Information Technology

COMPREHENSIVE

REPORT OF PROGRAM DATA

AY18-19 to AY20-21

July 1, 2018 through June 30, 2021

UNIVERSITY of HAWAI'I®
HAWAI'I
COMMUNITY COLLEGE

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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, and transfer students.

2. Analysis of the Program/Unit

UHCC Annual Report of Program Data (VARPD)

The Information Technology program was rated Cautionary overall for 2020-2021, down from Healthy in the previous two years. The changes to the ratings are in the Efficiency and Effectiveness sections. Some competitors to our program are the local workforce and the UH Hilo Computer Science program.

The program was rated Healthy for Demand this year and the previous two years of the report period. The job market is strong for IT careers, and so the demand is good. The demand for IT jobs is expected to continue in future years.

For the previous two years the Efficiency was rated as Healthy but changed to Progressing this year. The fill rate, 60.8%, is about the same as the previous year (60.4%), but both are down from the year before that (76.6%). The majors to full-time faculty have not decreased compared to the previous two years. The program could support two analytic FTE faculty even though there is only one faculty member. The program offers most classes only once a year to avoid low-enrolled

classes. Offering more classes online enables us to include more students, although some students do not want to take online classes.

The program also changed to Progressing for Effectiveness, while Healthy for the previous two years. The program completion rate dropped slightly from the previous two years and is currently 74% for completion rate. The persistence from fall to spring also dropped to 74%, down from the previous two years. Some of this can be attributed to the Covid pandemic and the move to online instruction. The number of unduplicated degrees/certificates and other certificates awarded also dropped this year compared to the previous two years. I am investigating this data to make sure it is correct, but the program can always improve on completion rates. Retention will be one of the action items at the end of the report.

The Perkins Indicators for 1P1 Postsecondary Placement and 2P1 Earned Recognized Credential were both met, as shown below. The way the Perkins Indicators are being reported changed this academic year, so it won't be compared to the previous two years.

#	Perkins Indicators	Goal	Actual	Met
29.	1P1 Postsecondary Placement	33	94.44	Met
30.	2P1 Earned Recognized Credential	33	84.62	Met
31.	3P1 Nontraditional Program Concentration	N/A	N/A	N/A

The pandemic was an external factor affecting the program, along with the move to online instruction. While some students prefer online instruction, others stopped coming to class and would prefer in-person instruction. One benefit of being online was the ability to pull students in from other UH campuses, including UH Mānoa, UH Hilo, and some of the other community colleges. During the past three years, the IT curriculum has changed to include classes that transfer to other UH schools, which means that other students can take our classes. The program will need to find a balance between offering online instruction to increase class sizes and offering face-to-face classes for those that prefer being in person. Another positive is that the program also entered into a transfer agreement with UH Maui for non-terminal students to earn a four-year degree.

3. Program Learning Outcomes or Unit/Service Outcomes

a) *List all Program Learning Outcomes (**PLO**s) or Unit/Service Outcomes (**UO**s) and their alignment to the College's Institutional Learning Outcomes (**ILO**s).*

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.

Institutional Learning Outcomes	**Aligned IT Program Learning Outcomes**
ILO 1: Communication - Hoʻokaʻaʻike Communicate effectively in a variety of situations. Hoʻokaʻaʻike pono i nā manawa like ʻole.	PLO 1, 2, 3, 4, 5, 6
ILO 2: Critical Thinking - Noʻonoʻo loi Utilize critical thinking to solve problems and make informed decisions. Noʻonoʻo loi ma ka huli ʻana i ka hāʻina a hoʻoholo manaʻo me ke naʻauao.	PLO 1, 2, 3, 4, 5, 6
ILO 3: Contributions to Community and Culture - Kōkua i ke Kaiaulu a me nā Moʻomeheu Apply knowledge and skills to make contributions to community that are respectful of the indigenous people and culture of Hawaiʻi island, as well as other cultures of the world. Kōkua i ke kaiaulu, me ka ʻike a me ka mākau, a me ka mahalo hoʻi i nā kānaka ʻōiwi a me nā moʻomeheu ʻōiwi o hawaiʻi nei, a me nā moʻomeheu ʻē aʻe o ka honua.	PLO 1, 2, 3, 4, 5, 6
ILO 4: Life-long Learning - Kūlia i ka nuʻu ma ka ʻImi Naʻauao Utilize quality comprehensive services and resources in the on-going pursuit of educational and career excellence. Kūlia i ka nuʻu ma ka ʻimi naʻauao a ma ka ʻoihana hoʻi ma o ka huli ʻana ma nā ʻoihana a me nā kumuwaiwai maikaʻi.	PLO 1, 2, 3, 4, 5, 6
ILO 5: Respect for Diversity - Mahalo i ke Kanaka a me ke Kaiapili Produce and perpetuate safe, healthy learning and professional environments that are respectful of social and individual diversity. Hoʻopuka a hoʻomau i kekahi kaiapuni aʻo maluhia me ona kaiapuni ʻoihana e mahalo i ke kanaka a me ke kaiapili.	PLO 1, 2, 3, 4, 5, 6
ILO 6: Environmental Sustainability - Mālama Pono i ke Kaiapuni Contribute to sustainable environmental practices for personal and community well-being. Mālama i ke kaiapuni no ke ola pono ʻana o ke kanaka a me ke kaiaulu.	PLO 1, 2, 3, 4, 5, 6

*b) List the PLOs or UOs that have been assessed in the period of this Review. Instructional programs must list the courses that have been assessed in the period of this Review and identify the alignment(s) of Course Learning Outcomes (**CLO**s) to the PLOs. If no assessment was conducted in the period of this Review, provide an explanation and the schedule of upcoming planned assessments.*

Course	**CLO**	**Aligned PLO**
ICS 101 – Digital Tools for the Information World	CLO1: Utilize the appropriate computer applications to produce professional documents, spreadsheets, presentation, databases, and web pages for effective communication (major content area).	PLO 1
	CLO2: Utilize operating system interfaces to manage computer resources effectively and securely.	PLO 1
	CLO3: Extract and synthesize information from available Internet resources using intelligent search and discrimination.	PLO 4,6
	CLO4: Define, explain, and demonstrate proper computer terminology usage in areas such as hardware, software, and communications to effectively interact with other computer users and to prepare for higher-level computer courses	PLO 4
	CLO5: Describe ethical and security issues involved in the use of computer terminology.	PLO 5
ICS 111 – Introduction to Computer Science I	CLO 1: Use an appropriate programming environment to design, code, compile, run and debug computer programs.	PLO 3,6
	CLO 2: Demonstrate basic problem solving skills: analyzing problems, modeling a problem as a system of objects, creating algorithms, and implementing models and algorithms in an object-oriented computing language.	PLO 1,3
	CLO 3: Illustrate basic programming concepts such as program flow and syntax of a high-level general purpose language and basic security practices.	PLO 3,4,5
	CLO 4: Demonstrate working with primitive data types, strings, and arrays.	PLO 3

ICS 141 – Discrete Mathematics for Computer Science I	CLO 1: Analyze issues and apply mathematical problem solving skills to plan courses of action in decision-making situations.	PLO 1,3,4,5
	CLO 2: Solve problems by using basic mathematical formal logic, proofs, recursion, analysis of algorithms, sets, combinatorics, relations, functions, matrices, and probability.	PLO 1,3,6
ICS 200 – Web Technology	CLO 1: Use styling and markup languages to create simple user interfaces.	PLO 1,3
	CLO 2: Use scripting to build dynamic web applications.	PLO 3
	CLO 3: Use scripting functions to optimize web applications for different devices, browser compatibly, and accessibility.	PLO 3,5
	CLO 4: Design and create a web application with client-side scripting, regular expressions, event handling, input validation, selection, repetition, and parameter passing.	PLO 1,3,6
ICS 211 – Introduction to Computer Science II	CLO 1: Use and implement abstract data types such as lists, stacks, queues, and trees.	PLO 3
	CLO 2: Select the appropriate searching or sorting algorithm based on the algorithm's behavior.	PLO 3,6
	CLO 3: Develop recursive algorithms and programs.	PLO 3
	CLO 4: Use standard libraries or packages as well as advanced object-oriented programming techniques (polymorphism, inheritance, and encapsulation).	PLO 3,4
	CLO 5: Produce robust and secure programs using exception handling and extensive program testing.	PLO 1,3,4,5
ITS 104 – Computer Hardware Support	CLO 1: Utilize and identify the functions and interactions of all PC parts within the computer system.	PLO 1
	CLO 2: Demonstrate comprehensive understanding of the basic concepts of microcomputer hardware to include: microprocessors, data bus, memory, disks and disk drives, video displays, serial and	PLO 1

	parallel ports, and computer system configurations.	
	CLO 3: Demonstrate the ability to identify and troubleshoot common PC hardware problems.	PLO 1
	CLO 4: Demonstrate the ability to select quality PCs and constituent components based on performance and cost.	PLO 1,2
	CLO 5: Demonstrate the ability to select, install, replace, and upgrade PC hardware components and PC peripherals such as printers, scanners and modems.	PLO 1
	CLO 6: Work independently and cooperatively in diverse business situations.	PLO 4,5,6
ITS 121 – Computing Topics	CLO 1: Demonstrate comprehensive understanding of the role of Unix/Linux and how it relates to the user and the computer system.	PLO 1,2
	CLO 2: Demonstrate the use of Unix/Linux command line interface and its relation to the Windows Operating System.	PLO 1,2,3
	CLO 3: Explain the structure and management of the Unix/Linux file systems.	PLO 1,2
	CLO 4: Demonstrate the structure of the Unix/Linux kernel, shells, Graphical User interface and networking.	PLO 1,2
	CLO 5: Install, maintain and troubleshoot the Unix/Linux operating system and other applications.	PLO 1,2,3,4,5,6
ITS 129 – Introduction to Databases	CLO 1: Define common database terminology.	PLO 3
	CLO 2: Create Entity Relationship Diagrams (ERD).	PLO 3
	CLO 3: Design and create a relational database using the normalization process.	PLO 3
	CLO 4: Use Structured Query Language (SQL) to manipulate data.	PLO 3,5,6
	CLO 5: Follow best practices in secure database design.	PLO 3

ITS 287 – IT Internship Preparation	CLO 1: Demonstrate the understanding of overall competencies, such as analyzing or describing job assignments in relationship to principles, concepts, or procedures covered in the field of study to prepare for practical workplace experience.	PLO 1,2,3
	CLO 2: Demonstrate the understanding of professional workplace ethics, behavior, attitudes, team work and interpersonal relations that meet industry standards for the ITS course of study.	PLO 1,2,3,4,5,6
ITS 288 – IT Program Internship	CLO 1: Perform activities in a cooperative work environment that demonstrate the understanding of overall competencies, such as analyzing or describing the job assignment in relationship to principles, concepts, or procedures covered in information technology.	PLO 1,2,3
	CLO 2: Apply workplace ethics, behavior, team work and interpersonal relations that meet the IT industry standards.	PLO 1,2,3,4,5,6

c) Assessment Results: provide a detailed discussion of assessment results at the program (PLO) and course (CLO), or unit (UO), levels in the period of this Review. Provide an analysis of how these results reflect the strengths and challenges of the program or unit in meetings its Outcomes.

Course	**Assessment Results**
ICS 101 • Fall 2018 Initial • Fall 2020 Closing the Loop	This class used a final summative project to assess the course learning outcomes. The project has the student creating a business presentation with components in Word, Excel, PowerPoint, and Access. In Fall 2018, over 90% of students met or exceeded the requirements. In Fall 2020, 70.26% of students met or exceeded the requirements. The students meeting the requirements were lower for online classes versus face-to-face. The pandemic might also have played a role in Fall 2020.

	The students enjoy the final project, and it is a good measure of their abilities for the course learning outcomes. This course has changed over the last three years of the review period to use open educational resources and to be more project-based. This course is used by both IT majors and those from other degrees. This project is still being used as a final project in current classes because of the success rate of the students, the relevancy of the project to future careers, and their enjoyment in completing the project. It continues to be assessed to see if components should be changed or if individual parts of the project should change due to technology.
ICS 111 • Spring 2021 Initial	This course was offered for the first time in Fall 2019 and was assessed in Spring 2021. The course was developed to be consistent with the same course at other UH campuses. The class uses open educational resources so that no textbook is required. The class also uses high-engagement and hands-on assignments. This class used a final summative project to assess the course learning outcomes. The final project consists of the student creating a Python program that includes criteria such as an overall loop with a menu that gives users choices of what to do, at least two other loops somewhere in the program, at least three functions that you make, at least one array/list, at least three if statements besides the menu items, at least one file to read to/write from, exception handling in at least one place, a class, comments, and the use of PyPlot or Pandas. 77.28% of students met or exceeded the requirements for the class. The class was offered in an online synchronous

	environment. The four who did not meet the requirement did not even attempt the assignment (they had stopped coming earlier in the semester). Students seemed to enjoy the final project, and it was a good measure of the course learning outcomes. This project will still be used as a final project in current classes because of the success rate of the students, the relevancy of the project to future careers, and their enjoyment in completing the project. It will continue to be assessed to see if components should be changed or if individual parts of the project should change due to technology, such as the programming language used.
ICS 141 • Fall 2019 Initial • Fall 2020 Closing the Loop	This course was offered for the first time in Fall 2019 and was assessed then and again in Fall 2020. The course was added to the IT curriculum for better transfer to UH schools. The class is aligned with other campuses. The class uses open educational resources so that no textbook is required. The class also uses practical assignments, such as programming, in addition to math problems and theories. The class uses a final summative project to assess the course learning outcomes. The final project consisted of the student creating a Python program that includes criteria such as an overall loop with a menu that gives users choices of what to do, a function that uses recursion, analysis of algorithms such a time and space complexity, the use of sets, relations, matrices, and probability. In addition, they were given some problems to demonstrate the use of proofs and combinatorics. The students were allowed to create any type of program such as a game or business application.

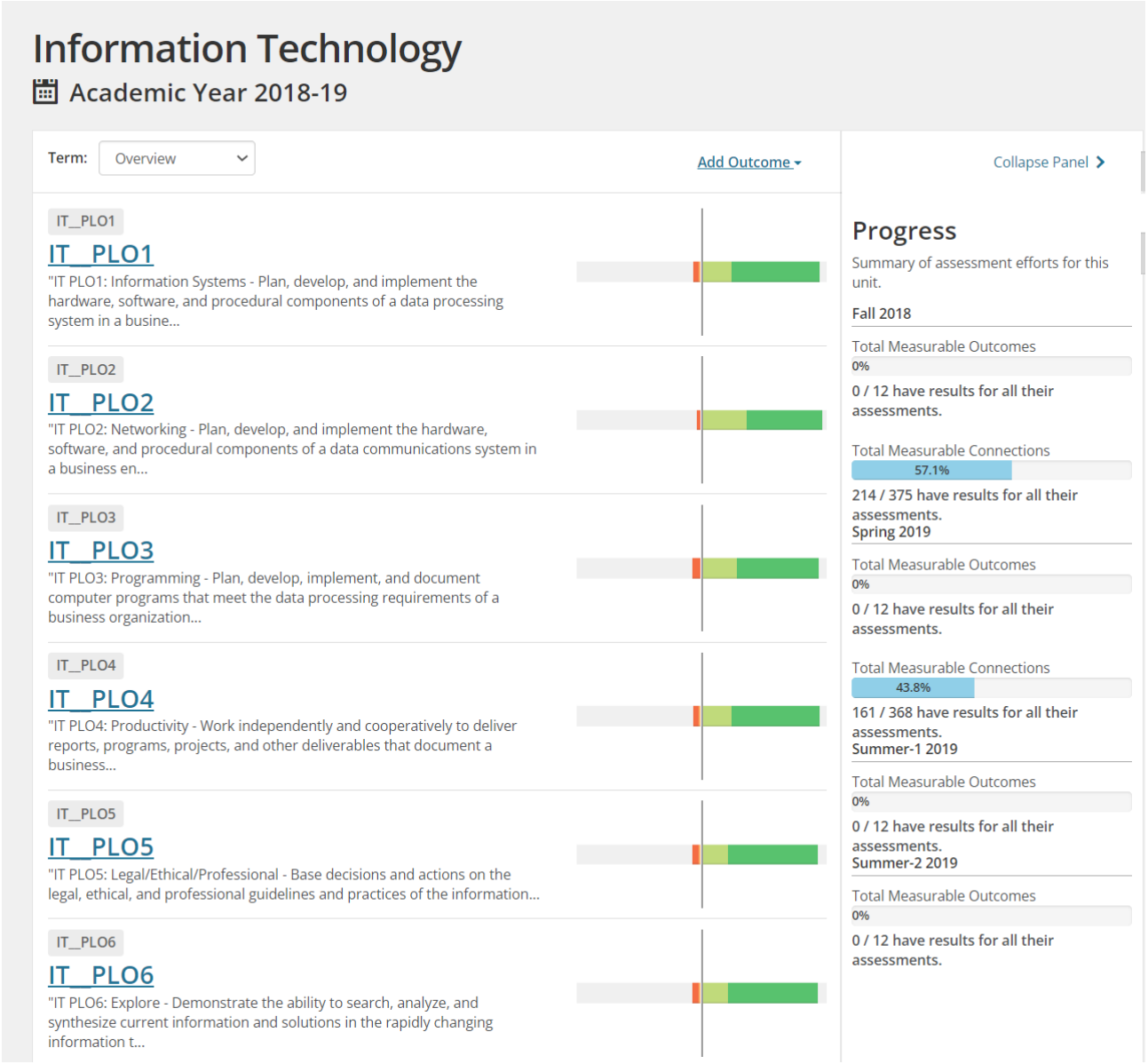
	All the students in the Fall 2019 section met or exceeded the requirements. 90.91% of the students met or exceed the requirements in Fall 2020. The final project was a good measure of the course learning outcomes. This project will still be used as a final project in current classes because of the success rate of the students, the relevancy of the project to future careers, and their enjoyment in completing the project. It will continue to be assessed to see if components should be changed or if individual parts of the project should change due to technology.
ICS 200 • Spring 2021 Initial	This course was offered for the first time in Fall 2019 and was assessed in Spring 2021. The course was developed to be consistent with the same course at other UH campuses. The class uses open educational resources so that no textbook is required. The class also uses high-engagement and hands-on assignments. This class used a final summative project to assess the course learning outcomes. The final project consists of the student creating a web application published to a web server that used HTML, CSS, and Javascript. They could choose the subject material they wanted to use but needed to include at least ten individual web pages, at least one form, at least ten images, input validation, selection and repetition statements, and parameter passing in Javascript functions. The project had to work in multiple browsers and meet accessibility guidelines. 84.62% of students met or exceeded the requirements for the class. The ones that didn't meet or exceed did not attempt the final project because they had stopped coming to class. The program will continue

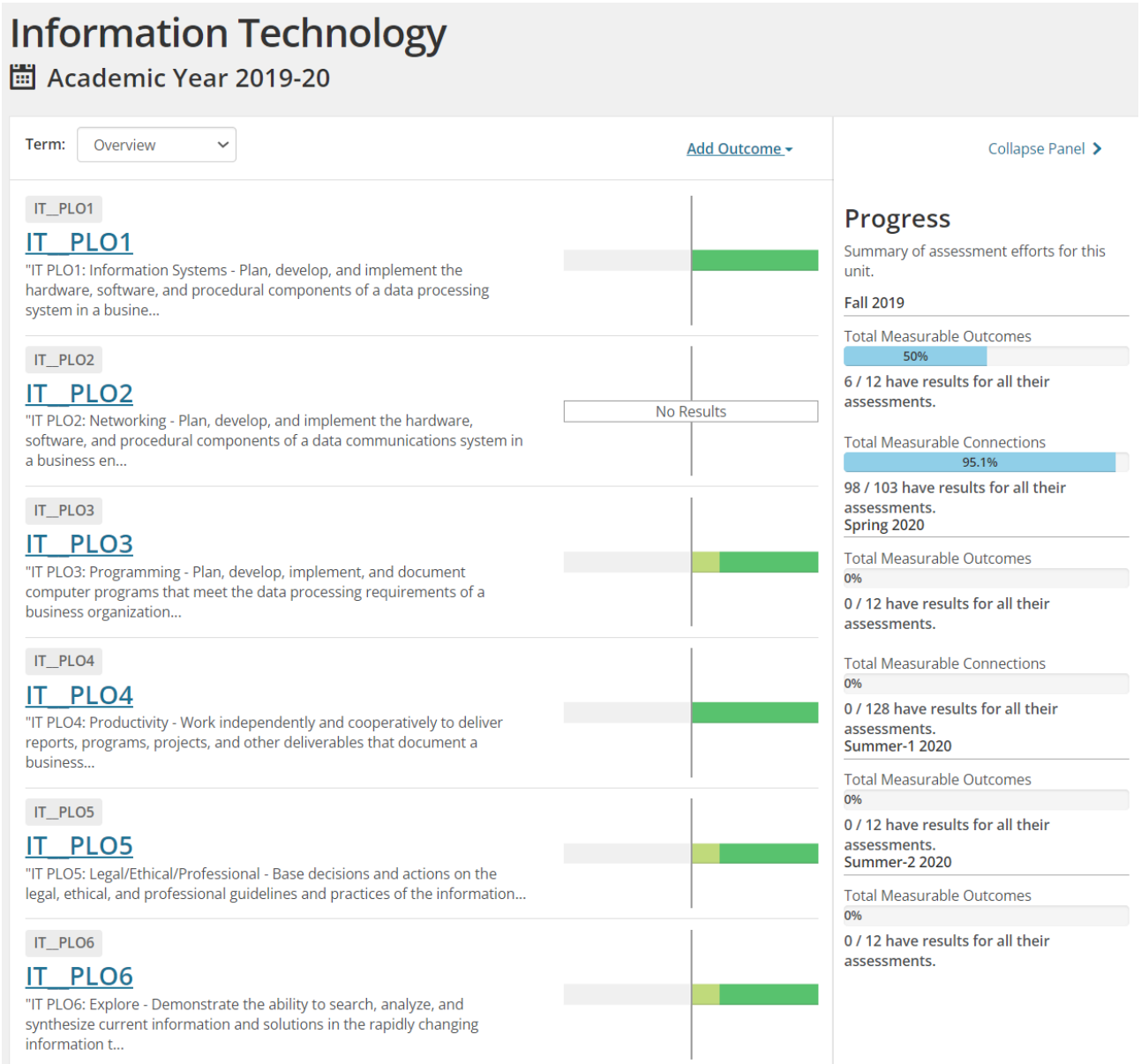
	to reach out to students that stop coming to try to get them back in the class. The class was offered in an online synchronous environment. Students seemed to enjoy the final project because of the creativity that they could use, and it was a good measure of the course learning outcomes. This project will still be used as a final project in current classes because of the success rate of the students, the relevancy of the project to future careers, and their enjoyment in completing the project. It will continue to be assessed to see if components should be changed or if individual parts of the project should change due to technology, such as the web server or use of HTML, CSS, and Javascript.
ICS 211 • Fall 2020 Initial	This course was offered for the first time in Fall 2019 and was assessed in Fall 2020. The course was developed to be consistent with the same course at other UH campuses. The class uses open educational resources so that no textbook is required. The class also uses high-engagement and hands-on assignments. This class used a final summative project to assess the course learning outcomes. The final project consists of the student creating a Python program that includes criteria such as including at least one class, at least one user defined function, at least one abstract data type, a searching or sorting algorithm, recursion, exception handling, Tkinter, a database, and at least one image. Students met or exceeded the course learning outcomes at a rate of 72%. Those who did not meet or exceed did not attempt the final project because they had stopped coming earlier in the semester. I will continue to attempt to contact those

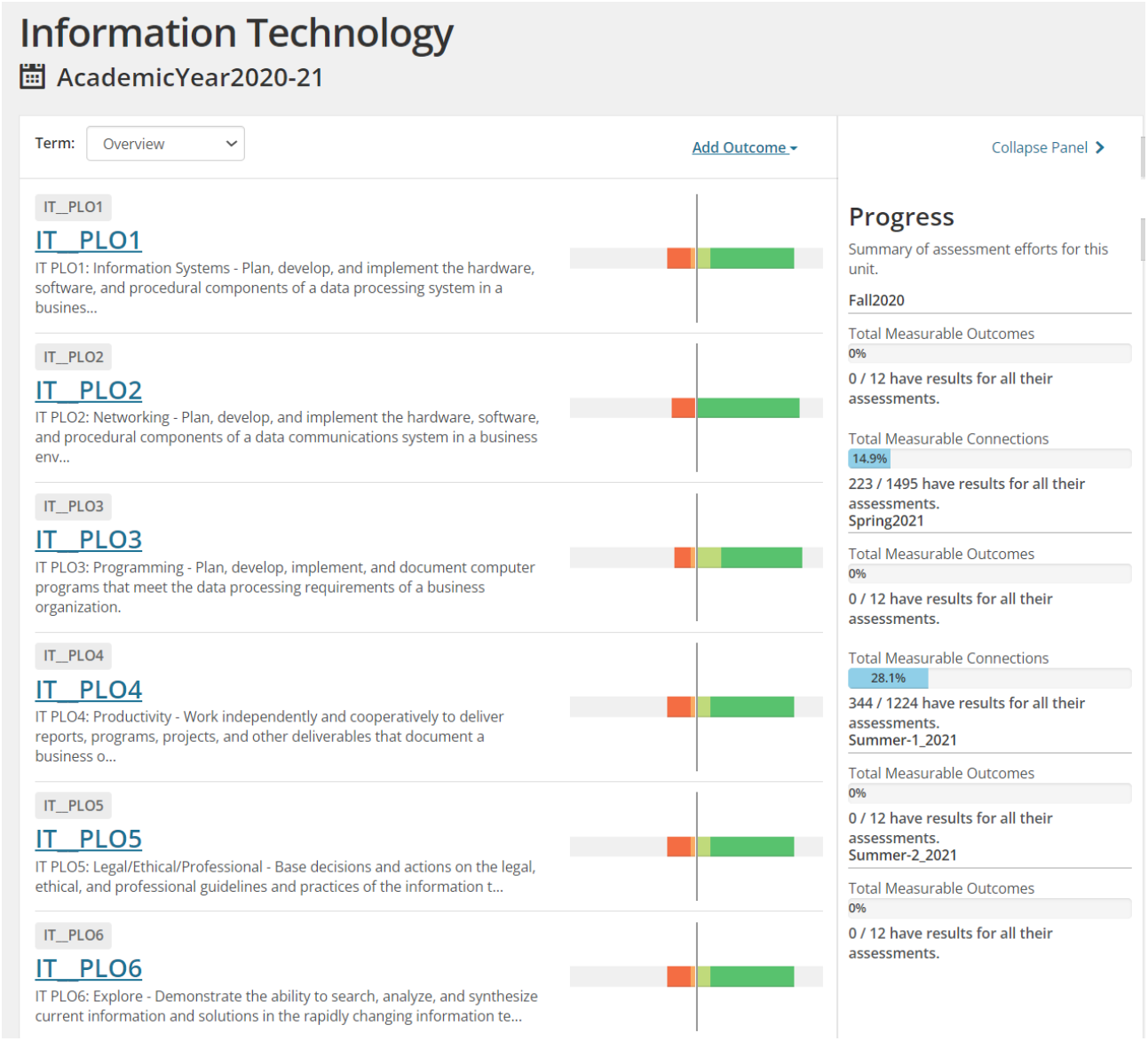
	students to keep them coming back. The class was offered in an online synchronous environment. Students seemed to enjoy the final project because of the creativity that they could use, and it was a good measure of the course learning outcomes. This project will still be used as a final project in current classes because of the success rate of the students, the relevancy of the project to future careers, and their enjoyment in completing the project. It will continue to be assessed to see if components should be changed or if individual parts of the project should change due to technology, such as the programming language used.
ITS 104 • Fall 2018 Initial • Fall 2020 Closing the Loop	This course has been in the IT program for many years. The course was redeveloped to make use of the Cisco curriculum (starting in Fall 2018), which was free for our students to use because of the professional development and certification of the full-time faculty member and a lecturer. To assess the course learning outcomes, a final summative exam was used. In Fall 2018, 100% of students met or exceeded the requirements. In Fall 2020, 63.64% met or exceeded the requirements. This section was online asynchronous, and those that did not meet the requirements did not even attempt the exam. This course is not transferrable to other campuses and will be replaced with another course in Fall 2022. The new course will be consistent with other campuses but will have similar content.
ITS 129 • Fall 2018 Initial • Fall 2019 Closing the Loop	This course has been in the IT program for many years. It was redeveloped for the first use in Fall 2018 using open educational

	resources, high-engagement strategies, and hands-on assignments. This class used a final summative project to assess the course learning outcomes. The final project consists of the student creating an entity relationship diagram, a database created in MySQL, and a website uploaded to a web server that used HTML, CSS, and PHP to create web pages for people to interact with the database (using SQL on the back end). In Fall 2018, 84.62% of students met or exceeded the requirements for the class. In Fall 2019, 100% of the students met or exceeded the requirements for the class. Both were face-to-face sections. This project will still be used as a final project in current classes because of the success rate of the students, the relevancy of the project to future careers, and their enjoyment in completing the project. It will continue to be assessed to see if components should be changed or if individual parts of the project should change due to technology, such as the website languages used and the DBMS.
ITS 287 • Spring 2019 Initial • Spring 2021 Closing the Loop	This course was first offered in Spring 2019. It replaced part of an existing course for internship preparation. The course uses open educational resources to help prepare students for their internship and future career. The class uses a final summative paper assignment to assess the course learning outcomes. In Spring 2019, all students met or exceeded the course requirements. In Spring 2021, 85.71% of students met or exceeded the requirements. In that semester one student stopped coming to class near the beginning of the semester. I will

	continue to try to reach out to students to try to get them to come back to class. This project will still be used as a final project in current classes because of the success rate of the students and the relevancy of the project to future careers. It will continue to be assessed to see if the course is meeting student needs.
ITS 288 • Spring 2019 Initial • Spring 2021 Closing the Loop	This course was first offered in Spring 2019. It replaced part of an existing course for an internship. The course involves students completing 100 internship hours. The class uses a supervisor evaluation and work log to assess course learning outcomes. In Spring 2019, all students met or exceeded the course requirements. In Spring 2021, 85.71% of students met or exceeded the requirements. In that semester, one student stopped coming to class near the beginning of the semester. I will continue to try to reach out to students to try to get them to come back to class. This class has been challenging with the pandemic because some employers were not willing to have in-person internships. Some projects were created to have students meet the hours for internship. The class is successful and will continue. The program will continue to be flexible with internship placements due to the pandemic.


Information Technology
Academic Year 2018-19
Term: Overview
Add Outcome
Collapse Panel
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...
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...
IT_PLO3
IT_PLO3
"IT PLO3: Programming - Plan, develop, implement, and document computer programs that meet the data processing requirements of a business organization...
IT_PLO4
IT_PLO4
"IT PLO4: Productivity - Work independently and cooperatively to deliver reports, programs, projects, and other deliverables that document a business...
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...
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...
Progress
Summary of assessment efforts for this unit.
Fall 2018
Total Measurable Outcomes
0%
0 / 12 have results for all their assessments.
Total Measurable Connections
57.1%
214 / 375 have results for all their assessments.
Spring 2019
Total Measurable Outcomes
0%
0 / 12 have results for all their assessments.
Total Measurable Connections
43.8%
161 / 368 have results for all their assessments.
Summer-1 2019
Total Measurable Outcomes
0%
0 / 12 have results for all their assessments.
Summer-2 2019
Total Measurable Outcomes
0%
0 / 12 have results for all their assessments.


Information Technology
Academic Year 2019-20
Term: Overview
Add Outcome
Collapse Panel
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...
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...
No Results
IT_PLO3
IT_PLO3
"IT PLO3: Programming - Plan, develop, implement, and document computer programs that meet the data processing requirements of a business organization...
IT_PLO4
IT_PLO4
"IT PLO4: Productivity - Work independently and cooperatively to deliver reports, programs, projects, and other deliverables that document a business...
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...
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...
Progress
Summary of assessment efforts for this unit.
Fall 2019
Total Measurable Outcomes
50%
6 / 12 have results for all their assessments.
Total Measurable Connections
95.1%
98 / 103 have results for all their assessments.
Spring 2020
Total Measurable Outcomes
0%
0 / 12 have results for all their assessments.
Total Measurable Connections
0%
0 / 128 have results for all their assessments.
Summer-1 2020
Total Measurable Outcomes
0%
0 / 12 have results for all their assessments.
Summer-2 2020
Total Measurable Outcomes
0%
0 / 12 have results for all their assessments.



d) *Changes that have been made as a result of the assessment results: instructional programs must provide a discussion of changes made as a result of the analysis of assessment results, e.g., to curriculum, instruction, development of student learning opportunities, faculty professional development activities, assessment strategies, etc.; non-instructional units must provide a discussion of changes made as a result of the analysis of assessment results, e.g., to services, operations, personnel training, assessment strategies, etc.*

Overall, the program has been successful in helping students meet their course learning outcomes, as evidenced by the assessment results of most students meeting or exceeding the requirements. All curriculum for the program has been converted to use open educational resources and the curriculum will continually be assessed to see if changes need to be made to support students, support workforce needs, and keep up with the continual changes in technology.

4. Action Plan

Based on findings in Parts 1-3, develop an action plan for your program or unit from now until your next Comprehensive Review (three-year plan).

Be sure to focus on areas to improve as identified in ARPD data or unit-developed measures, student learning or unit/service outcomes assessment results, and results of survey and other data used to assess your program or unit.

This action plan must include an analysis of progress in achieving previous planned improvements including the results of the prior Comprehensive Review's action plan(s). Discuss how the goals identified in that prior action plan were met and the impact on the program or unit; or, if not met, discuss why and the impact on the program or unit, and whether those goals are being carried over to the current action plan.

This action plan should be detailed enough to guide your program/unit through to the next program/unit Comprehensive Review cycle. Include specific recommendations for improvement(s) or planned program or unit action(s). The plan must include details of measurable outcomes, benchmarks and timelines.
** CTE programs must include specific action plans for any Perkins Core Indicator for which the program did not meet the performance level.*

Specify how the action plan aligns with the College's Mission and Strategic Plan. Include a discussion of how implementing this action plan will contribute to the College achieving the goals of the Strategic Plan.
https://Hawai'i.Hawai'i.edu/sites/default/files/assets/docs/strategic-plan/hawcc-strategic-directions-2015-2021.pdf

Be sure to list resources that will be required, if any, in section 5 below.

**The action plan may be amended based on new initiatives, updated data, or unforeseen external factors between now and the next Comprehensive Review.*

The first action item from the last Comprehensive Review was to "increase the average class size, major count, and number of graduates. We will be working on recruitment and retention to achieve this goal. In addition, we will be offering distance education courses to help raise the average class size." Some of the actions during the review period to help support this item was the GirlsWhoCode programming club and attending career fairs to help with recruitment efforts. The pandemic stopped some of the activities, and the program will be trying to continue recruitment efforts online and in person once things are open again. The program offered the first online class in Fall 2018, which allows students from around the island and from other campuses to take our classes. The major count for the program is about the same as it was in the last review program. The average class size is 15, and we would still like to increase this number.

The second action item from the last Comprehensive Review was "reviewing all curriculum to see if updates need to be made to be relevant to community needs and to ensure pathways for ongoing education. In addition, we would like to make all courses within the program TCZ (textbook cost zero)." This action item was met. The curriculum had updates to add needed technologies and all IT courses are currently textbook cost zero. This helps the students by reducing the cost of college and ensuring learning materials are relevant.

For the next three years, the IT program would like to focus on:

Action Item 1: Marketing and Recruitment: This aligns with the Hawai'i Graduation Initiative Strategy 1 to "Strengthen the pipeline from K-12 to the university to improve college readiness and increase college attendance."

- Attend career fairs
- Start using social media to promote program
- Interface with local schools to increase awareness of our program and to find pathways

Action Item 2: Retention: This aligns with the Hawai'i Graduation Initiative Strategy 2 to "Implement structural improvements that promote persistence to attain a degree and timely completion."

- Balance the need of having online classes to increase class size with the need for some students wanting in-person classes
- Flexible scheduling so that more people in different situations can still attend class
- Form better relationships between students and faculty and students with students to build community and increase retention

5. Resource Implications -
* ONE-TIME BUDGET REQUESTS ONLY *

Detail any ONE-TIME resource requests that are not included in your regular program or unit operating "B" budget, including reallocation of existing resources (physical, human, financial).
*Note that CTE programs seeking future funding via UHCC System Perkins proposals must reference their ARPD Section 4. Action Plan and this ARPD Section 5. Resource Implications to be eligible for funding.

x I am NOT requesting additional ONE-TIME resources for my program/unit.

☐ I AM requesting additional ONE-TIME resource(s) for my program/unit.
Total number of items being requested: _____(4 items max.)

*For each item requested, make sure you have gathered the following required information and all relevant documentation before you upload this Review; you will submit all information and attachments for your **Resource Request** as part of your Review document submission via the Hawai‘i CC - Program & Unit Review Submission portal https://Hawai‘i.kualibuild.com/app/builder/#/app/60ef56c477b0f470999bb6e5/run

- ✓ Item Description
- ✓ Justification
- ✓ Priority Criteria (must meet at least one of the following):
  1. Ensure compliance with mandates and requirements such as laws and regulations, executive orders, board mandates, agreements and contracts and accreditation requirements.
  2. Address and/or mitigate issues of liability, including ensuring the health, safety and security of our Kauhale.
  3. Expand our commitment to serving all segments of our Hawai‘i Island community through Pālamanui and satellite centers
  4. Address aging infrastructure.
  5. Continue efforts to promote integrated student support in closing educational gaps.
  6. Leverage resources, investments with returns, or scaling opportunities
  7. Promote professional development.

Category-Specific Information				
Equipment	Estimated Date Needed	Quantity / Number of Units; Cost per Unit	Total Cost (with S&H, tax)	On Inventory List (Y/N); Decal #, Reason replacing
Facilities Modification	Estimated Date Needed	Total Cost	Monthly/Yearly Recurring Costs	Utilities Required
Personnel Resource	Estimated Date Needed	FTE; Position Type; Position Title	Estimated Salary	Was an Existing Position Abolished? (Y/N); Position #
Professional Development	Estimated Date Needed	Have you applied before (Y/N); was it approved?	Professional Development Type	PD Details; Impact; Total Cost
Reallocation	Estimated Date Needed	Total Cost	Monthly/Yearly Recurring Costs	Reallocation Proposal

6. Optional: Edits to Occupation List for Instructional Programs

Review the Standard Occupational Classification (SOC) codes listed for your Instructional Program and verify that the occupations listed align with the program learning outcomes. Program graduates should be prepared to enter the occupations listed upon program completion. Indicate in this section if the program is requesting removal or additions to the occupation list.

x I am NOT requesting changes to the SOC codes/occupations listed for my program.

☐ I am requesting changes to the SOC codes/occupations listed for my program.

O*Net CIP-SOC Code Look-up
in the **Crosswalks box, choose "Education," then enter CIP number to see related SOC codes*

List below each SOC code for which change is being requested and include details of requested code deletions and/or additions. Include justification for all requested changes.

*All requested changes to the SOC codes/occupations listed for programs must be discussed with and approved by the Department/Division Chair.