the critical skills and competencies expected of CTAHR graduates?**

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DMJ, Sensors and Instrumentation for Biological Systems
The specific critical skills and competencies to be strengthened will depend on the specific topic and the instructor.

8. How will students be evaluated?

The format of student evaluation will depend on the material and the way in which it is presented.

9. What are the minimum qualifications for teaching this course? Is a qualified instructor now available?

A Ph.D. degree in a discipline relevant to Bioengineering or equivalent professional experience will be required. Existing and visiting faculty are qualified to teach material for this course in their relevant fields.

10. How will the course be financed, assuming no further cutbacks?

In general, no special equipment or supplies will be required. The proposed course will be financed by department and college instructional funds, with material for demonstrations and projects provided from resources existing within the department.

11. Has the course been offered before? Is there a demand for it?

The course has not been offered before, and is being proposed to promote the program to students at the university and to expose students early on to the applications of Bioengineering.

12. Is the course cross-listed with another department? No.