

The Senate of Michigan Technological University

PROPOSAL 6-86

PRELIMINARY APPROVAL FOR ESTABLISHMENT OF A BACHELOR OF SCIENCE IN ENVIRONMENTAL ENGINEERING (BSEnE) DEGREE PROGRAM

BACKGROUND:

A detailed proposal to establish the BSEnE degree has been endorsed by the Dean of Engineering and Chairman of Civil Engineering and has been considered by the Senate Curricular Policy Committee. The Committee recommends that the Senate grant preliminary approval for the establishment of this program in accordance with Senate Proposal 7-78. Following subsequent consideration by the Board of Control and Michigan Academic Officers, it is anticipated that a detailed proposal will be submitted to the Senate for final approval in accordance with Senate Proposal 10-70.

Although the BSEnE is a new degree designation at Michigan Tech, it is clearly not a new program. The environmental engineering specialty curriculum has been available under the undesignated Bachelor of Science in Engineering (BSE) degree program since 1972 and was accredited by the Accreditation Board for Engineering Technology (ABET) in 1974. Since that time, this program has produced over 50 graduates and has grown to an enrollment of about 30 students and a degree production of about 6 per year. Hence, the proposed degree is a spin off from the existing BSE program.

The purpose of the undesignated BSE degree program is to provide a route for a student to pursue a non-standard engineering curriculum. Over the past decade, this degree program has nurtured the development of the environmental engineering curriculum to the point where it has evolved to a standard pattern. This curriculum, with only minor changes, qualifies to be named and accredited as Environmental Engineering.

According to the "Guide for Environmental Engineering Visitors on Accreditation Teams" published by ABET, Environmental Engineering is defined as: ". . . that branch of engineering which is concerned with 1) the protection of human populations from the effects of adverse environmental factors, 2) the protection of the environment, both local and global, from the potentially deleterious effects of human activities, 3) the improvement of environmental quality for man's health and well-being." Major subject areas within environmental engineering are: water quality engineering, environmental health engineering, air pollution control engineering, and solid wastes engineering. All of these areas are covered in both the existing and proposed degree programs at Michigan Tech. However, the primary emphasis is on water quality engineering and treatment of residual hazardous wastes.

Most of the faculty involved with the environmental engineering program hold appointments in the Civil Engineering Department. Consequently, it is proposed that the BSEnE degree be administered through the Civil Engineering Department in much the same way as the present BSE degree. The environmental engineering faculty group will have primary authority and responsibility for curricular development on the BSEnE degree program within ABET guidelines. That is, the environmental engineering faculty will assume the primary responsibility of the current BSE "professional interest group."

PROPOSAL:

The Faculty Senate Grants Preliminary Approval for Establishment of the Bachelor of Science in Environmental Engineering Degree Program.

Approved by Senate: 5 February 1986

BOC Approval: 21 March 1986

Final Approval of the Program: 30 April 1986 (Proposal 8-86)