

CS8692: COMPREHENSIVE STUDIES IN SELECTED TOPICS IN COMPUTER SCIENCE

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Comprehensive Studies in Selected Topics in Computer Science

Subject Code

CS - Computer Science

Course Number

8692

Academic Unit

Computer Science (CS)

College/School

College of Computing (CC)

Course Duration

One Semester

Credit Units

3

Level

R8 - Research Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

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 acquire 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.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 app.)		DEC-A2	DEC-A3
1	To develop documentation and presentation skill in conveying the results of his/her work.			x	
2	To acquire in-depth knowledge of a chosen field of interest.		x		
3	To explore, investigate, make critique and to derive possible new solutions on a specific topic in computer science.			x	

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 real-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.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	Individual consultation	Students will conduct a weekly in-depth individual discussion with their supervisors. Through these consultations, students will obtain suggestions and comments from supervisors on their works.	3	
2	Presentation	Each student will give a presentation of the main project findings to members of his/her qualifying panel members.	1	

3	Identification of research problem and development of solution.	Each student will perform an in-depth study of a specific research problem, and to design an effective solution to the problem. The main findings are to be documented in the form of an interim and a final report.	1, 2, 3	
---	---	--	---------	--

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks ("- " for nil entry)	Allow Use of GenAI?
1	Research problem identification and solution development	1, 2, 3	50	Use GenAI for editing the English of report.	Yes
2	Presentation to qualifying panel	1	10	Use GenAI for editing the English of report.	Yes
3	Written report	1, 2	20	Use GenAI for editing the English of report.	Yes
4	Weekly in-depth discussions	3	20	Use GenAI for editing the English of report.	Yes

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)**Assessment Task**

Identification of research problem and development of solution (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

- Capacity for acquiring an in-depth knowledge of a chosen research field in computer science.
- Capability to recognize and address a specific research problem, and to formulate effective solutions for the problem.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

- Ability to deliver a presentation which summarizes the research problem under study.
- Capability to effectively address the questions raised by members of the qualifying panel.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

- Capacity for presenting the main research findings in the form of a report.
- Capability to recognize the merits and limitations of current research approaches, and propose possible new solutions to the research problem under study.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Weekly discussion (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to attain the major project milestones in a timely manner.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Identification of research problem and development of solution (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

- Capacity for acquiring an in-depth knowledge of a chosen research field in computer science.
- Capability to recognize and address a specific research problem, and to formulate effective solutions for the problem.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate to Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

- Ability to deliver a presentation which summarizes the research problem under study.
- Capability to effectively address the questions raised by members of the qualifying panel.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate to Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

- Capacity for presenting the main research findings in the form of a report.
- Capability to recognize the merits and limitations of current research approaches, and propose possible new solutions to the research problem under study.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate to Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Weekly discussion (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to attain the major project milestones in a timely manner.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate to Basic

Failure

(F) Not even reaching marginal levels

Part III Other Information

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.

Reading List

Compulsory Readings

Title	
1	N/A

Additional Readings

Title	
1	N/A