NUS
National University
of Singapore

NUS | Department of Information Systems and Analytics
School of Computing

Freshman Briefing 2025
for Business Artificial Intelligence Systems (BAIS) and Business Analytics (BZA) Students

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School of Computing

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Get to know other DISA professors and TAs here:
https://www.comp.nus.edu.sg/disa/people/

Agenda

1. Welcome Speech by HoD
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. Internship and Undergraduate Research Programmes
8. Entrepreneurship and Work/Service Opportunities
9. Student Experience Sharing
10. Q&A

Welcome Speech

Goh Khim Yong

Associate Professor

Head, Department of Information Systems and Analytics

disgohky@nus.edu.sg

# 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

Recent Information Systems (IS) Graduates

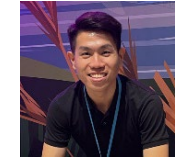Co-Founder & CTO
Hubble.Build
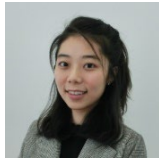
Solutions Engineer
TikTok

Software Engineer
Barclays

DevOps Engineer
Dynamite Games
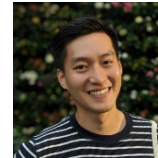
Software Developer
Citi

Cloud Architect
AWS

Senior Product Manager
Shopee

Consultant
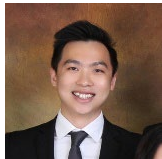**IBM**

Analyst
GIC
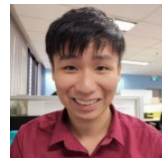
Product Manager
HP

Software Engineer
Shopee

Software Engineer
PayPal

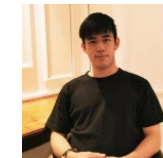Senior Consultant
Deloitte

Business Engineer
Meta

DevOps Engineer
GovTech

Software Engineer
JPMorgan Chase

Senior Analyst
Accenture
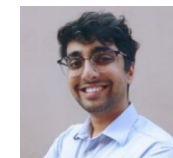
Technology Analyst
Goldman Sachs

Career Options for BAIS Graduates

Data and AI

- Data Analyst
- Data Engineer
- AI/ML Engineer
- Business Intelligence Manager

Software and Application

- Software Engineer
- DevOps Engineer

Strategy and Governance

- Business Analyst/AI Translator
- Data Protection Executive
- Data Protection Officer
- IT Auditor

Emerging Job Roles

- AI Policy Advisors
- Ethical AI Consultant
- Responsible AI Strategist
- AI Ethics Compliance Officer

- **Wong Deshun**
Class of '24
- **Associate AI Developer (Full Stack)** at SAP

- **Hnin Azali (Brenda Yang)**
Class of '23
- **Business AI Solution Advisor** at SAP

Recent Business Analytics (BZA) Graduates
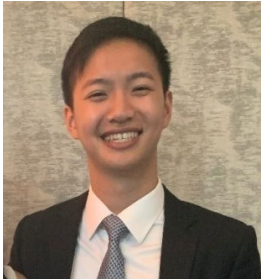
Quant Analyst
Bloomberg

Data Scientist
TikTok
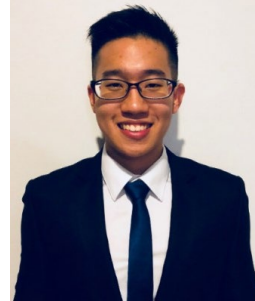
Data Engineer
GIC

Analyst
Capula Investment Management
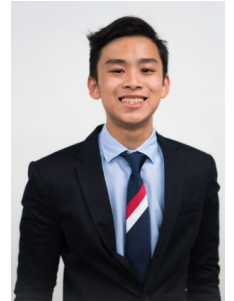
Software Engineer
Visa

Associate AI Engineer
GovTech

Software Engineer
Singapore Airlines
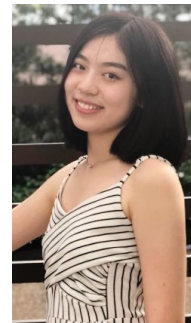
Software Engineer
JPMorgan Chase

Data Scientist
OCBC

Software Engineer
DBS

Is AI threatening Your Jobs?

- The BAIS and BZA programmes prepare you to <u>apply AI/ML to solve business problems</u>:
  - Architect and develop AI-enabled solutions
  - Apply ML models to analyse data for generating business insights
- Both programmes also impart <u>critical soft skills</u> 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 <u>enhance your productivity</u> in tasks such as software engineering and data analysis with AI tools

How can I prepare?

Remember these key milestones

Milestones

- How do I plan?
- Orbital after Y1?

- Student exchange (SEP)?
- NOC?
- Capstone project?

Year 1 **Year 2** **Year 3** (Penultimate) **Year 4**

- Hackathon challenges?
- Innovation challenges?

- Internship?
- Dissertation?
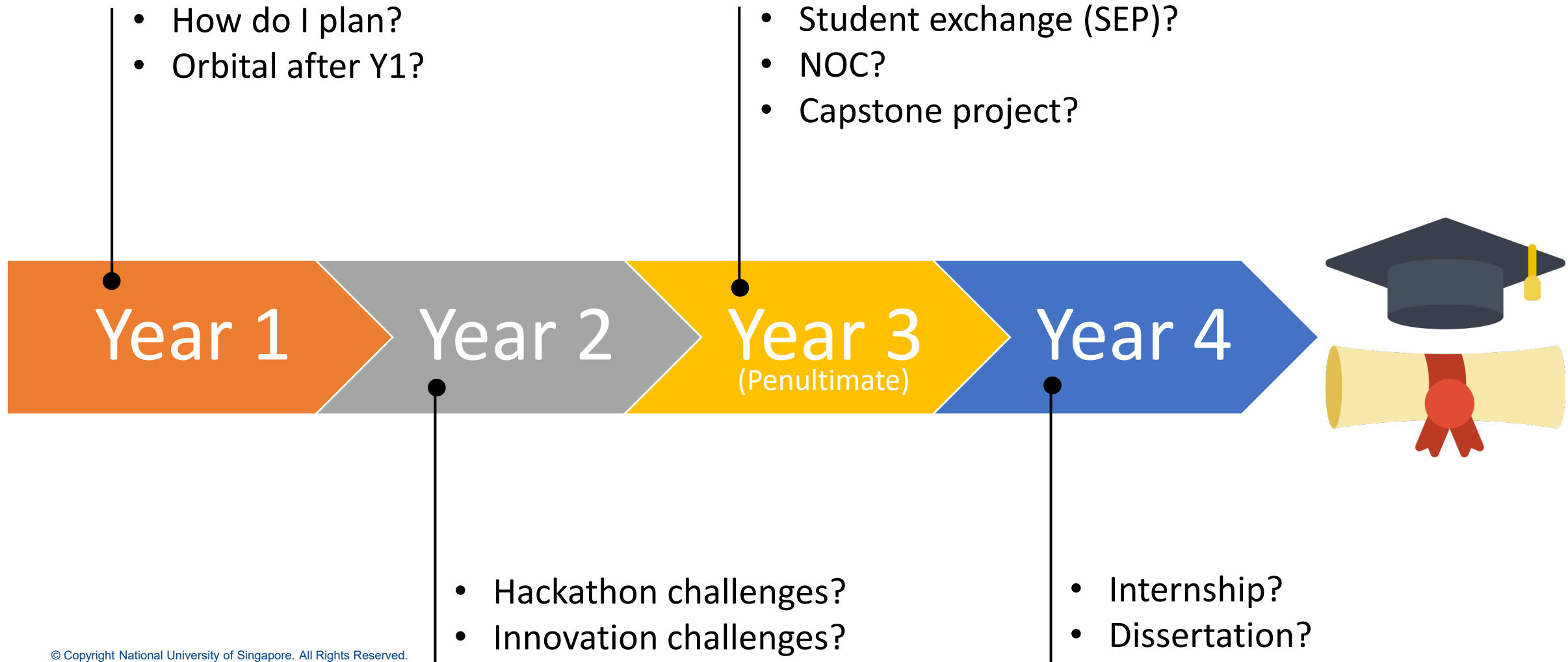
Some Advices

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

https://nus.edu.sg/cfg/students

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

Refer to this url: https://www.nus.edu.sg/registrar/academic-information-policies/undergraduate-students/general-education/for-students-admitted-from-AY2021-22

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.

Include Service Learning in Study Plan

| Sem 1 | Sem 2 | Sem 3 | Sem 4 | Sem 5 | Sem 6 | Sem 7 | Sem 8 |

GEN2050,60,61,62,70

No SEP/NOC courses

GEN2050,61,62
GEN2060,70

Ex: SEP in Sem 5

Ex: SEP in Sem 6

Ex: NOC in Sem 3, plus SEP in Sem 5

preferred
restrictions apply

6
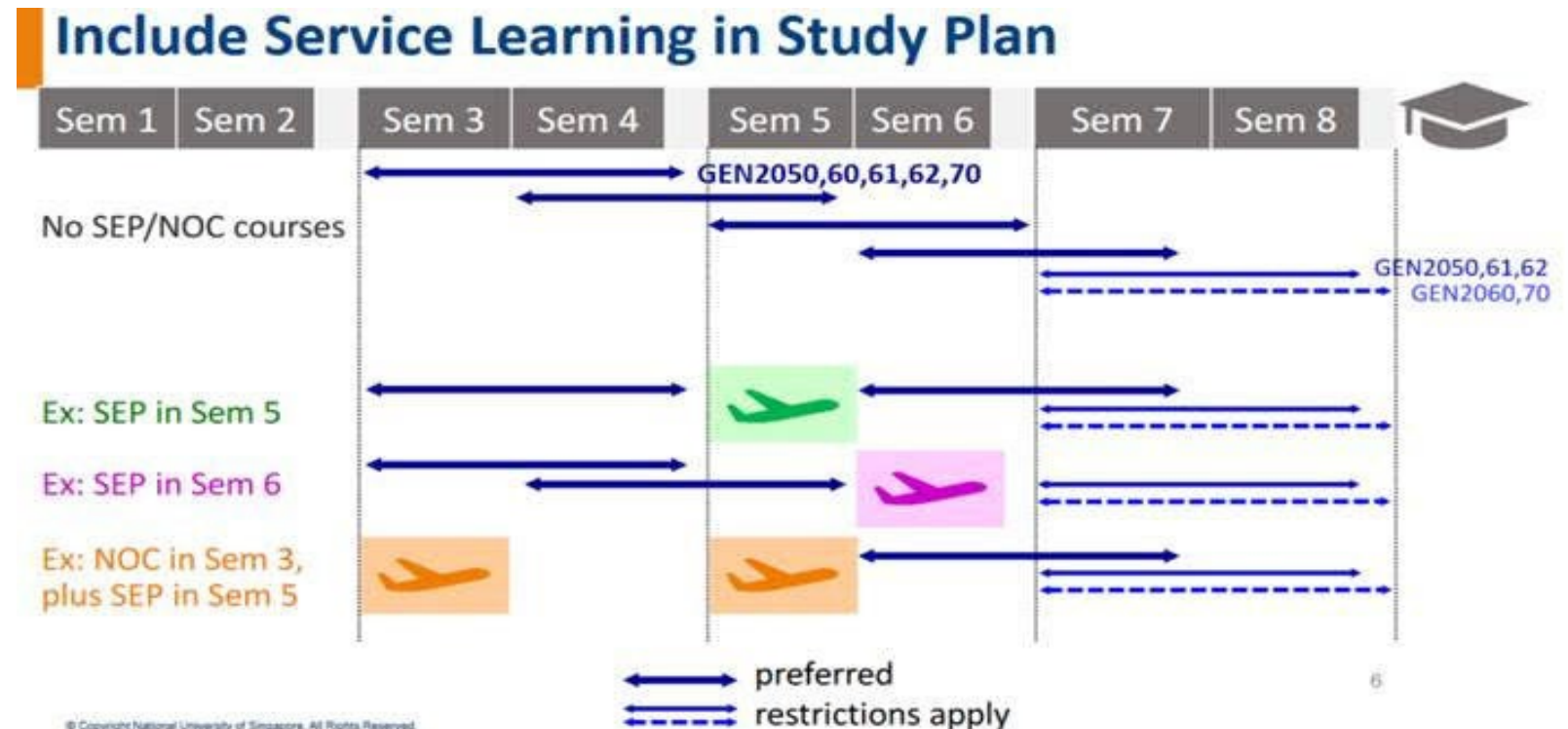
Interdisciplinary (ID) and Cross-disciplinary (CD) Courses

- 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 <u>must</u> do

- Cross-faculty courses (i.e., non CS/IS/BT-coded courses), please clear them as soon as possible

- <u>Pre-allocated core courses</u> (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 lots of elective courses to choose, 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!

For more information: http://www.nus.edu.sg/registrar/academic-information-policies/undergraduate-students

Points to take note

- **Academic Integrity: Cheating, Plagiarism, Learning Materials Copyright, etc.**
  - **Proper use of AI tools for learning**
  - AI Guidelines (New!) - 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.

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

** 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.

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 2025/26** 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-25-26/

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) Business AI Systems Dissertation
	IS4108, IS4010, CP3880, CP4101

Develop Competency

Full-Stack Software Engineering	AI and Machine Learning	Professionalism and Communication
IS2102, IS2108, IS3108	IS2109, IS3109, IS4401, IS4402	IS1108, IS2101, IS3103

Foundation

Math + Statistics + Analytics	Business	Computing
		Computer Science
MA1521, MA1522, ST2334, BT1101	IS1128, IS2218, IS2238	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
	IS1108	CS2030	ST2334	IS2109	IS4108 (Capstone, 8 Units)	Internship Or FYP (12 Units)	PE5	UE6
	CS1010A	MA1521/ MA1522	IS2108	IS3103			UE2	UE7
	MA1521/ MA1522	IS2101	BT2102	PE2	PE3		UE3	UE8
	ULR/ID/CD	BT1101	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

ULR/ID/CD = Common Curriculum Requirements   PE = Programme Elective   UE =Unrestricted Electives

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
IS1108	CS2030	MA1521/ MA1522	IS2109	IS4108 (Capstone, 8 Units)	Internship Or FYP (12 Units)	PE5	
CS1010A	MA1521/ MA1522	IS2108	IS3103			UE2	
MA1301 (UE1)	IS2101	BT2102	CS2040	PE3		UE3	
ULR/ID/CD	BT1101	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

Bachelor of Computing (Business AI Systems)

Notes on IS2102 and IS3108

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

- Consider if you intend to take any BAIS specialization and other second major/minor
- 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-25-26/

National University of Singapore

Bachelor of Science (Business Analytics)

Develop Expertise

Specialisation: Financial Analytics, Marketing Analytics, Machine Learning-based Analytics	BZA Capstone Project Internship (DTLP, ATAP, NOC) Business Analytics Dissertation
	BT4103, IS4010, CP3880, BT4101

Develop Competency

Analytical Modeling and Techniques	Data Visualization and Systems Development	Professionalism and Communication
BT1101, BT2101, BT3102	BT2102, BT3103	IS1108, IS2101, IS3103

Foundation

Math + Statistics	Business	Computing
MA1521, MA1522, ST2334	IS1128, IS2218, IS2238	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
	IS1108	BT2102	BT2101	BT3103	BT4103 (Capstone, 8 Units)	PE4	Internship Or FYP (12 Units)	UE6
	CS1010A	CS2030	CS2040	PE1		PE5		UE7
	BT1101	IS2101	IS3103	PE2	PE3	UE1		UE8
	MA1521/ MA1522	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
IS1108	BT2102	BT2101	BT3103	BT4103 (Capstone, 8 Units)	PE4	Internship Or FYP (12 Units)	
CS1010A	CS2030	CS2040	PE1		PE5		
BT1101	MA1521	IS3103	PE2	PE3	UE2		
IS2101	MA1522	ST2334	ULR/ID/CD	ULR/ID/CD	UE3	UE4	
MA1301 (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

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)

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)

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)

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

Internship, Undergraduate Research Programmes, Entrepreneurship, and Work/Service Opportunities

Internship

- 12-unit, 24-week compulsory internship requirement
  - may be substituted with 12-unit FYP dissertation
- Taken after 80 units and some core course prerequisites
- BAIS/BZA students can take DTLP, ATAP or NOC to fulfill internship requirement (but not two 12-week SIP internships)
  - Digital Transformation Leadership Programme - DTLP (24 weeks, individual or team) – only for DISA students
  - Advanced Technology Attachment Programme - ATAP (24 weeks, individual)
  - NUS Overseas College Programme
- Can pursue more than one internship (additional ones will count as unrestricted elective units); do this more for exposure rather than getting into an internship arms race
- Possible to self-source internship but requires approval if to be taken with course credits
- Allowed to take up to two 4-unit courses during internship semester (subject to company approval)
  - Not allowed to do 8-unit BAIS/BZA capstone project with credit-bearing internship
- Not allowed to do internship in the final graduating semester (needs special approval)

Undergraduate Research Programmes

- Final Year Project (FYP) Dissertation (BT4101/CP4101) – 2 semesters; 12 units
  - students who aim for Honours (Highest Distinction) must pass the Dissertation
  - condition "GPA of 4.00 or higher after completing at least 70% (112 units) of the total unit requirement for the degree programme" must be satisfied before students can commence BT4101/CP4101.
  - FYP project selection process takes place one semester ahead of the semester in which the students commence BT4101/CP4101
  - Strongly recommended to take CP3100 Information Systems and Analytics Research Methodology (new course from AY2025-26)
  - doing FYP as well as internship? Yes, possible but not concurrently.
- Computing Project (CP4106) – 2 semesters; 8 units
  - open to all computing students who have completed at least 112 units.
  - students who are doing / plan to complete a Final Year Project (BT4101, CP4101, or any Integrated Honours Thesis/Project/Dissertation module) are not eligible to take CP4106
- Independent Project (CP3106) – 1 semester; 4 units

Entrepreneurship

- Some courses like *IS3251 Principles of Technology Entrepreneurship* and *CP2201 Journey of the Innovator* provide opportunities to learn more about entrepreneurship

- Venture Initiation Programme (VIP@SoC)
  - https://www.comp.nus.edu.sg/entrepreneurship/awards/iepsoc/
- NUS Computing Innovation Prize
  - https://www.comp.nus.edu.sg/entrepreneurship/awards/ia/

- Mixed teams comprising BAIS and BZA students are encouraged for such initiatives

UG Teaching and Research Opportunities

- **Undergraduate Teaching Assistant**
  - $40/hour (current rate)
  - Max of 16 hours per week during term time
  - Invitation email from UG Studies Office (around Jun and Nov)

- **Undergraduate Student Researcher**
  - $20/hour (current rate)
  - Develop skills for FYP
  - Explore interests for postgraduate studies
  - Can consider taking CP3100 Information Systems and Analytics Research Methodology

- **NUS Student Work Scheme (NSWS)**
  https://nus.edu.sg/cfg/students/jobs-internships/nsws

BAIS and BZA Ambassadors

- You are our best voices for what the BAIS/BZA student experience is all about.

- Our students have been involved in various activities as ambassadors (paid under the NSWS scheme):
  - NUS Open Day
  - SoC Info Session
  - SoC Academic Day
  - Pre-University Competition such as the NUS HumanITy Challenge

- Join us in building our student community!