The University Senate of Michigan Technological University

Proposal 8-17
(Voting Units: Academic)

Proposed Laptop Requirement for Students in Engineering Fundamentals First-Year Courses

Submitted by: Faculty of the Department of Engineering Fundamentals
(Contact Person: Dr. Jon Sticklen)

Overview:

This proposal is being submitted due to a formal request made by the University Senate on January 18, 2017.

Proposal:

Beginning Fall Semester 2017, the Department of Engineering Fundamentals will require that all students enrolling in ENG 1101, ENG 1102, ENG 1001, and ENG 1100 have a laptop that meets specific requirements (requirements will be determined and made available via the web no later than March 1 each year).

Following implementation, the Department of Engineering Fundamentals will provide a report to the administration (through the Dean of the College of Engineering) and to the Senate for their review, including an analysis of pedagogical outcomes, survey of student views of the initiative effect on their learning and overall implementation (including IT support), with the support of other units, the effect on IT and its infrastructure and staffing, and financial impact on students. The Department of Engineering Fundamentals intends to provide this report in the fall of 2018, 2019, and 2020.

Background:

Pedagogical approaches in engineering education have evolved over the decades as computing capability has become increasingly available so that it now permeates the practice of engineering, and supports collaborative team problem-solving and communication and assessment of engineering design solutions.

The First-Year Engineering Program, managed by the Engineering Fundamentals Department, proposes requiring laptops of each student taking their courses (ENG 1101/1102/1001/1100) beginning with academic year 2017-2018. The details of this program, including the pedagogical basis, a review of other engineering colleges' policies, and a draft set of questions and answers relating to the program, have been made available to the Senate for their review with a request for their input and advice.

Summary Statement:

The faculty of the Department of Engineering Fundamentals passed a resolution in support of the proposed laptop requirement by a vote of 7 in favor, 0 opposed, and 1 abstained, at the EF faculty meeting held on Tuesday, January 24, 2017. The Department of Engineering Fundamentals requests that the

Senate respect the professional judgement of the faculty teaching the first-year engineering courses at Michigan Tech and formally support this proposal.

Success of this proposed initiative would not necessarily mean our readiness to eliminate university-wide computer labs. Any such possibility must be considered independently.

This proposal is unanimously supported by the Academic and Instructional Policy committee.