Information Technology

2020
ANNUAL REPORT OF PROGRAM DATA

UNIVERSITY of HAWAI'I®
HAWAI'I
COMMUNITY COLLEGE

1. Program or Unit Description

The Information Technology program is a career-laddered, competency-based program that provides training in the use and support of business-related computer systems, data communication networks (including local area networks), and the development of business computer information systems programs using procedural, event-driven and object-oriented programming techniques. The program includes a combination of business, computer, and information technology courses. Campus-based computer and networking projects, faculty supervised laboratories, and workplace internships provide hands-on experience designed to prepare students for positions in computer support, programming, network administration, or systems development in a business information technology system. The program focuses on computers and information technology as tools to solve business problems.

The program targets undergraduates seeking individual courses, certificates, and two-year degrees.

2. Analysis of the Program/Unit

The Information Technology program was rated Healthy for Overall program, Demand, Efficiency, and Effectiveness health. The job market is strong for IT careers and so the demand is good. The program could support two analytic FTE faculty even though there is only one faculty member. The program is also effective with an 86% completion level and a persistence rate that has been steadily increasing over the last three years.

The program offered the first distance education course the year prior to this report. The number of distance courses and the number of students has increased both years.

Only one of the Perkins indicators, Completion, was met. The technical skills attainment had the biggest gap between the goal and the actual number. The program can try to strengthen retention through better communication and tracking with the students. The remaining indicators were closer to the goal. Information technology and computer science classes are predominantly male and efforts to recruit females include the program's local Girls Who Code chapter for middle and high school students that the full-time faculty member leads.

#	Perkins Indicators	Goal	Actual	Met
29.	1P1 Technical Skills Attainment	94.75	73.33	Not Met
30.	2P1 Completion	61	66.67	Met
31.	3P1 Student Retention or Transfer	86	76.19	Not Met
32.	4P1 Student Placement	66.75	60	Not Met
33.	5P1 Nontraditional Participation	23.75	21.43	Not Met
34.	5P2 Nontraditional Completion	23.25	20	Not Met

For performance indicators, the number of degrees and certificates awarded to Native Hawaiians and the number of transfers to UH schools increased.

One action item to work on from the previous year was pathways to UH and other schools for transfer. This will help with the Perkins indicator 3P1 and performance indicators. Efforts were made to work with Western Governors University and UH Maui. The new curriculum will help with transfer of more courses to UH Hilo. The second action item from the previous year was to attend career fairs, community events, and to run the local Girls Who Code club to increase enrollment and to help with Perkins 5P1. The program went to several career fairs and a career day. The club, which met once a week on campus, ran until March when we moved online due to the pandemic.

Link to ARPD data: https://uhcc.hawaii.edu/varpd/index.php?y=2020&c=HAW&t=CTE&p=2099

3. Program Student Learning Outcomes or Unit/Service Outcomes

a) IT Program Learning Outcomes:

- PLO 1: Information Systems - Plan, develop, and implement the hardware, software, and procedural components of a data processing system in a business environment.
- PLO 2: Networking - Plan, develop, and implement the hardware, software, and procedural components of a data communications system in a business environment.
- PLO 3: Programming - Plan, develop, implement, and document computer programs that meet the data processing requirements of a business organization.
- PLO 4: Productivity - Work independently and cooperatively to deliver reports, programs, projects, and other deliverables that document a business organization's information technology requirements.
- PLO 5: Legal/Ethical/Professional - Base decisions and actions on the legal, ethical, and professional guidelines and practices of the information technology field.
- PLO 6: Explore - Demonstrate the ability to search, analyze, and synthesize current information and solutions in the rapidly changing information technology profession.

b) During Fall 2019, PLO1, PLO3, PLO4, PLO5, and PLO6 were assessed through CLO-based assessments of the following courses:
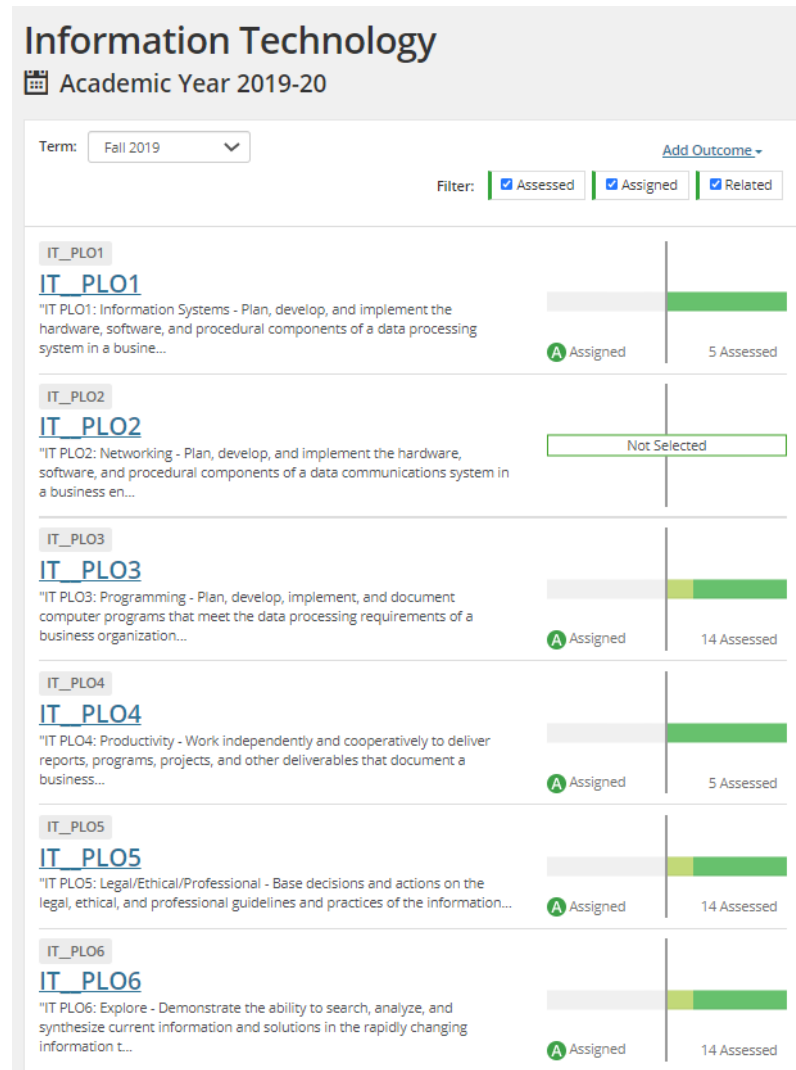
ICS 141 - Discrete Mathematics for Computer Science I: PLO1, PLO3, PLO4, PLO5, PLO6
ITS129 - Introduction to Databases: PLO3, PLO5, and PLO6

The College suspended course assessments during Spring 2020 due to the COVID-related shift of all courses to distance delivery modalities. The program has rescheduled all affected course assessments to Spring 2021 or Spring 2022 as appropriate.

c) For the courses assessed in Fall 2019, the results were favorable. In both courses, all students met or exceeded achievement standards on all CLOs/PLOs. Please see the graph below.

Information Technology Program AY19-20 Assessment Results
Key: Dark Green = Exceeds // Light Green = Meets // Orange = Partly Meets //Red = Does not Meet

Information Technology
📅 Academic Year 2019-20

Term: Fall 2019 ▾   Add Outcome ▾

Filter: ☑ Assessed | ☑ Assigned | ☑ Related

IT_PLO1
IT_PLO1
"IT PLO1: Information Systems - Plan, develop, and implement the hardware, software, and procedural components of a data processing system in a busine...

Ⓐ Assigned   5 Assessed

IT_PLO2
IT_PLO2
"IT PLO2: Networking - Plan, develop, and implement the hardware, software, and procedural components of a data communications system in a business en...

Not Selected

IT_PLO3
IT_PLO3
"IT PLO3: Programming - Plan, develop, implement, and document computer programs that meet the data processing requirements of a business organization...

Ⓐ Assigned   14 Assessed

IT_PLO4
IT_PLO4
"IT PLO4: Productivity - Work independently and cooperatively to deliver reports, programs, projects, and other deliverables that document a business...

Ⓐ Assigned   5 Assessed

IT_PLO5
IT_PLO5
"IT PLO5: Legal/Ethical/Professional - Base decisions and actions on the legal, ethical, and professional guidelines and practices of the information...

Ⓐ Assigned   14 Assessed

IT_PLO6
IT_PLO6
"IT PLO6: Explore - Demonstrate the ability to search, analyze, and synthesize current information and solutions in the rapidly changing information t...

Ⓐ Assigned   14 Assessed

d) Changes made because of these assessments:
During the assessment of ICS 141, a new course first offered Fall 2019, the program found that, while all students met or exceeded the expected results, the textbook was difficult and that a new textbook or more supplemental material was needed. All the students in ITS 129 also achieved expected results, however the program found that a more stable web hosting platform to host student projects was needed.

4. Action Plan

Action Item 1: Compile data on graduating students and alumni of the program to better analyze data to help with Perkins student retention or transfer and student placement. This will also align to the Hawaii Graduation Initiative action item.

Action Item 2: The system is in a budget crisis due to the pandemic. The program is working with others around the state to find ways to be more efficient, such as offering more online sections from multiple campuses. The curriculum will be looked at to see if there are any ways to streamline classes from other campuses. This action item also aligns with the Hawaii Graduation Initiative action item.

5. Resource Implications

Detail any resource requests, including reallocation of existing resources (physical, human, financial)

Ⅹ **I am NOT requesting additional resources for my program/unit.**