

# DSC6024: DISSERTATION FOR ARTIFICIAL INTELLIGENCE FOR SCIENCES

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## Effective Term

Semester A 2026/27

## Part I Course Overview

### Course Title

Dissertation for Artificial Intelligence for Sciences

### Subject Code

DSC - Data Science

### Course Number

6024

### Academic Unit

Data Science (DS)

### College/School

College of Computing (CC)

### Course Duration

Two Semesters

### Credit Units

0-6

### Level

P5, P6 - Postgraduate Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

NIL

### Precursors

NIL

### Equivalent Courses

SDSC6024 Dissertation for Artificial Intelligence for Sciences

### Exclusive Courses

DSC6023 Internship in Artificial Intelligence for Sciences

SDSC6023 Internship in Artificial Intelligence for Sciences

## Part II Course Details

### Abstract

This course aims to develop a student's expertise in his/her chosen subject area through application of AI for science knowledge and techniques, and demonstrate a student's ability to present and organize subject knowledge scholarly in an independent research.

### Course Intended Learning Outcomes (CILOs)

| CILOs |                                                                                                             | Weighting (if app.) | DEC-A1 | DEC-A2 | DEC-A3 |
|-------|-------------------------------------------------------------------------------------------------------------|---------------------|--------|--------|--------|
| 1     | Carry out independent study for problem solving and solution seeking.                                       | 20                  | x      | x      |        |
| 2     | Integrate AI knowledge and techniques of diverse subjects in formulating and analyzing scientific problems. | 20                  | x      | x      |        |
| 3     | Assess critically appropriateness of research methodology and strategies in approaching problems.           | 20                  | x      | x      |        |
| 4     | Interpret insights and novel findings in conducted data analytics studies.                                  | 20                  | x      |        | x      |
| 5     | Prepare a coherent dissertation with effective presentation of literature and analysis of results.          | 20                  |        | 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    | Consultation | Students will meet with their chosen supervisors to identify appropriate project topics and make research plans. | 1, 2, 3, 4 | 13 hours/sem               |

|   |                  |                                                                                             |            |              |
|---|------------------|---------------------------------------------------------------------------------------------|------------|--------------|
| 2 | Individual works | Students will conduct the selected research project under the guidance of their supervisor. | 2, 3, 4, 5 | 26 hours/sem |
|---|------------------|---------------------------------------------------------------------------------------------|------------|--------------|

**Assessment Tasks / Activities (ATs)**

|   | ATs                        | CILO No.      | Weighting (%) | Remarks ("- " for nil entry) | Allow Use of GenAI? |
|---|----------------------------|---------------|---------------|------------------------------|---------------------|
| 1 | Project Proposal           | 3, 4          | 20            | -                            | Yes                 |
| 2 | Project Milestone Meetings | 1, 2, 3, 4    | 20            | -                            | Yes                 |
| 3 | Dissertation               | 1, 2, 3, 4, 5 | 40            | -                            | Yes                 |
| 4 | Oral Presentation          | 5             | 20            | -                            | Yes                 |

**Continuous Assessment (%)**

100

**Assessment Rubrics (AR)****Assessment Task**

Project Proposal (for students admitted in Semester A 2026/27 &amp; thereafter)

**Criterion**

20%

**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**

Project Milestone Meetings (for students admitted in Semester A 2026/27 &amp; thereafter)

**Criterion**

20%

**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

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**Assessment Task**

Dissertation (for students admitted in Semester A 2026/27 & thereafter)

**Criterion**

40%

**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

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**Assessment Task**

Oral Presentation (for students admitted in Semester A 2026/27 & thereafter)

**Criterion**

20%

**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**

No formal syllabus. Students will be required to undertake individually supervised research and dissertation preparation.

### **Reading List**