

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE COLLEGE OF ENGINEERING, UNIVERSITY OF HAWAI'I AT MANOĀ
AND
THE STATE OF HAWAI'I DEPARTMENT OF EDUCATION
REGARDING
*College-Focused Engineering Pathway to Acceptance at the College of Engineering,
University of Hawai'i at Manoa*

This Memorandum of Understanding ("MOU") is between the College of Engineering, University of Hawai'i at Manoa (CoE-UHM) with its principal place of business at 2540 Dole Street, Holmes Hall 240, Honolulu, Hawai'i 96822 and Hawai'i State Department of Education and its affiliates, (HIDOE) with its principal place of business located at 1390 Miller Street, Honolulu, Hawai'i 96813.

I. Purpose

The purpose of this agreement is to establish a formal partnership between HIDOE and CoE-UHM for the purposes of a single initiative, the *College-Focused Engineering Pathway to Acceptance at the College of Engineering, University of Hawai'i at Manoa*. This MOU seeks to clearly identify the requirements and necessary preparation for Hawai'i high school students to be accepted directly into a designated engineering major in the CoE-UHM, an engineering course of study accredited by the Accreditation Board for Engineering and Technology (ABET).

II. Background

The CoE-UHM has supported the development of a college-focused engineering pathway for Hawai'i public high school students to enter its professionally accredited engineering program. The pathway concept resulted from a collaboration between HIDOE and CoE-UHM, and was funded through an Office of Naval Research grant administered by the Director of the Office of Naval Research Project and Educational Leadership Program at Chaminade University. Through this collaborative effort the following milestones were achieved:

- Developed college-focused engineering pathway program requirements for high school students to successfully matriculate and pursue a degree at the CoE-UHM.
- Worked on the development of Engineering Technology I and II standards.
- Developed HIDOE approved Engineering I and II high school courses. These courses are consistent with the anticipated knowledge base for CoE-UHM entry level engineering course objectives.

III. Collaboration

CoE-UHM and HIDOE will each accept the following roles and responsibilities to meet the goals of this agreement to the extent practical and authorized by law and State policies:

A. College of Engineering, University of Hawai'i at Manoa

1. Designate a point of contact (POC) within CoE-UHM to administer the College-Focused Engineering Pathway program to acceptance at the College of Engineering, University of Hawai'i at Manoa Initiative.
2. Provide an annual summary of CoE-UHM public school freshmen enrollment data including students identified by HIDOE as successfully completing the College-Focused Engineering Pathway program.
3. CoE-UHM will summarize the College-Focused Engineering Pathway program data gathered from the review of applications from all public high school students accepted to the University of Hawai'i at Manoa who have designated an engineering major and self-reported that they are enrolled in the College-Focused Engineering Pathway program on their application. This data will confirm that CoE-UHM has accepted students who met the following requirements:
 - Gained admission into the University of Hawai'i at Manoa.
 - Met HIDOE College-Focused Engineering Pathway Program of Study requirements as provided by the HIDOE. The list of high school student graduates who have successfully met all HIDOE College-focused Engineering Pathway Program of Study will be provided to the CoE-UHM POC. The College-Focused Engineering Pathway Program of Study requirements are included in Attachment I.
4. Coordinate and facilitate an annual meeting with HIDOE POC.

B. Hawai'i State Department of Education

1. Designate a point of contact (POC) within the HIDOE to administer the College-Focused Engineering Pathway to Acceptance at the College of Engineering, University of Hawai'i at Manoa Initiative.
2. Disseminate information and announcements regarding the program to HIDOE administrators, specialist, and teachers.
3. Provide the list of public high school graduates identified by the HIDOE as having successfully completed the HIDOE's College-Focused Engineering Pathway program.
4. Provide data to the CoE-UHM POC on: 1) schools adopting the College-Focused Engineering Pathway program, and 2) schools teaching Engineering I and II courses.
5. Develop strategies with the CoE-UHM to monitor and assess program effectiveness in order to optimize student success

COLLEGE-FOCUSED ENGINEERING PATHWAY PROGRAM OF STUDY

Required Courses (Grades of B or Better)	Engineering Pathway Courses (Grades of B or Better)	Electives <i>Application/Content Courses</i>	Other Program Requirements	Outcome of Meeting Program of Study Requirements	K-16 Outcome
<p>Mathematics: 4 credits (Grades of B or Better)</p> <p>~ Geometry I or 2-Year Integrated Common Core Sequence</p> <p>~ Algebra II</p> <p>~ Precalculus/Trigonometry</p> <p>~ Calculus (AP/IB/Running Start)</p> <p>Science: 4 credits (Grades of B or Better)</p> <p>~ Physical Science or Other Sci. Course</p> <p>~ Biology 1 (or accepted AP/IB equivalent)</p> <p>~ Chemistry (or accepted AP/IB equivalent)</p> <p>~ Physics (or accepted AP/IB equivalent)</p> <p>English: 4 credits</p> <p>Social Studies: 4 credits</p>	<p>Grade 9</p> <p>TIC5010 Industrial and Engineering Technology Core</p> <p>Grade 10</p> <p>TIU5810 Engineering Technology I</p> <p>Grade 11</p> <p>TIN5623 Engineering Technology II</p> <p>Grade 12</p> <p>XAT1000 STEM Capstone</p>	<p>Mathematics:</p> <p>~ Probability/Statistics</p> <p>~ AP Statistics</p> <p>Science:</p> <p>~ AP Chemistry</p> <p>~ AP Physics</p> <p>~ AP Environmental Science</p> <p>Engineering Program of Study Cluster Courses</p> <p>TIU5710 Electricity & Electronics</p> <p>TIU5310 Design Technology I</p> <p>TIN5320 Design Technology II</p> <p>TIN5520 Cyber Security</p> <p>TIU5713 Networking Fundamentals and LAN</p> <p>TIN5716 WAN and Networking Architecture</p> <p>TIU5510 A+ Certifications Introduction</p> <p>TIU5511 A+ Certifications Computer Systems</p>	<p align="center">Acceptance into UHM</p>	<p align="center">Acceptance into College of Engineering-UHM in a Declared Engineering Major</p>	<p align="center">Engineer</p>

Physical Education: 1 credit		TIN5512 A+ Certification Operating Systems			
Health: 0.5 credit		TIN5513 Internship			
Personal Transition Plan 0.5 credit		TIU5620 Electronic Technology I			
		TIN5623 Electronic Technology II			

Total Credits = 24