

**City University of Hong Kong  
Course Syllabus**

**offered by Department of Computer Science  
with effect from Semester A 2022/23**

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**Part I Course Overview**

**Course Title:** Comprehensive Studies in Selected Topics in Computer Science

**Course Code:** CS8692

**Course Duration:** One semester

**Credit Units:** 3 credits

**Level:** R8

**Medium of Instruction:** English

**Medium of Assessment:** English

**Prerequisites:**  
*(Course Code and Title)* Nil

**Precursors:**  
*(Course Code and Title)* Nil

**Equivalent Courses:**  
*(Course Code and Title)* Nil

**Exclusive Courses:**  
*(Course Code and Title)* Nil

## Part II Course Details

### 1. Abstract

The aim of this course is to provide an opportunity for a postgraduate research student to explore a selected topic in computer science. The objectives are to develop in-depth knowledge of a chosen field of interest. The students will also have the opportunity to develop documentation and presentation skill in conveying the results of his/her work.

### 2. Course Intended Learning Outcomes (CILOs)

No.	CILOs	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	To develop documentation and presentation skill in conveying the results of his/her work.			✓	
2.	To develop in-depth knowledge of a chosen field of interest.		✓		
3.	To explore, investigate, make critique and to derive possible new solutions on a specific topic in computer science.			✓	
		100%			

*A1: Attitude*

*Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.*

*A2: Ability*

*Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.*

*A3: Accomplishments*

*Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.*

### 3. Teaching and Learning Activities (TLAs)

TLA	Brief Description	CILO No.			Hours/week (if applicable)
		1	2	3	
Individual consultation	Students will conduct a weekly in-depth individual discussion with their supervisors. Through these consultations, supervisors will provide suggestions and comments on the works of the students.			✓	
Presentation	Each student will give a presentation of the main project findings to members of his/her qualifying panel members.	✓			
Identification of research problem and development of solution.	Each student will perform an in-depth study of a specific research problem, and to develop an effective solution to the problem. The main findings are to be documented in the form of an interim and a final report.	✓	✓	✓	

### 4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.			Weighting*	Remarks
	1	2	3		
Continuous Assessment: <u>100%</u>					
Research problem identification and solution development	✓	✓	✓	50%	
Presentation to qualifying panel	✓			10%	
Written report	✓	✓		20%	
Weekly in-depth discussions			✓	20%	
Examination: <u>0%</u>					
				100%	

## 5. Assessment Rubrics

Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Identification of research problem and development of solution	Capacity for developing an in-depth knowledge of a chosen research field in computer science.	High	Significant	Moderate to Basic	Not even reaching marginal levels
	Capability to identify and address a specific research problem, and to formulate effective solutions for the problem.				
2. Presentation	Ability to deliver a presentation which summarizes the research problem under study.	High	Significant	Moderate to Basic	Not even reaching marginal levels
	Capability to effectively address the questions raised by members of the qualifying panel.				
3. Report	Capacity for presenting the main research findings in the form of a report.	High	Significant	Moderate to Basic	Not even reaching marginal levels
	Capability to identify the merits and limitations of current research approaches, and propose possible new solutions to the research problem under study.				
4. Weekly discussion	Ability to attain the major project milestones in a timely manner.	High	Significant	Moderate to Basic	Not even reaching marginal levels

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Identification of research problem and development of solution	Capacity for developing an in-depth knowledge of a chosen research field in computer science.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to identify and address a specific research problem, and to formulate effective solutions for the problem.					
2. Presentation	Ability to deliver a presentation which summarizes the research problem under study.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to effectively address the questions raised by members of the qualifying panel.					
3. Report	Capacity for presenting the main research findings in the form of a report.	High	Significant	Moderate	Basic	Not even reaching

	Capability to identify the merits and limitations of current research approaches, and propose possible new solutions to the research problem under study.					marginal levels
4.Weekly discussion	Ability to attain the major project milestones in a timely manner.	High	Significant	Moderate	Basic	Not even reaching marginal levels

## Part III Other Information

### 1. Keyword Syllabus

Typical topics include: Computer Networks, Operating Systems, Distributed Systems, Software Engineering, Data Engineering, Formal Specification Techniques, Performance Evaluation, Artificial Intelligence, Algorithms, Programming Languages, Computer Graphics, Multimedia, Image Computing.

### 2. Reading List

#### 2.1 Compulsory Readings

	N/A
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#### 2.2 Additional Readings

*(Additional references for students to learn to expand their knowledge about the subject.)*

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