

MEMORANDUM

TO: Committee on Academic Programs

FROM: Steering Committee

RE: BA in Biomedical Engineering

DATE: February 5, 2014

Background:

The School of Engineering currently offers both BA and BS degrees in Biomedical Engineering. The Department of Biomedical Engineering wishes to discontinue the BA degree, a request endorsed by Dean Schreiner. The accompanying packet of information explains the department's rationale for the request.

Charge:

CAP should determine if appropriate procedures for program closure have been followed. If so, it can prepare a final recommendation without seeking further testimony.

Timeline:

CAP should complete its work on this charge this semester.

TCNJ Governance Processes

Step #1 -- Identifying and reporting the problem: When a Standing Committee receives a charge from the Steering Committee, the first responsibility is to clearly articulate and report the problem to the campus community. The problem may have been set out clearly in the charge received from the Steering Committee, or it may be necessary for the Standing Committee to frame a problem statement. The problem statement should indicate the difficulties or uncertainties that need to be addressed through new or revised policy, procedure, or program. The problem statement should be broadly stated and should include a context such as existing policy or practice. Problem statements may include solution parameters but should not suggest any specific solutions. Clearly stated problems will lead to better recommendations.

Step #2 -- Preparing a preliminary recommendation: Once the campus community has received the problem statement, committees can begin to collect data needed to make a preliminary recommendation. Committees should receive input from affected individuals and all relevant stakeholder groups prior to making a preliminary recommendation. For issues that have broad implications or that affect a large number of individuals, initial testimony should be solicited from the campus community at large. For some issues, sufficient initial testimony may come from input through committee membership or solicitation from targeted constituent groups. When, in the best judgment of the committee, adequate clarity of the principles contributing to the problem are known, a preliminary recommendation should be drafted and disseminated to the campus community through regular updates and the Governance website. At this point, committees typically receive input or testimony through committee membership, formal

testimony, and open comment from affected individuals and all stakeholder groups. Committees must be proactive in inviting stakeholder groups (including Student Government, Staff Senate and Faculty Senate) to provide formal testimony. In cases where testimony results in significant and substantive changes to the preliminary recommendation, the new recommendation will be considered to be in step #2.

Step #3 -- Making a final recommendation: Committees must use sound judgment to give the campus adequate time to review the preliminary recommendation before making their final recommendation. Again, committees are expected to be proactive in receiving feedback on the preliminary recommendation. If a full calendar year has passed since the formal announcement of the preliminary recommendation, the committee must resubmit a preliminary recommendation to the campus community. When, in the best judgment of the committee, the campus community has responded to the proposed resolution of the issue, the committee shall send its final recommendation (with documentation) to the Steering Committee. That final recommendation should include a suggested implementation date. Accompanying the final recommendation shall be a report of how testimony was gathered, the nature of that testimony, and how the Committee responded to that testimony, including a description of how the preliminary recommendation evolved as a result of testimony.

Testimony

The presenting of testimony, prior to both the preliminary and final recommendations, is central to the concept of shared governance. All stakeholder groups will have an opportunity to provide input into governance issues through direct membership as well as invited testimony. Individuals appointed or elected to the governance system are expected to take a broad institutional perspective relative to issues being considered. In contrast, invited testimony will reflect the stakeholder perspective on the issue being considered. Committees are expected to be proactive in inviting stakeholder groups to provide testimony at both steps # 2 and #3 of the process. Committees need to identify stakeholder groups that are interested in each particular issue and invite their testimony at scheduled Committee meetings or hearings. Committees should report in their transmittal memos which groups were targeted as stakeholders, how testimony was invited, the form of the testimony (written, oral, etc.), and the substantive content of the testimony.

To see the Steering Committee's guidelines for gathering testimony and making a final recommendation, see the "Governance Toolbox" at <http://academicaffairs.pages.tcnj.edu/college-governance/a-governance-toolbox/>



The College of New Jersey

School of Engineering

To: College-wide Steering Committee
From: Steven Schreiner, Dean, School of Engineering
Date: April 3, 2013
Re: Discontinuation of the BA in Biomedical Engineering

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The Biomedical Engineering Department currently offers two very similarly-named degrees: the BA in Biomedical Engineering and the BS in Biomedical Engineering. I am requesting that the Steering Committee please approve the attached request from the Biomedical Engineering Department to discontinue the BA in Biomedical Engineering degree program.

I support this request because the BA degree has caused significant confusion among prospective and current students and their parents due to the nature of the degree and the fundamental differences from other engineering degrees offered by the School of Engineering. Furthermore, the BA degree does not meet the requirements of ABET accreditation causing additional confusion in regard to which degrees in the engineering portfolio are indeed accredited. The overwhelming majority of prospective and current students intend to seek an accredited engineering degree.

This request came from the department and has been recommended by the School of Engineering Curriculum Committee. Additionally, an open forum was held by the department chair, Dr. Constance Hall, to discuss the proposal. There were concerns brought forward regarding the special nature of pre-medical students who may benefit from the "reduced" BA curriculum. However, serious problems arise for the significant number of students who do not go onto medical school as their degrees are not accredited, making them less competitive for engineering opportunities. Moreover, in 2011 an expert accreditation consultant advised me that offering two very similarly-named degrees may cause significant problems when seeking accreditation for our biomedical engineering program that leads to a BS degree in Biomedical Engineering. All of these concerns and those articulated in the proposal led to my stopping new admissions into the program and the start of the process to formally discontinue the degree program.

Even though we are already not enrolling new students in the BA program, all students currently enrolled in the program will be able to complete their degree.

I have reached out to the Dean's Council for comment as required by our governance process and there were no objections to this discontinuation proposal.

cc: Connie Hall, Lisa Grega, Martha Stella, Frank Cooper, File



The College of New Jersey

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March 15, 2012

TO: School of Engineering Curriculum Committee

From: Connie L. Hall, PhD


Department of Biomedical Engineering

Subject: Proposal to discontinue the BA in Biomedical Engineering

The Department of Biomedical Engineering proposes to discontinue the BA in Biomedical Engineering. The justification is outlined in the attached proposal. The College policy on program closures is outlined at <http://www.tcnj.edu/~academic/policy/programclosure.html>. The closure will have no impact on current staff or faculty resources for the reasons delineated in the attached proposal.

Proposal for discontinuing the Bachelor of Arts in Biomedical Engineering

The Faculty of the Department of Biomedical Engineering proposes the closure of the degree program, Bachelor of Arts in Biomedical Engineering (BABME) as a stand-alone program and in conjunction with the BABME/MD 7 year program. The department proposes closing the program effective Fall 2012 with the exception of incoming freshman applicants to the BABME/MD program. These incoming freshmen, in addition to any student that entered the program as of the end of Spring 2012 will be able to complete the degree (course offerings for the BABME align with those offered for the BSBME).

The decision is supported by 1) the pattern of low student enrollment in the program, 2) concern regarding the limited career options for students graduating from the program; 3) the significant "degree confusion" between the BA and BS in Biomedical Engineering for students, their families and the engineering accrediting body (ABET).

The closure of this program will not affect any faculty or staff positions. The program has very low enrollment and all of the courses in the BA curriculum are contained within other engineering programs and are populated by students in these programs (BS BME students or other engineering majors).

Current Enrollment:

Currently there are 8 students enrolled in the BABME program, 6 under the standard 4 year plan and 2 pursuing the BA/MD 7 Yr program. The current combined enrollment in the BS BME and former biomedical specialization under engineering science is currently 104.

Graduation Trends:

Between 2007 to 2010, eight students graduated with the BA in BME after completion of the standard 4 year program. Three students graduated following completion of the BA/7yr program. In 2011 there were no graduates from these programs. In 2012, it is anticipated that there will be 4 graduates from the 4 year program and one graduate from the 7 year program. The remaining enrollment in Fall 2012 will be 2.

Anticipated Fall 2012 Enrollment:

There are no accepted students in the BA in BME. There were two applicants to the BA/7 Yr med program. One applicant was rejected, the admission decision for the other is pending as of March 28, 2012. If this student is accepted and decides to attend TCNJ in the BA/7 yr med program, they will be given the option to pursue this program or transfer to the BSBME/7 yr med program. The majority of applicants for Fall 2012 requested the BSBME/7 yr med program

over the BA/7 yr med program (22 for the BS vs 2 for the BA). Clearly, the BS is the preferred degree option.

Impact on 7 yr programs

The Coordinator for the 7 yr program, Dennis Shevlin, has been informed of our plan to close the BA BME and the BABME/7 yr program and has no concerns regarding this closure. The BSBME/7 yr plan has been in effect for two years with his full support.

Limited career options

The primary goal of biomedical engineering programs with reduced engineering requirements and increased flexibility in science and humanities electives was to attract student on a pre-med path. These programs/degrees do not contain sufficient engineering content to be accredited by ABET. Therefore, students do not graduate with a true engineering degree and are not qualified for engineering practice. As result, if they are not competitive for medical school admission or admission to other health professional schools (dentistry, etc.), they are left with limited career options.

Therefore, these graduates are also at a disadvantage in pursuit of other graduate degrees (they are not truly engineering or science). Nationally, undergraduate biomedical and bio-engineering departments that previously offered non-ABET accredited paths for pre-med students have discontinued these options (Univ. of Calif, San Diego in 2011, Univ. of Pennsylvania converted to degree in applied science) for similar reasons.

Degree confusion:

The existence of a degree in BME that is seeking ABET accreditation and a degree with the same name that cannot be accredited as a result of key missing engineering components, leads to confusion for the students, their families and the public. It is also misleading to award a degree in engineering that is not designed to meet the minimum standards set forth by the national accrediting body (ABET).



The College of New Jersey

School of Engineering

PO Box 7718
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To: Department of Biomedical Engineering

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From: Steven Schreiner, Ph.D., P.E., Dean, School of Engineering

F) 609.637.5148

Date: April 3, 2012

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Re: Bachelor of Arts in Biomedical Engineering Program Closure

I am recommending that the Bachelor of Arts in Biomedical Engineering degree program be discontinued, effective Fall 2012.

Recently, there has been discussion at the department level questioning the appropriateness of offering this degree program in the context of the newly created Bachelor of Science in Biomedical Engineering degree program. Additionally, a recent evaluation of the BS program by an ABET accreditation consultant confirmed my concerns regarding public confusion caused by offering both a BS and BA degree in biomedical engineering.

I am asking the department to respond to this recommendation with an assessment of the program with respect to student enrollment and placement, the effect on faculty and staff, and the confusion resulting from offering both a BS in biomedical engineering program that is seeking ABET accreditation and a BA in biomedical engineering program that cannot be accredited due to key missing engineering components. Within your assessment, include analysis of the effects of discontinuing the BA program on the 7-year medical program population. Finally, ensure that if the program is discontinued, students currently enrolled will have ample opportunity to complete their degree.