International Holistic Competency Foundation

Application ID: 000SAMPLE

International Holistic Competency Accreditation Application – Provisional Accreditation Stage [Sample Application with Instructions]

1. Contact Information

PERSONAL INFORMATION	
Contact Name*	Dr. Kenan Wise
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Name of organisation*	University of Hong Kong
Faculty (if any)	Engineering
Department (if any)	Computer Science
Country	Hong Kong SAR

* Mandatory fields

2. Course Information

COURSE INFORMATION (to be accredited)	
Please provide the information on the course that you wish to accredit with international holistic competency recognition. Upon successful review, the course will be awarded provisional accreditation that is valid for two years on the relevant competency or competencies.	
Course Code*	BUCS104
Course Title*	Computer Programming I
Programme code (if any)	EngCS880
Programme title (if any)	Bachelor of Engineering in Computer Science
Short description of the course* - Maximum 300 words. Please explain how the course information is disseminated to staff and students particularly the Holistic Competency Outcomes (HCOs) (e.g., printed programme/course guides, through the official university website, through the learning management system. You can attach the documents at the end of the application process in Other Docs.	The course assumes no knowledge in computer programming. It introduces the students to the basic concepts and techniques of developing programs for problem solving. In this course, students learn how to apply an integrated program development tool to design, implement, test, debug, and document programs. Additionally, students will be introduced to the use of AI (e.g., ChatGPT) in problem solving and understanding program coding. The delivery, learning tasks, and assignments of the course provide opportunities for collaborative problem solving, encouraging students to analyse issues, negotiate solutions, communicate their ideas to others effectively, and apply programming knowledge and skills in large-scale system implementation. A service learning component is also included, engaging students with local businesses and applying the knowledge from this course to real-world tasks. By the end of the course, students will have developed a solid foundation in programming and will be able to apply their knowledge to develop application programs in different high-level programming languages such as Java and C++. (Course information and HCO learning outcomes will be disseminated to students and assistant instructors though the printed and online course syllabus.)

* Mandatory fields

3. Holistic Competency Outcomes

HOLISTIC COMPETENCY OUTCOMES (HCOs)
Please select the Holistic Competency Outcomes (HCOs) that you wish to accredit for the course, this is mandatory. Currently, IHCF recognises 14 holistic competencies.
HCO01 Communication
HCO03 Critical Thinking
HCO08 Problem Solving
HCO12 Teamwork Competency
HCO13 AI Literacy

4. Programme Learning Outcomes (PLOs)

PROGRAMME LEARNING OUTCOMES (PLOs)
Please enter the Programme Learning Outcomes (PLOs) if your course is part of a programme (e.g., a degree, diploma or certificate programme), if no PLOs, please type N/A.
PLO1: Upon successful completion of the curriculum, students should be able to possess an ability to apply knowledge of mathematics, science, and engineering appropriate to the degree discipline.
PLO2: Upon successful completion of the curriculum, students should be able to possess an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to the degree discipline.
PLO3: Upon successful completion of the curriculum, students should be able to possess an ability to identify, formulate and solve engineering problems.
PLO4: Upon successful completion of the curriculum, students should be able to possess an ability to communicate effectively.

5. Course Learning Outcomes (CLOs)

COURSE LEARNING OUTCOMES (CLOs)
Please enter the Course Learning Outcomes (CLOs), this is mandatory.
CLO1: Able to identify possible solutions for problems based on computer programs.
CLO2: Able to implement solutions for problems using Python.
CLO3: Able to understand programs written by others and participate in larger scale system implementation.
CLO4: Able to use AI (e.g., ChatGPT) in problem solving and understanding program coding written by others.

6. Please indicate the alignment between HCOs and CLOs.

ALIGNMENT OF HOLISITC COMPETENCY OUTCOMES (HCOs) AND COURSE LEARNING OUTCOMES (CLOs)	
Please indicate the alignment between HCOs and CLOs.	
Holistic Competency Outcome(s) (HCOs)	**Aligned Course Learning Outcome(s) (CLOs)**
HCO01 Communication	**CLO3:** Able to understand programs written by others and participate in larger scale system implementation. **CLO4:** Able to use AI (e.g., ChatGPT) in problem solving and understanding program coding written by others.
HCO03 Critical Thinking	**CLO1:** Able to identify possible solutions for problems based on computer programs. **CLO2:** Able to implement solutions for problems using Python. **CLO4:** Able to use AI (e.g., ChatGPT) in problem solving and understanding program coding written by others.
HCO08 Problem Solving	**CLO1:** Able to identify possible solutions for problems based on computer programs. **CLO2:** Able to implement solutions for problems using Python. **CLO4:** Able to use AI (e.g., ChatGPT) in problem solving and understanding program coding written by others.
HCO12 Teamwork Competency	**CLO3:** Able to understand programs written by others and participate in larger scale system implementation.
HCO13 AI Literacy	**CLO4:** Able to use AI (e.g., ChatGPT) in problem solving and understanding program coding written by others.

7. Please indicate the alignment between CLOs and PLOs.

ALIGNMENT OF COURSE LEARNING OUTCOMES (CLOs) AND PROGRAMME LEARNING OUTCOMES (PLOs)	
Please indicate the alignment between CLOs and PLOs. If there is no PLO, please continue to the next step.	
Course Learning Outcome(s) (CLOs)	**Aligned Programme Learning Outcomes (PLOs)**
CLO1: Able to identify possible solutions for problems based on computer programs	**PLO1:** Upon successful completion of the curriculum, students should be able to possess an ability to apply knowledge of mathematics, science, and engineering appropriate to the degree discipline.
	PLO2: Upon successful completion of the curriculum, students should be able to possess an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to the degree discipline.
	PLO3: Upon successful completion of the curriculum, students should be able to possess an ability to identify, formulate and solve engineering problems.
CLO2: Able to implement solutions for problems using Python.	**PLO1:** Upon successful completion of the curriculum, students should be able to possess an ability to apply knowledge of mathematics, science, and engineering appropriate to the degree discipline.
	PLO2: Upon successful completion of the curriculum, students should be able to possess an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to the degree discipline.
	PLO3: Upon successful completion of the curriculum, students should be able to possess an ability to identify, formulate and solve engineering problems.
CLO3: Able to understand programs written by others and participate in larger scale system implementation.	**PLO3:** Upon successful completion of the curriculum, students should be able to possess an ability to identify, formulate and solve engineering problems.
	PLO4: Upon successful completion of the curriculum, students should be able to possess an ability to communicate effectively.
CLO4: Able to use AI (e.g., ChatGPT) in problem solving	**PLO1:** Upon successful completion of the curriculum, students should be able to possess an ability to apply knowledge of

and understanding program coding written by others	mathematics, science, and engineering appropriate to the degree discipline.
	PLO2: Upon successful completion of the curriculum, students should be able to possess an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to the degree discipline.
	PLO3: Upon successful completion of the curriculum, students should be able to possess an ability to identify, formulate and solve engineering problems.
	PLO4: Upon successful completion of the curriculum, students should be able to possess an ability to communicate effectively.

8. Teaching and Learning Activities

TEACHING AND LEARNING ACTIVITIES		
Please list the teaching and learning activities (e.g., group discussion, independent research, self-reflection) employed to achieve each Holistic Competency Outcome (HCO) and provide a brief description of the activity and how it allows students to develop the intended competency. The description for each HCO should not exceeded 300 words (emphasise on opportunities that allow students to apply the holistic competency in experiential learning and out-of-classroom settings).		
Holistic Competency Outcome(s) (HCOs)	**List of Teaching and Learning Activities**	**Teaching and Learning Activities description - maximum 300 words for each HCO**
HCO01 Communication	Website redesign; Oral presentations	Website redesign – Students work in teams to help local business owners recreate their websites. This is part of the service learning project, which requires students to discuss design ideas with business owners and communicate with team members in the design process. Oral presentations – Individual presentations of problem solutions. After completing an individual programming task, each student explains the step-by-step solution taken to complete the task, followed addressing questions and comments from their peers. The communication skills involved include expressing ideas clearly, providing clarification, and active listening.
HCO03 Critical Thinking	Programming tasks	Programming tasks – Solving programming problems. The problem-solving process requires critical thinking skills such as analyzing problems, logical reasoning, and evaluating solutions.
HCO08 Problem Solving	Programming tasks	Programming tasks – Solving programming problems. The tasks require students to undertake problem solving steps: defining the problem, planning the solution, coding the program, testing the program, documenting the program.

HCO12 Teamwork Competency	Website redesign; Python race	Website redesign – Students work in teams to help local business owners recreate their websites. The project requires students to participate in collaborative problem solving and encourages skills needed for effective teamwork such as conflict management, coordination, and role clarification. Python race – A quiz competition testing students' knowledge and skills in Python programming. Students compete in teams where they have to solve problems that require them to apply their Python programming skills.
HCO13 AI Literacy	Programming tasks; Oral presentations	Programming tasks – Solving programming problems. The problem-solving process requires AI literacy as students use AI in various ways to assist in completing the task, such as analyzing problems, coding the program, and debugging. Oral presentations – Individual presentations of problem solutions. After completing an individual programming task, each student explains the step-by-step solution taken to complete the task, followed by addressing questions and comments from their peers. Students demonstrate their AI literacy by explaining how they used AI tools to support them in their programming task. As they are also allowed to use AI to help create their presentations, they exercise AI literacy in this regard as well.

9. Assessment Tasks

ASSESSMENT TASKS			
Please list the assessment task(s) that used to assess the different Holistic Competency Outcomes (HCOs) in the course. In the Assessment Tasks description, explain how this assessment is used to provide evidence to demonstrate student development of holistic competency and select the HCO Assessment Level. The Assessment Tasks description - maximum 300 words for each HCO (describe the assessment task and emphasise the grading method and weightings used (e.g., Pass/Fail, Percentage or no grading) that allow students to apply the holistic competency developed).			
Holistic Competency Outcome(s) (HCOs)	**List of Assessment Tasks**	**HCO Assess. Level (see below)**	**Assessment Tasks description - maximum 300 words for each HCO**
HCO01 Communication	Service learning project	X	Communication serves as a means to accomplishing the service project. It is not assessed because the focus of the service project is on delivering system implementation as a team. There is no grading because this competency is not assessed.
HCO01 Communication	Oral presentation	S	Students' oral presentations will be assessed and graded using a rubric, which will include communication skills as one of the criteria. The rubric has five levels of descriptors (Excellent to Poor; see supporting documents) which concern areas like clarity, delivery, and engagement with the audience.
HCO03 Critical Thinking	Programming assignments	I	Students are asked to think critically on the programming assignments which contains novel and real-life situations. Their critical thinking will be assessed and feedback on their reasoning will be provided, but this competency will not graded in these tasks.

HCO03 Critical Thinking	Service learning project	S	In the service learning project, students will work with the local business owners to find ways to solve given problems. They need to use their knowledge and listen to the business owners, to think critically about which solutions may be best suited for the situation. This part involves the business owners providing comments on a feedback form, but students' critical thinking will not be graded.
HCO08 Problem Solving	Programming assignments	A	Students' problem-solving will be assessed throughout the programming assignments of this course. At the beginning of the semester, they will go through tutorial exercises in which they identify solutions for programming problems. In the fourth week, they are given programming assignments in which they have to demonstrate their ability to apply programming knowledge and skills to solve problems. Towards the end of the semester, they participate in a service project to solve real-life programming problems. Marking schemes will be used for earlier assignments, rubrics will be used for the later, more complex assignments. Percentage grading (0-100%)
HCO12 Teamwork Competency	Service learning project	A	Students' teamwork will be evaluated by peer assessment, but no grade will be given for this competency. The service project aims to expose first-year students to collaborative problem solving; therefore, teamwork is not graded to encourage students to improve their teamwork skills through the comments and suggestions received from peers

			without being over-concerned about grades.
HCO13 AI Literacy	Programming assignments	X	AI literacy serves as a means to accomplishing the various programming assignments, as well as the oral presentation. It is not assessed because the focus of these assignments is to offer solutions to problems through programming and explain them to the class; AI tools are only used as a support for student learning. There is no grading because the competency is not assessed.

* Levels of HCO Assessment:

I = Introductory Level: The assessment design is able to provide evidence demonstrating student competency awareness

S = Standard level: The assessment design is able to provide evidence demonstrating some progress in competency development of the students

A = Advanced level: The assessment design is able to provide convincing evidence clearly demonstrating the student's development of the competency with a mechanism for feedback

X = Not assessed

10. Feedback Mechanism

FEEDBACK MECHANISM		
In order to support student development of holistic competency, feedback mechanism should be integrated into the curriculum. Please provide the list of feedback providers (e.g., student peers, teachers, employers, external agencies) and the description of the type of feedback provided (e.g., written comments by the community partners, face-to-face discussion with the teacher). You may wish to provide a brief scenario.		
Holistic Competency Outcomes (HCOs)	**List of Feedback Providers**	**Description of the Feedback Provided (maximum 300 words)**
HCO01 Communication	Course instructor	The course instructor provides continuous feedback to students after each team project meeting.
HCO03 Critical Thinking	Local business owners	From the service project, students work closely with local business owners who in turn provide non-systematic feedback to the students. For example, in one particular a site visit to the business, a student was asked to join the business meeting and brainstorming was required. The student's idea was criticized, but they provided the rationale for why they made such a suggestion. Through the discussion, the student received comments on their approach, particularly their critical thinking.
HCO08 Problem Solving	Course instructor; Peers; Local business owners	After the service project, students are given the opportunity to discuss and reflect on the comments they receive from peers and business owners in the classroom. They are required to submit a written reflection, in which they must explain what they have learned from the service-learning experience and how they can improve their problem-solving strategies and collaborate more effectively.
HCO12 Teamwork Competency	Peers	Teamwork competency is evaluated by peer assessment in the service project, and comments are given through an e-platform.
HCO13 AI Literacy	Course instructor	The course instructor provides continuous feedback after completion of assignments.

11. Other Documents

OTHER DOCUMENTS	
Document Type	**File name**
Course syllabus and related documents	course_syllabus.pdf,
Teaching activities, assessment tasks, rubrics, grading guidelines, feedback mechanisms or related document	programming_worksheets.pdf, service_project_details.pdf, course_rubrics.pdf, business_owner_feedback_forms.pdf, grading_guidelines.pdf
Any related documents that will help us to approve your course for competency accreditation (you may wish to include teacher's experience and CV.)	teacherCV.pdf

Note: When submitting your application, please attach and/or include the above types of documents (if any).