SDSC3003: BLOCKCHAIN

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Blockchain

Subject Code
SDSC - Data Science
Course Number
3003

Academic Unit
Data Science (DS)

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
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract
Blockchain technology facilitates marketplaces, digital platforms, privacy and trust without traditional intermediaries. This course provides students an elementary introduction of both technological aspect and economical aspect of Blockchain

technology, including the mechanism underlying its functioning and some of its core applications, such as cryptocurrency, smart contract, initial coin/token offering, and others.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Articulate fundamental principles of Blockchain technology, and explain specific aspects of its working mechanism.	25	x		
2	Categorize important features of existing forms and/or core applications of Blockchain technology.	15	x	x	
3	Assess prevailing practices in Blockchain technology and identify approaches that improve the existing practices.	30	x	x	
4	Utilize suitable principles and methods to solve given practical problems in Blockchian technology.	30	x	x	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	Lectures and in-class discussions	Learning through teaching is carried out primarily through in-class lectures, together with Q&As and discussions in order to implement CILOs 1-4.	1, 2, 3, 4	39 hours per semester
2	Tutorial and/or case studies	Learning through tutorial and case studies targets questions that may arise from the lectures, issues in the homework assignments, analysis of the case studies, etc.	2, 3, 4	In or after classes

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Homework assignments	1, 2, 3, 4	20	20%-40%	Yes
2	Test (in-class exam or project)	1, 2, 3	20	0%-20%	No

Continuous Assessment (%)

40

Examination (%)

60

Examination Duration (Hours)

2

Minimum Continuous Assessment Passing Requirement (%)

30

Minimum Examination Passing Requirement (%)

30

Additional Information for ATs

Note: To pass the course, apart from obtaining a minimum of 40% in the overall mark, a student must also obtain a minimum mark of 30% in both continuous assessment and examination components.

Assessment Rubrics (AR)

Assessment Task

Homework assignments

Criterion

In the form of submitted written work. Ability to understand and apply common industry practices of business analytics.

Excellent (A+, A, A-)

High.For all 4 CILOs, strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good (B+, B, B-)

Significant.For at least 3 out of 4 CILOs, evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

Fair (C+, C, C-)

Moderate. For at least 3 out of the 4 CILOs, evidence that student is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.

Marginal (D)

Basic.For at least 3 out of the 4 CILOs, sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

Failure (F)

Not evident. Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

Assessment Task

Test

Criterion

Either in the form of in-class exam or group project with written report and presentation.Ability to learn the basic concepts, apply methods of business analytics, and design relevant studies for industry applications.

Excellent (A+, A, A-)

High.For all 4 CILOs, strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good (B+, B, B-)

Significant.For at least 3 out of 4 CILOs, evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

Fair (C+, C, C-)

Moderate. For at least 3 out of the 4 CILOs, evidence that student is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.

Marginal (D)

Basic.For at least 3 out of the 4 CILOs, sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

Failure (F)

Not evident. Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

Assessment Task

Examination

Criterion

In the form of submitted written work.Ability to solve conceptual and operational questions using social media analytics.

Excellent (A+, A, A-)

High.For all 4 CILOs, strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good (B+, B, B-)

Significant.For at least 3 out of 4 CILOs, evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

Fair (C+, C, C-)

Moderate. For at least 3 out of the 4 CILOs, evidence that student is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.

Marginal (D)

Basic.For at least 3 out of the 4 CILOs, sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

Failure (F)

Not evident. Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

Part III Other Information

Keyword Syllabus

Distributed database, digital platform and marketplaces, cryptocurrency, smart contract, privacy and trust, initial coin offering

Reading List

Compulsory Readings

	Title
1	Lecture notes and slides provided by the instructor.

Additional Readings

	Title
1	Relevant online learning material will be provided by the instructor.