CS4552: GUIDED STUDY

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Guided Study

Subject Code
CS - Computer Science
Course Number
4552

Academic Unit
Computer Science (CS)

College/School
College of Computing (CC)

Course Duration
One Semester

Credit Units
3

Level
B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Completion of at least 60 credit units with an overall GPA of at least 2.0

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract
The aim of this course is to provide an opportunity to explore an area of computing in consultation with a member of the academic staff. The objectives are to explore knowledge of a chosen field of interest in depth, and to apply the skills and

techniques acquired in earlier courses in proposing solutions to a research problem or creating new designs of computer applications. Students will also have the opportunity to develop writing skills in conveying the results of project undertaken.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Identify a challenging computer related problem, analyze the problem in detail in the context of an extensive review of existing literature.	20		x	
2	Propose innovative solutions, formulate a detailed design of the solutions and comparison of the proposed solution with existing approaches.	50		x	x
3	Explain the system design process, background study and where appropriate the expected performance of the solution, and to present the key concepts in a cogent manner.	30			

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	Each student will work on a project with the support of an academic supervisor on a one to one basis. The role of the supervisor is to closely monitor the project progress with project meetings regularly, in order to give advice to the student, to establish criteria for assessment, and to advise on possible solutions and potential problems.	1, 2, 3	1 hour / week individual consultation

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Project Report	1, 2, 3	100	-	Yes

Continuous Assessment (%)
100

Examination (%)
0

Assessment Rubrics (AR)

Assessment Task
Final Report

Criterion
1.1 Ability to conduct comprehensive literature survey.

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
Final Report

Criterion
1.2 Ability to develop innovation solution for a research-oriented problem in a specialized area in computer science.

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
Final Report

Criterion
1.1 Ability to produce well written interim and final reports regarding the progress and results of the research work.

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

Part III Other Information

Keyword Syllabus
Investigate research problem or create designs of new computer applications in a specialized area of computer science including but not limited to : Computer Networks, Operating Systems, Distributed Systems, Software Engineering, Data Engineering, Performance Evaluation, Artificial Intelligence, Algorithms, Programming Languages, Multimedia Systems and Pervasive Computing; Survey of related work; Design/Analysis, Final Report.

Reading List

Compulsory Readings

	Title
1	Readings related to the selected topic of study will be assigned by supervisor.

Additional Readings

	Title
1	Readings related to the selected topic of study will be assigned by supervisor.