

## Bachelor of Computer Science – Artificial Intelligence BA-CS

Semester 2 | 2023

### Recommended Sequence

Units are listed on your Course Planner in a recommended sequence. However, this can be amended depending on unit availability, unit progression, timetabling and the semester in which you commenced your course.

### How to use your Course Planner

Refer to the below table to help explain what units are required each semester throughout your course. The units in your planner are colour-coded to assist you with mapping out your studies.

## Year One

Semester 1   Aug/Sept 2023		
Unit Code	Unit Name	Pre-requisites
COS10009	Introduction to Programming	Nil
COS10026	Computing Technology Inquiry Project	Nil
TNE10006	Networks and Switching	Nil
COS10003	Computer and Logic Essentials*	Nil
MPU3193	Philosophy and Current Issues (Malaysian and International Students)	Nil
Summer Term   Jan 2024		
MPU3212	Bahasa Kebangsaan A (Malaysian students who do not have SPM Bahasa Melayu credit)	Nil
Semester 2   Feb/Mar 2024		
COS20007	Object-oriented Programming	COS10009
COS10025	Technology in an Indigenous Context Project	Nil
COS30015	IT Security*	COS10009 & COS10026 & TNE10006
COS10022	Data Science Principles*	Nil
MPU3183	Penghayatan Etika dan Peradaban (Malaysian Students Only)	Nil
MPU3143	Malay Language Communication 2 (International Students Only)	Nil

### Course Information

This course has 24 units (300 credit points) consisting of

#### 8 Core Units

100 credit points

A set of compulsory units you MUST complete as part of your Course.

#### 8 Artificial Intelligence Major Units

100 credit points

A set of compulsory units you MUST complete as part of your Course.

#### 8 Elective Units

100 credit points

A combination of elective units / second-major / Minor

#### General Studies/MPU

0 credit points

\* Compulsory units to complete as a pre-requisite to graduate (see statement below)

\* Advisable to enroll in Year One

\* Email [itu@swinburne.edu.my](mailto:itu@swinburne.edu.my) for queries

#### Work-Integrated Learning Placement (3 month) – Offer in Winter/Summer Term

25 credit points

\* An option for students and completing WIL internship placement is equivalent to two elective units' exemption.

\* Students need to complete at least 12 units if they want to enroll in WIL Internship

## Year Two

Semester 1   Aug/Sept 2024		
Unit Code	Unit Name	Pre-requisites
COS20031	Computing Technology Design Project	COS10009 / COS10026
COS30019	Introduction to Artificial Intelligence	COS20007
	Elective 1	
SWE30009	Software Testing and Reliability*	COS20007
Semester 2   Feb/Mar 2025		
COS10004	Computer Systems	Co-req: COS10009
COS30049	Computing Technology Innovation Project	Nil
COS30018	Intelligent Systems	COS20007
COS20019	Cloud Computing Architecture	50cp
Winter Term   Jun/Jul 2025		
ICT20016*	- Completing Work-Integrated Learning (Internship) as an exemption to 2 electives - Students need to complete at least 12 units to enroll - WIL internship placement can be taken in Year Three	

All commencing students of Master, Degree, Diploma and Foundation courses will be automatically registered for the **Academic Integrity Training Module** in the first semester (Note: Students articulating from Foundation Studies are expected to undertake this unit as a refresher). There are 4 topics in this online module that are recommended for completion during Week 1-4 of your commencing study period. At the end of this module,

## Year Three

Semester 1   Aug/Sept 2025		
Unit Code	Unit Name	Pre-requisites
COS40005	Computing Technology Project A	175cp
COS30082	Applied Machine Learning	COS30018 / COS30019
	Elective 2	
	Elective 3	
Semester 2   Feb/Mar 2026		
COS40006	Computing Technology Project B	COS40005
COS40007	Artificial Intelligence for Engineering	COS10009 & 100CP
SWE30003	Software Architecture and Design	COS20007 & 150cp
	Elective 4	

Ministry of Education requires that all NEW Cohorts pursuing Degree course (International and Malaysian) students must take the MPU units as a prerequisite for the award of their degree.

- Malaysian students: Must take and pass the units as a prerequisite for the award of their degree.
- International students: Must attempt all coursework and finalexam as a prerequisite for the award of their degree

Recommended Elective Units			
Unit Code	Unit Name	Pre-requisites	Offered in
COS30045	Data Visualisation	COS10009	Aug/Sept only
COS20083	Advanced Data Analytics	COS10022 & COS10009	Feb/Mar only
COS30008	Data Structure and Patterns	COS20007	Aug/Sept only
COS30043	Interface Design and Development	COS20007 & COS10026	Feb/Mar only
COS30020	Advanced Web Development	COS10009 & COS10026	Aug/Sept only
COS20015	Fundamental of Data Management	COS10009	Feb/Mar only
Minor   Big Data Analytics			
COS10022	Data Science Principles	NIL	Feb/Mar & Aug/Sept
COS10082	Applied Analytics in Business	NIL	Aug/Sept only
COS20083	Advanced Data Analytics	COS10022 & COS10009	Feb/Mar only
COS20028	Big Data Architecture and Application	COS10022 & COS20007	Aug/Sept only

### Notes

\* Pre-scribed Elective