



Department of Information Systems and Analytics
School of Computing

Freshman Briefing 2026

for Business Artificial Intelligence Systems (BAIS)
and Business Analytics (BZA) Students



Goh Khim Yong
Professor
Head of Department
DISA
disgohky@nus.edu.sg



Tan Chuan Hoo
Professor
Deputy Head
(Research and
Administration)
distanc@nus.edu.sg



Oh Lih Bin
Associate Professor
Deputy Head
(Teaching and Degree
Programmes)
ohlb@nus.edu.sg



Anand Mohan Ramchand
Associate Professor
Deputy Head
(Industry and Special
Programmes)
anand@nus.edu.sg



Tan Wee Kek
Associate Professor
DISA Curriculum
Committee Chair
distwk@nus.edu.sg



Cui Wei
Lecturer
Academic Advisor for AY2026-27 Cohort
discw@nus.edu.sg





Agenda

1. Welcome Speech
2. Where are you heading? See where your seniors are
3. How can I prepare? Remember the key milestones
4. Overview of a Degree Programme
5. Bachelor of Computing (Business Artificial Intelligence Systems)
6. Bachelor of Science (Business Analytics)
7. Industrial Experience and Undergraduate Research
8. Entrepreneurship and Work/Service Opportunities
9. Student Experience Sharing
10. Q&A

Welcome Speech

Goh Khim Yong

Professor

Head, Department of Information Systems and Analytics

disgohky@nus.edu.sg

Where are you heading?

See where your seniors are



Difference Across **BAIS**, CS and **BZA** Degrees



BAIS and BZA graduates play a key role in the **digital transformation** of organisations

	Business AI Systems (BAIS)	Computer Science (CS)	Business Analytics (BZA)
Focus	AI solutioning	Technical, algorithmic	Industry-relevant data analysis
Objective	More efficient/effective AI-enabled business	Reliable, efficient software	Evidence-based decision making in business
Core task	Design and implement AI solution by determining business requirements and understanding existing/new IT infrastructure and portfolio	Deliver software systems to meet defined requirements and specifications	Deliver data-driven and model-based insights and recommendations to address business problems

Is AI threatening Your Jobs?

- The BAIS and BZA programmes prepare you to apply AI/ML to solve business problems:
 - Architect and develop AI-enabled solutions
 - Apply ML models to analyse data for generating business insights
- Both programmes also impart critical soft skills that instil resilience in our graduates in the face of rapid AI advancements:
 - System thinking
 - Interdisciplinarity and creativity
 - Empathy, ethics and communication
- You will also learn how to enhance your productivity in tasks such as software engineering and data analysis with AI tools

Architects and Detectives: Navigating the Digital Future

Business AI Systems (BAIS): The Architect



Full Stack AI Solutioning

Designing the 'How' by architecting complete, intelligent systems from the ground up.



Business Analytics (BZA): The Detective



Uncovering the 'Why'

Uses data-driven insights to find specific answers within complex information streams.



Proven Career Pathways – BAIS



**Associate AI Developer
(Full Stack)**
SAP



Engineering Project Manager
Apple



Product Manager (UX/AI)
GovTech Singapore



Senior Software Engineer
OKX

Proven Career Pathways – BZA



Forward Deployed Engineer
OpenAI



Data Scientist
QuantumBlack, AI by McKinsey



Software Engineer
Morgan Stanley



Quantitative Researcher
Capula Investment Management
LLP

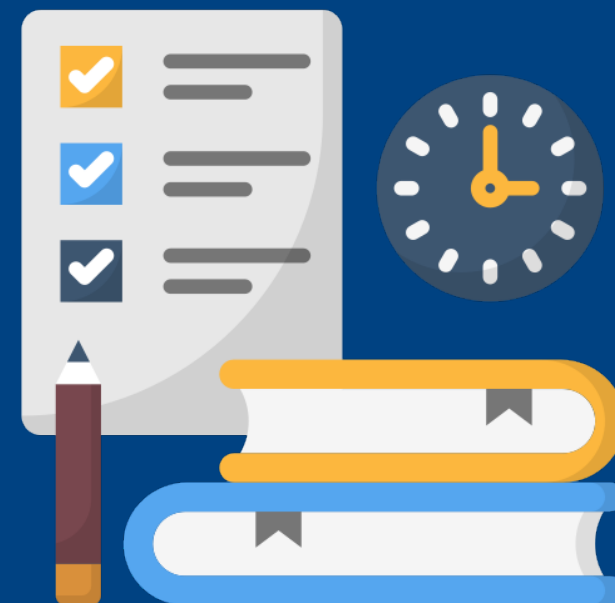


Emerging Computing Job Roles

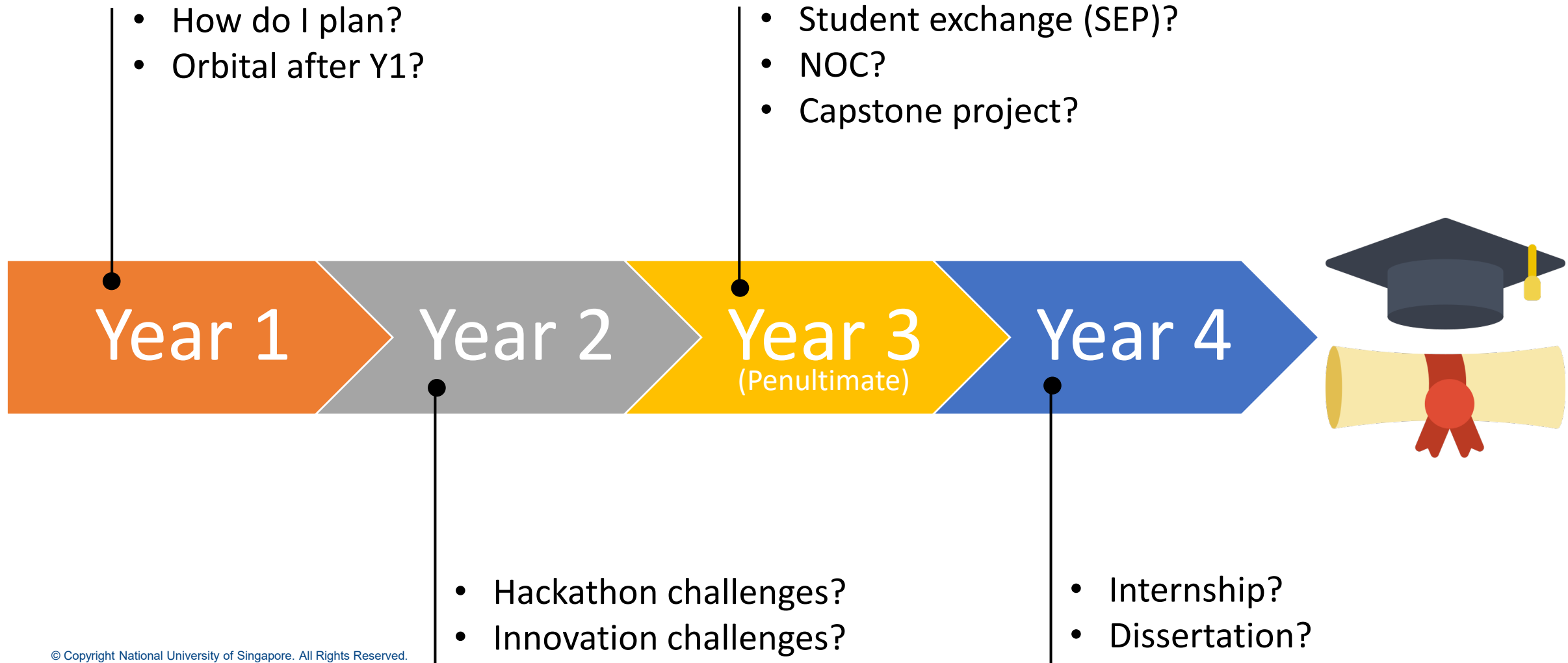
- **Forward-deployed engineer**
 - Partner with business units to translate strategic goals into AI-enabled workflows to develop AI solutions
 - Works alongside stakeholders to turn data into decisions by helping them ask the right questions and digging deeper to build granular, persuasive evidence for action
- **Agentic AI Orchestrator**
 - Design, build, and manage AI agents and orchestrations that automate routine business processes, analysis and reporting
- These roles require a combination of technical expertise, human judgement to understand business context, validate AI outputs and design innovative yet ethical human+AI solutions

How can I prepare?

Remember these key milestones



Milestones



Some Advices

Step 1: Course planning

- Based on individual aspiration, particularly for specialization and programme electives
- Keep yourself abreast of AI developments

Step 2: CV review

- Domain and professional positioning (personal branding)

Step 3: Interview preparation

- Internship and job interview

Step 4: Technical test preparation

Advice:

1. Build your [LinkedIn profile](#) from day 1
2. Explore opportunities and discover your interest – attend more [industry talks](#)

LinkedIn



Overview of a degree programme



Curriculum Structure

- For **single degree**, 160 units
- For **double degree**, minimum 180 units, up to 200 units (approximately), satisfying both degree requirements
- For **poly-intake**, 20 units is automatically awarded for unrestricted electives
 - up to 20 units to fulfil

Courses	Units	Subtotals
COMMON CURRICULUM REQUIREMENTS		40
PROGRAMME REQUIREMENTS		80
Core Courses	60	
(including 12 units of Industry Experience Requirement or Dissertation)		
Elective Courses	20	
UNRESTRICTED ELECTIVES		40
Grand Total		160

Curriculum Structure

Courses	Units	Subtotals
COMMON CURRICULUM REQUIREMENTS		40
PROGRAMME REQUIREMENTS		80
Core Courses	60	
(including 12 units of Industry Experience Requirement or Dissertation)		
Elective Courses	20	
UNRESTRICTED ELECTIVES		40
Grand Total		160

- Read **1** General Education (GE) Course from **each of the 6 pillars**
- Students are strongly encouraged to complete all GE courses within the **first two years** of their candidature
- Two programme requirements are used to satisfy two pillar requirements (CS1010A fulfills Digital Literacy and BT1101 fulfills Data Literacy)
- Read IS1108 Digital and AI Ethics





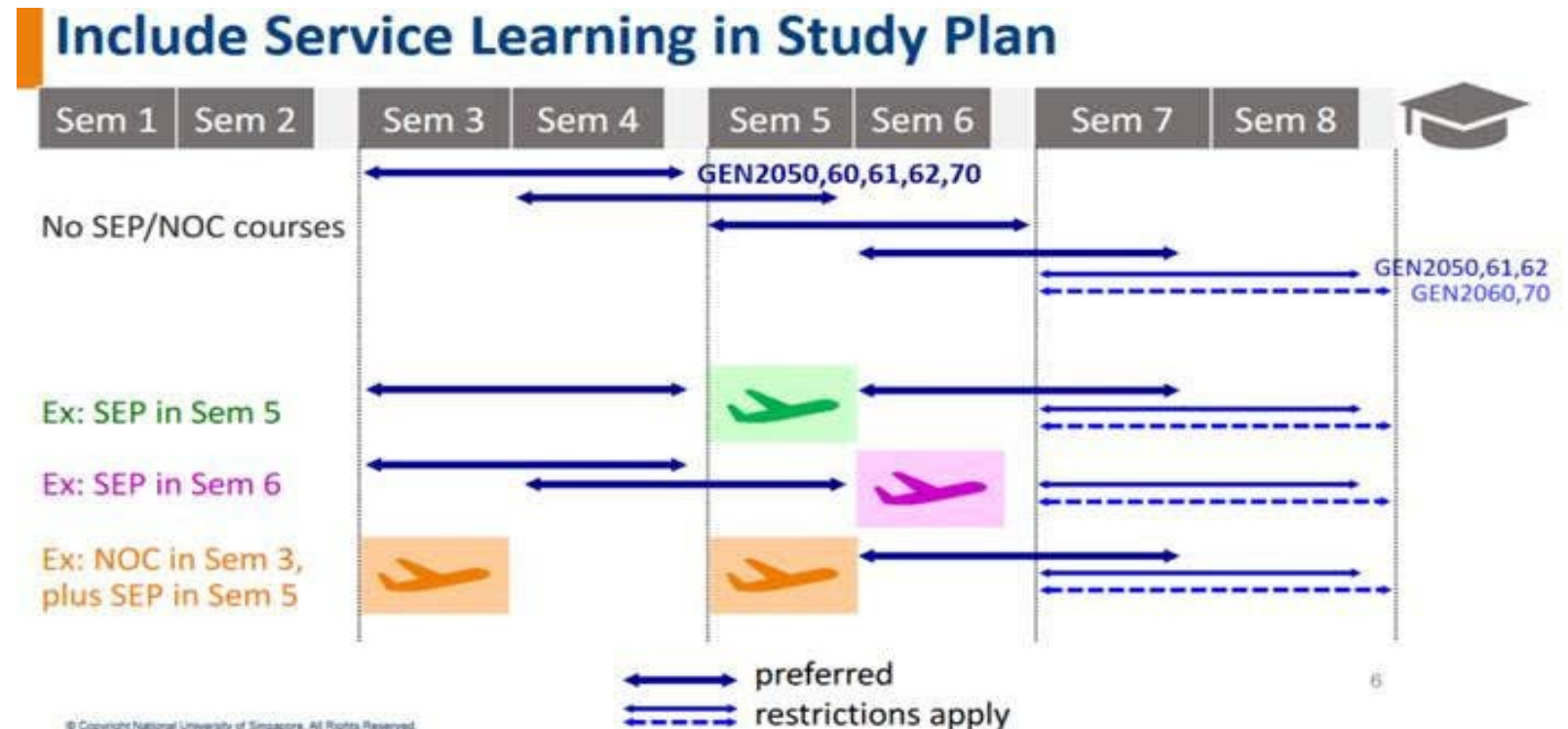
Communities and Engagement

- **Communities and Engagement (coded as GEN%)**
- One of the **Pillars** under **Common Curriculum**
- GEN courses may be Semester or Year long (see below)
 - <https://www.nus.edu.sg/registrar/academic-information-policies/undergraduate-students/general-education/communities-and-engagement-pillar>

Communities and Engagement

Issues: semester-long GEN courses have limited capacity per semester – alternative is year-long GEN Courses (i.e. Service Learning)

Students planning for enrichment programmes (Student Exchange Programme (SEP), NOC and/or internships) who wish to take year-long GEN option – recommend not leaving the GEN course too late and recommend to include Servicing Learning in their Study Plan.



Interdisciplinary (ID) and Cross-disciplinary (CD) Courses

- Under the common curriculum requirements, students are required to take 12 units with at least two ID courses and no more than one CD course.
- BAIS and BZA students are advised to choose your two ID courses from:
 - IS1128 IT, Management and Organisation
 - IS2218 Digital Platforms for Business
 - IS2238 Economics of IT and AI



Curriculum Structure

Courses	Units	Subtotals
COMMON CURRICULUM REQUIREMENTS		40
PROGRAMME REQUIREMENTS		80
Core Courses	60	
(including 12 units of Industry Experience Requirement or Dissertation)		
Elective Courses	20	
UNRESTRICTED ELECTIVES		40
Grand Total		160

- Essential courses that you must do
- Cross-faculty courses (i.e., non CS/IS/BT-coded courses), please clear them as soon as possible
- Pre-allocated core courses (drop with care!)

Curriculum Structure

Courses	Units	Subtotals
COMMON CURRICULUM REQUIREMENTS		40
PROGRAMME REQUIREMENTS		80
Core Courses	60	
(including 12 units of Industry Experience Requirement or Dissertation)		
Elective Courses	20	
UNRESTRICTED ELECTIVES		40
Grand Total		160

- Students with GPA of 4.00 or higher after completing at least 70% (i.e. 112 units) of the total unit requirement for the degree programme may opt to replace the Industry Experience Requirement by Dissertation (12 units).
- If you opt to do a Dissertation (final year project, FYP), you do not need to take up internship.
- Students who aim for Honours (Highest Distinction) must pass the Dissertation.

Curriculum Structure

Courses	Units	Subtotals
COMMON CURRICULUM REQUIREMENTS		40
PROGRAMME REQUIREMENTS		80
Core Courses	60	
(including 12 units of Industry Experience Requirement or Dissertation)		
Elective Courses	20	
UNRESTRICTED ELECTIVES		40
Grand Total		160

- Complete 5 programme elective (PE) courses
- For specialisation, there is a pre-defined set of courses to take (20 units)
 - choosing a specialisation is optional, though it helps in your career positioning
 - once the specialisation requirement is fulfilled, it will be reflected on your transcript
 - double counting of common courses between specialisations should not be more than 8 units among specialisations
- You have many elective courses to choose from, so choose wisely

Curriculum Structure

Courses	Units	Subtotals
COMMON CURRICULUM REQUIREMENTS		40
PROGRAMME REQUIREMENTS		80
Core Courses	60	
(including 12 units of Industry Experience Requirement or Dissertation)		
Elective Courses	20	
UNRESTRICTED ELECTIVES		40
Grand Total		160

- Poly-intake will get a reduction of 20 units from UE
- Doing a minor: 20 units (potentially up to 8 units double counted)
- Doing a second major: 40 units (potentially up to 16 units can be double counted)
- Suggestion: Choose more courses from the BT/IS elective course list.

They are specially created for you!

Points to take note

- Read **at least 18 units** every semester throughout your candidature, except during the following semesters when you are allowed to read fewer units:
 - final semester before completion of all graduation requirements for the degree
 - semester in which you are doing internship or final year project
- You **cannot** overload more than **23 units** in the first semester; overloading in subsequent semesters will be based on GPA and requires approval.
- You are **not** allowed to opt for a **new Minor or Second Major** programme beyond the end of the **5th semester** of study. Do it early!



Points to take note

- **Academic Integrity: Cheating, Plagiarism, Learning Materials Copyright, etc.**

- **Proper use of AI tools for learning**

- [AI Guidelines - Library Essentials - LibGuides at National University of Singapore](#)

- Check your **NUS emails** regularly

- Please **do not** ignore email from ohlb@nus.edu.sg

- Find your study mate(s)

- Many of the courses have group-based project and assignment

- Capstone project is a team-based course

- **Watch out for your GPA**

- to graduate, you need **a minimum GPA of 2.00.**

- to continue in an undergraduate programme of study, a student may **not** have **GPA below 2.00** for **two consecutive semesters.**

****** for any semester in which the student's GPA falls below 2.00, s/he will be placed on probation.

****** if the student's GPA remains below 2.00 for the second consecutive semester, the student will be issued a letter of dismissal by the Office of the University Registrar and denied re-admission.

Honours Degree Classification	Criteria
Honours (Highest Distinction)	GPA 4.50 and above
Honours (Distinction)	GPA 4.00 – 4.49
Honours (Merit)	GPA 3.50 – 3.99
Honours	GPA 3.00 – 3.49
Pass	GPA 2.00 – 2.99



More Advices on Course Planning

- You have some flexibility to deviate from suggested study plan
- Plan ahead and update study plan after each semester
- Be mindful of the pre-requisites
- Capstone project course/internship to be taken when you have sufficient confidence
- Always refer to the **Cohort 2026/27** curriculum webpage on SoC website for changes to degree requirements
- Use current AY's **Course Schedule** as a guide on course offerings, but note that the semester that a course will be offered *may* change in the following AY
 - Some core courses will only be offered in one semester
 - Some elective courses may not be offered every semester
- There may be a course quota for popular elective courses
 - Some elective courses may be offered in both semesters
- Have contingency plans, especially if aiming for a specialisation, taking second major/minor or going for SEP/internship

Bachelor of Computing (Business AI Systems)



<https://www.comp.nus.edu.sg/cug/per-cohort/bais/bais-26-27/>

Bachelor of Computing (Business AI Systems)

Develop Expertise

**Specialisation: AI Governance and Management,
Digital Product and Platform Management,
Financial Technology**

**BAIS Capstone Project
Internship (DTLP, ATAP, NOC)
B.Comp. Dissertation**

IS4108, IS4010, CP3880, CP4101

Develop Competency

Full-Stack Software Engineering

IS2102, IS2108, IS3108

AI and Machine Learning

IS2109, IS3109, IS4401, IS4402, IS4403

**Professionalism and
Communication**

IS1108, IS2101, IS3103

Foundation

Math + Statistics + Analytics

MA1521, MA1522, ST2334, BT1101

Business

IS1128, IS2218, IS2238

Computing

Computer Science

CS1010A, CS2030, CS2040

General Education

Student Exchange

**Second
Major/Minor**

**Double
Degree**

Bachelor of Computing (Business AI Systems)

A-level intake

Year 1		Year 2		Year 3		Year 4	
S1	S2	S1	S2	S1	S2	S1	S2
<u>IS1108</u>	CS2030	ST2334	IS2109	IS4108 (Capstone, 8 Units)	Internship Or FYP (12 Units)	PE5	UE6
<u>CS1010A</u>	MA1521/ MA1522	IS2108	IS3103			UE2	UE7
<u>MA1521/ MA1522</u>	IS2101	BT2102	PE2			UE3	UE8
ULR/ID/CD	<u>BT1101</u>	CS2040	ULR/ID/CD	ULR/ID/CD	PE4	UE4	UE9
ULR/ID/CD	ULR/ID/CD	PE1	ULR/ID/CD	ULR/ID/CD	UE1	UE5	UE10
20 Units	20 Units	20 Units	20 Units	20 Units	20 Units	20 Units	20 Units
TOTAL GRADUATION REQUIREMENTS = 160 Units							

Bachelor of Computing (Business AI Systems)

Poly-level intake (with course exemptions)

Year 1		Year 2		Year 3		Year 4	
S1	S2	S1	S2	S1	S2	S1	S2
<u>IS1108</u>	CS2030	MA1521/ MA1522	IS2109	IS4108	Internship Or FYP (12 Units)	PE5	
<u>CS1010A</u>	MA1521/ MA1522	IS2108	IS3103	(Capstone, 8 Units)		UE2	
<u>MA1301</u> (UE1)	IS2101	BT2102	CS2040	PE3		UE3	
ULR/ID/CD	<u>BT1101</u>	ST2334	PE2	ULR/ID/CD	PE4	UE4	
ULR/ID/CD	ULR/ID/CD	PE1	ULR/ID/CD	ULR/ID/CD	ULR/ID/CD	UE5	
20 Units	20 Units	20 Units	20 Units	20 Units	20 Units	20 Units	0 Units
TOTAL GRADUATION REQUIREMENTS = 160 Units - 20 Units from Unrestricted Electives							



Bachelor of Computing (Business AI Systems)

Programme Electives (PE)

- Choose **5 BAIS PE courses** to make up **20 Units**
- At least 3 courses must be at level-4000

BAIS Areas:

- Digital Business
- Financial Technology
- IT Solutioning
- AI Solutioning
- IT Business Innovation and Entrepreneurship
- IT Security and Legal Aspects

Bachelor of Computing (Business AI Systems)

A Sample of BAIS Programme Electives

Digital Business

IS3150 Digital Media Marketing
IS3240 Digital Platform Strategy and Architecture
IS4262 Digital Product Management

Financial Technology

IS4226 Systematic Trading Strategies and Systems
IS4228 Information Technologies in Financial Services
IS4302 Blockchain and Distributed Ledger Technologies
IS4303 IT-Mediated Financial Solutions and Platforms

IT Business Innovation and Entrepreneurship

CP3100 IS and Analytics Research Methodology
IS3251 Principles of Technology Entrepreneurship
IS4241 Social Media Network Analysis
IS4261 Designing AI-driven Business Innovations

IT Security and Legal Aspects

CS2107 Introduction to Information Security
IFS4101 Legal Aspects of Information Security
IS4231 Information Security Management
IS4233 Legal Aspects of Information Technology
IS4238 Strategic Cybersecurity

IT Solutioning

CS2105 Introduction to Computer Networks
IS2102 Requirements Analysis for Business IT Systems
IS3108 Full-stack Software Engineering for AI Solutions II
IS3221 ERP Systems with Analytics Solutions
IS4100 IT Project Management
IS4234 Governance, Regulation, and Compliance Technology
IS4236 Cloud Services and Infrastructure Management
IS4243 Digital Transformation Consulting
IS4250 IT-enabled Healthcare Solutioning
IS4301 Agile IT with DevOps

AI Solutioning

BT3017 Feature Engineering for Machine Learning
BT4014 Analytics Driven Design of Adaptive Systems
BT4221 Advanced Analytics with Big Data Technologies
BT4301 Business Analytics Solutions and Development
IS3107 Data Engineering
IS3109 AI and Machine Learning Techniques II
IS4151 AIoT Solutions and Development
IS4246 Smart Systems and AI Governance
IS4400 Human-AI Interaction
IS4401 Generative AI and Business Applications
IS4402 Machine Learning with Unstructured Data
IS4403 Agentic AI Solutions and Development



Bachelor of Computing (Business AI Systems)

Notes on elective courses IS2102 and IS3108

- IS2102 Requirements Analysis for Business IT Systems
- IS3108 Full-stack Software Engineering for AI Solutions II

- If you are taking any BAIS specialization and/or other second major/minor, you may not have the additional UE space to do these courses
- Recommended to take IS2102 (in Y2S1) and IS3108 (in Y2S2) and count as PEs if they fit your study plan
 - Must take IS2102 if you intend to take higher-level courses that need it as a pre-requisite course
 - Take IS3108 if you want to go deeper into client-side AI Solutioning
 - Useful for IS4108 AI Solutioning Capstone Project
 - *May* be possible pick up client-side software development on your own



Bachelor of Computing (Business AI Systems)

Artificial Intelligence (AI) Governance and Management Specialisation

Take on a career path responsible for ensuring that AI systems are designed and managed in compliance with ethical AI and data security/privacy principles

Pass 20 units (5 courses) from the prescribed list:

IS4233 Legal Aspects of Information Technology

IS4234 Governance, Regulation, and Compliance Technology

IS4236 Cloud Services and Infrastructure Management

IS4238 Strategic Cybersecurity

IS4243 Digital Transformation Consulting

IS4246 Smart Systems and AI Governance

IS4400 Human-AI Interaction



Bachelor of Computing (Business AI Systems)

Digital Product and Platform Management Specialisation

Pursue a career to design and manage digital products and solutions

Pass 20 units (5 courses) from the prescribed list:

IS3150 Digital Media Marketing

IS3240 Digital Platform Strategy and Architecture

IS4233 Legal Aspects of Information Technology

IS4236 Cloud Services and Infrastructure Management

IS4241 Social Media Network Analysis

IS4243 Digital Transformation Consulting

IS4250 IT-enabled Healthcare Solutioning

IS4261 Designing AI-driven Business Innovations

IS4262 Digital Product Management



Bachelor of Computing (Business AI Systems)

Financial Technology Specialisation

Pursue niche jobs in Fintech to design and implement IT/financial services, solutions and platform

Pass 20 units (5 courses) from the prescribed list:

BT4014 Analytics Driven Design of Adaptive Systems

IS3107 Data Engineering

IS4226 Systematic Trading Strategies and Systems

IS4228 Information Technologies in Financial Services

IS4234 Governance, Regulation, and Compliance Technology

IS4246 Smart Systems and AI Governance

IS4302 Blockchain and Distributed Ledger Technologies

IS4303 IT-Mediated Financial Solutions and Platforms

Bachelor of Science (Business Analytics)



<https://www.comp.nus.edu.sg/cug/per-cohort/ba/ba-26-27/>

Bachelor of Science (Business Analytics)

**Develop
Expertise**

**Specialisation: Financial Analytics,
Marketing Analytics, Machine Learning-based
Analytics**

**BZA Capstone Project
Internship (DTLP, ATAP, NOC)
B.Sc Dissertation**

BT4103, IS4010, CP3880, BT4101

**Develop
Competency**

**Analytical Modeling and
Techniques**

BT1101, BT2101, BT3102

**Data Visualization and Systems
Development**

BT2102, BT3103

**Professionalism and
Communication**

IS1108, IS2101, IS3103

Foundation

Math + Statistics

MA1521, MA1522, ST2334

Business

IS1128, IS2218, IS2238

Computing

Computer Science

CS1010A, CS2030, CS2040

General Education

Student Exchange

**Second
Major/Minor**

**Double
Degree**

Bachelor of Science (Business Analytics)

A-level intake

Year 1		Year 2		Year 3		Year 4	
S1	S2	S1	S2	S1	S2	S1	S2
<u>IS1108</u>	BT2102	BT2101	BT3103	BT4103 (Capstone, 8 Units)	PE4	Internship Or FYP (12 Units)	UE6
<u>CS1010A</u>	CS2030	CS2040	PE1		PE5		UE7
<u>BT1101</u>	IS2101	IS3103	PE2		UE1		UE8
<u>MA1521/ MA1522</u>	MA1521/ MA1522	ST2334	ULR/ID/CD	ULR/ID/CD	UE2	UE4	UE9
ULR/ID/CD	ULR/ID/CD	ULR/ID/CD	ULR/ID/CD	ULR/ID/CD	UE3	UE5	UE10
20 Units	20 Units	20 Units	20 Units	20 Units	20 Units	20 Units	20 Units
TOTAL GRADUATION REQUIREMENTS = 160 Units							

ULR/ID/CD = Common Curriculum Requirements

PE = Programme Elective

UE =Unrestricted Electives

Bachelor of Science (Business Analytics)

Poly-level intake (with course exemptions)

Year 1		Year 2		Year 3		Year 4	
S1	S2	S1	S2	S1	S2	S1	S2
<u>IS1108</u>	BT2102	BT2101	BT3103	BT4103	Internship Or FYP (12 Units)	PE5	
<u>CS1010A</u>	CS2030	CS2040	PE1	(Capstone, 8 Units)		UE2	
<u>BT1101</u>	MA1521	IS3103	PE2	PE3		UE3	
IS2101	MA1522	ST2334	ULR/ID/CD	ULR/ID/CD	PE4	UE4	
<u>MA1301</u> (UE1)	ULR/ID/CD	ULR/ID/CD	ULR/ID/CD	ULR/ID/CD	ULR/ID/CD	UE5	
20 Units	20 Units	20 Units	20 Units	20 Units	20 Units	20 Units	0 Units
TOTAL GRADUATION REQUIREMENTS = 160 Units - 20 Units from Unrestricted Electives							



Bachelor of Science (Business Analytics)

Programme Electives (PE)

- Choose 5 Business Analytics PE courses to make up 20 Units
- At least 3 courses must be at level-4000
- At least 3 courses must be BT-coded courses

BZA Areas:

- Business Applications
- Analytics Methods
- Technology Implementation

Bachelor of Science (Business Analytics)

A Sample of BZA Programme Electives

Business Applications

IE3120 Manufacturing Logistics
IS3150 Digital Media Marketing
IS3240 Digital Platform Strategy and Architecture
BT4013 Analytics for Capital Market Trading and Investment
BT4016 Risk Analytics for Financial Services
BT4211 Data-Driven Marketing
BT4212 Search Engine Optimization and Analytics
DBA4811 Analytical Tools for Consulting
IS4241 Social Media Network Analysis
IS4250 IT-enabled Healthcare Solutioning
IS4262 Digital Product Management

Analytics Methods

BT3017 Feature Engineering for Machine Learning
BT3102 Computational Methods for Business Analytics
BT3104 Optimization Methods for Business Analytics
CS3243 Introduction to Artificial Intelligence
CS3244 Machine Learning
CS4248 Natural Language Processing
BT4012 Fraud Analytics
BT4015 Geospatial Analytics
BT4221 Advanced Analytics with Big Data Technologies
BT4222 Mining Web Data for Business Insights
BT4240 Machine Learning for Predictive Data Analytics
BT4241 Causal Impact Analytics for Business Applications
IS4241 Social Media Network Analysis
ST4245 Statistical Methods for Finance
CP3100 Information Systems and Analytics Research Methodology

Technology Implementation

IS3107 Data Engineering
IS3221 ERP Systems with Analytics Solutions
BT4014 Analytics Driven Design of Adaptive Systems
BT4301 Business Analytics Solutions Development and Deployment
IS4226 Systematic Trading Strategies and Systems
IS4228 Information Technologies in Financial Services
IS4234 Governance, Regulation, and Compliance Technology
IS4246 Smart Systems and AI Governance
IS4302 Blockchain and Distributed Ledger Technologies
IS4303 IT-Mediated Financial Solutions and Platforms



Bachelor of Science (Business Analytics)

Machine Learning-based Analytics Specialisation

Pursue a career to design and develop business solutions with machine learning techniques

Pass 20 units (5 courses) from the prescribed list:

BT3017 Feature Engineering for Machine Learning

BT4012 Fraud Analytics

BT4014 Analytics Driven Design of Adaptive Systems

BT4221 Advanced Analytics with Big Data Technologies

BT4222 Mining Web Data for Business Insights

BT4240 Machine Learning for Predictive Data Analytics

BT4241 Causal Impact Analytics for Business Applications

BT4301 Business Analytics Solutions Development and Deployment

CS3243 Introduction to Artificial Intelligence

CS4248 Natural Language Processing

IS4246 Smart Systems and AI Governance



Bachelor of Science (Business Analytics)

Financial Analytics Specialisation

Pursue a career in data analytics for investment, banking, and finance sectors

Pass 20 units (5 courses) from the prescribed list:

BT3102 Computational Methods for Business Analytics

BT4012 Fraud Analytics

BT4013 Analytics for Capital Market Trading and Investment

BT4016 Risk Analytics for Financial Services

BT4221 Advanced Analytics with Big Data Technologies

IS4226 Systematic Trading Strategies and Systems

IS4228 Information Technologies in Financial Services

IS4234 Governance, Regulation, and Compliance Technology

IS4302 Blockchain and Distributed Ledger Technologies

IS4303 IT-mediated Financial Solutions and Platforms



Bachelor of Science (Business Analytics)

Marketing Analytics Specialisation

Take on a career to manage strategic marketing campaigns using analytics tools and data

Pass 20 units (5 courses) from the prescribed list:

BT3017 Feature Engineering for Machine Learning

BT4014 Analytics Driven Design of Adaptive Systems

BT4015 Geospatial Analytics

BT4211 Data-Driven Marketing

BT4212 Search Engine Optimization and Analytics

BT4222 Mining Web Data for Business Insights

IS3150 Digital Media Marketing

IS4241 Social Media Network Analysis

IS4262 Digital Product Management



Industrial Experience, Undergraduate Research, Entrepreneurship, and Work & Service Opportunities

1. Industrial Experience

I Complete one 12-unit **internship**

II Complete two 6-unit **internships**

III Complete one 6-unit **internship**
+ 6 units of **courses**

IV Complete a **dissertation**

Completing your **Industrial Experience Requirement (IER)** is compulsory for graduation.

There are 4 options.

1. Industrial Experience

I Complete one 12-unit **internship**

II Complete two 6-unit internships

III Complete one 6-unit internship
+ 6 units of courses

IV Complete a dissertation

Your internship should be **full-time**, at least **12** units, and at least **24** continuous weeks long.

BAIS / BZA students can satisfy this by completing:

- a. CP3880 Advanced Technology Attachment Programme (**ATAP**), or
- b. IS4010 Digital Transformation Leadership Programme (**DTLP**), or
- c. NUS Overseas College Programme (**NOC**)

1. Industrial Experience

I Complete one 12-unit **internship**

II Complete two 6-unit internships

III Complete one 6-unit internship
+ 6 units of courses

IV Complete a dissertation

Choosing between ATAP and DTLP

	CP3880 ATAP	IS4010 DTLP
Units		12 units
Length		24 weeks
Focus	Hands-on technical experience	Transformation projects, with both technical deployment and digital strategy / leadership
Journey	Internship only	Includes seminars, reflective learning, mentorship
Team	Individual only	Individual / Pair
Access	All SOC students	Only BAIS/BZA students
Grading	CS/CU	Letter graded

1. Industrial Experience

I Complete one 12-unit **internship**

II Complete two 6-unit internships

III Complete one 6-unit internship
+ 6 units of courses

IV Complete a dissertation

Both ATAP and DTLP are offered twice a year:
May-Nov or **Jan-Jun**

You are allowed to take **two** 4-unit courses during the internship semester (subject to company / course instructor approval).

But you are **not** allowed to take your 8-unit capstone course while on a credit-bearing internship.

1. Industrial Experience

I Complete one 12-unit internship

II Complete two 6-unit **internships**

III Complete one 6-unit internship
+ 6 units of courses

IV Complete a dissertation

Your **two** internships should each be **full-time**, at least **6** units, and at least **12** continuous weeks long.

BAIS / BZA students can satisfy this by completing:

- a. CP3200 Student Internship Programme I (**SIP I**), and
- b. CP3202 Student Internship Programme II (**SIP II**)

CP3200 & CP3202 are only offered in Special Term.

1. Industrial Experience

I Complete one 12-unit internship

II Complete two 6-unit internships

III Complete one 6-unit **internship**
+ 6 units of **courses**

IV Complete a dissertation

Your internship should be **full-time**, at least **6** units, and at least **12** continuous weeks long.

BAIS / BZA students can satisfy this by completing:
a. CP3200 Student Internship Programme I (**SIP I**)

CP3200 is only offered in Special Term.

The remaining 6 units can be fulfilled by completing courses from a specific list.

1. Industrial Experience

I Complete one 12-unit internship

II Complete two 6-unit internships

III Complete one 6-unit **internship**
+ 6 units of **courses**

IV Complete a dissertation

Complete 6 units from:

	Units	Applicable to:	
		BAIS	BZA
CP3201 Industry Seminar for Computing	2	Y	Y
CP4352 Industry Seminar in Cybersecurity	2	Y	Y
IS4236 Cloud Services and Infrastructure Management	4	Y	Y
IS4243 Digital Transformation Consulting	4	Y	Y
IS4301 Agile IT with DevOps	4	Y	N
BT4301 Business Analytics Solutions Development & Deployment	4	Y	Y

These courses **cannot** be double-counted toward programme electives or specialisation requirements.

1. Industrial Experience

I Complete one 12-unit **internship**

II Complete two 6-unit **internships**

III Complete one 6-unit **internship**
+ 6 units of **courses**

IV Complete a dissertation

Notes about internships

1. Credit bearing internships can only be taken **after completing** prerequisite courses.
2. You can pursue **more than one** credit bearing internship (eg. IS4010 DTLP + CP3200 SIP I) during your programme. Additional units will count toward your Unrestricted Electives.
3. An internship can be self-sourced, but it **requires approval** to be recognised as credit-bearing.
4. You are **not** allowed to do a credit-bearing internship in your final, graduating semester. (This requires special approval)

1. Industrial Experience

I Complete one 12-unit internship

II Complete two 6-unit internships

III Complete one 6-unit internship
+ 6 units of courses

IV Complete a **dissertation**

Students with **GPA ≥ 4.00** and **completing 70% of their total units required** (ie. 112 units) may choose to substitute IER with a final year project (FYP) dissertation:

- a. BT4101 B.Sc. Dissertation (for BZA students), or
- b. CP4101 B.Comp. Dissertation (for BAIS students)

You will work independently on a research or applied research project, under the supervision of a faculty member.

1. Industrial Experience

I Complete one 12-unit internship

II Complete two 6-unit internships

III Complete one 6-unit internship
+ 6 units of courses

IV Complete a **dissertation**

Both BT4101 and CP4101 are **12** units and span **2** semesters. Project selection takes place one semester ahead.

Students aiming for Honours (Highest Distinction) **must pass** the dissertation.

We strongly recommend FYP students take CP3100 Information Systems and Analytics Research Methodology.

You can do both an FYP and internship, but not concurrently.

2. Undergraduate Research Opportunities

The **final year project (FYP)** is one of our undergraduate research opportunities. Other opportunities are:

1. **Computing Project (CP4106)**

2 semesters / 8 units

Available to those who have completed at least 112 units. Students who plan to complete BT4101, CP4101 or any Integrated Honours Thesis/Project/Dissertation module are **not** eligible to take CP4106.

2. **Independent Project (CP3106)**

1 semester / 4 units

Examples of Research Projects

Financial Time Series Forecasting Methods Under Regime Switches & Distributional Drift

Upgrading the Singapore Real Estate Prediction Model

The Graduation Gamble: Are University Startup Programs Helping Students Launch Too Soon?

Empowering Type 1 Diabetes Patients with Generative AI

Leveraging Large Language Models for Advanced Legal Intelligence: A RAG and Graph Database Approach

The Effect of Social Media in Indonesia Presidential Election

Identifying and Optimizing Harmful Dimensions in Text Embeddings for Efficient NLP Systems

Memory Fragmentation in LLM systems

Economic Outcomes of Generative AI Integration on Freelancer Platforms

3. Innovation & Entrepreneurship



Computing Innovators Programme (C-Innovators)

Applications close on 30 July

A new programme designed to support your innovation & entrepreneurial ambitions

Where you start building products that solve real problems with real commercialisation opportunities.

3. Innovation & Entrepreneurship



1. 20 units designated to developing and scaling
 - 4u from CD/ID (CP1001 & CP1002, 2u each)
 - 4u from UE (CP4xxx, 4u)
 - 12u from IER / UE (eg. CP3200 & CP3202, 6u each)
2. Enrichment activities
 - Entrepreneurship workshops and networking
 - Global and local immersive learning journeys
 - Innovation challenges and company visits
3. Ongoing mentorship
 - Coaching from real entrepreneurs, domain experts & innovators, matched to your needs
4. Community and ecosystem resources
 - Build with others, not in isolation



3. Innovation & Entrepreneurship

There are also other courses to provide opportunities to learn more about innovation & entrepreneurship, to equip you with skills to thrive within tech startups:

CP2201 Journey of the Innovator

IS3251 Principles of Technology Entrepreneurship

3. Innovation & Entrepreneurship

Besides entrepreneurship education, the School also provides funding, incubation and related opportunities:

Venture Initiation Programme (VIP@SoC): Get grant funding to kickstart your startup

<https://www.comp.nus.edu.sg/entrepreneurship/awards/iepsoc/>

NUS Computing Innovation Prize: Get \$2,000 for a project that demonstrates a significant degree of innovation.

<https://www.comp.nus.edu.sg/entrepreneurship/awards/ia/>

Asia Business Plan Competition (ABPC): Represent NUS in an annual competition with Hong Kong and Taiwan

<https://www.comp.nus.edu.sg/entrepreneurship/awards/abp-competition/>

4. Work & Service Opportunities

Undergraduate Teaching Assistant

\$40/hour (current rate)

Max of 16 hours per week during term time

Invitation email from UG Office (around Jun and Nov)

Undergraduate Student Researcher

\$20/hour (current rate)

Develop skills for scientific research & FYP

Explore your interest for postgraduate studies

NUS Student Work Scheme (NSWS)

<https://nus.edu.sg/cfg/students/jobs-internships/nsws>

Join us as a BZA/BAIS ambassador!

Be a voice for what the BAIS/BZA student experience is all about

Our ambassadors are involved in various events throughout the year (paid under the NSWS scheme).

Thank You!

Stay Connected with the DISA Family!



LinkedIn



<https://sg.linkedin.com/company/nus-disa>