

**Bachelor of Computing (Information Systems)  
with Second Major in Innovation & Design**

**Cohort AY2022/2023**

<b>Modular Requirements</b>	<b>Modular Credits (MCs)</b>
<b>Common Curriculum</b>	
BT1101 Introduction to Business Analytics <sup>1</sup>	4
CS1101J Programming Methodology <sup>1</sup>	4
GE: Critique and Expression <sup>2</sup>	4
GE: Communities and Engagement <sup>2</sup>	4
GE: Cultures and Connections <sup>2</sup>	4
GE: Singapore Studies <sup>2</sup>	4
IS1108 Digital Ethics and Data Privacy	4
Interdisciplinary Modules <sup>3</sup>	8
Group A module for Second Major <sup>3</sup> (double-counted as Cross-disciplinary Module)	4
<b>Sub-total for Common Curriculum</b>	<b>40</b>
<b>Programme Requirements</b>	
BT2102 Database Management and Visualization <u>or</u> CS2102 Database Systems	4
CS2030 Programming Methodology II	4
CS2040 Data Structures and Algorithms	4
IS2101 Business and Technical Communication	4
IS2102 Enterprise Systems Architecture and Design	4
IS2103 Enterprise Systems Server-side Design and Development	4
IS3103 Information Systems Leadership and Communication	4
IS3106 Enterprise Systems Interface Design and Development	4
IS4103 Information Systems Capstone Project	8
MA1312 Calculus with Applications <u>or</u> MA1521 Calculus for Computing <u>or</u> MA2002 Calculus	4
ST2334 Probability and Statistics	4
Programme electives	20
IS4010 Industry Internship Programme <u>or</u> CP4101 B.Comp. Dissertation	12
<b>Sub-total for Programme Requirements</b>	<b>80</b>
<b>Unrestricted Electives</b>	
Group B module for Second Major	4
Group C modules for Second Major (Innovation & Enterprise electives)	8
EG3301R DCP Project (over 2 consecutive semesters)	12
EG4301 DCP Dissertation <u>or</u> EG4301A Ideas to Start-up (over 2 consecutive semesters)	12
Other unrestricted electives	4
<b>Sub-total for Unrestricted Electives</b>	<b>40</b>
<b>Total</b>	<b>160</b>

Notes:

- <sup>1</sup> Data Literacy and Digital Literacy pillars are satisfied by BT1101 and CS1101J, respectively.
- <sup>2</sup> Students may read equivalent modules in USP/NUSC, UTCP, and RVRC.
- <sup>3</sup> Students in this Second Major are highly recommended to read DTK1234 Design Thinking or EG1311 Design and Make as an Interdisciplinary Module before taking the Group A module.

Recommended semester schedule

Semester 1	MCs	Semester 2	MCs
MA1312 Calculus with Applications or MA1521 Calculus for Computing	4	IS2101 Business and Technical Communication	4
CS1101J Programming Methodology	4	BT1101 Introduction to Business Analytics	4
IS1108 Digital Ethics and Data Privacy	4	CS2030 Programming Methodology II	4
GE	4	ST2334 Probability and Statistics	4
Interdisciplinary Module 1 ^	4	Group A module for Second Major	4
<b>Sub-total</b>	<b>20</b>	<b>Sub-total</b>	<b>20</b>

Semester 3	MCs	Semester 4	MCs
BT2102 Database Management and Visualization	4	IS3103 Information Systems Leadership and Communication	4
CS2040 Data Structures and Algorithms	4	IS3106 Enterprise Systems Interface Design and Development	4
IS2102 Enterprise Systems Architecture and Design	4	GE	4
IS2103 Enterprise Systems Server-side Design and Development	4	GE	4
Group B module for Second Major	4	EG3301R DCP Project	6
<b>Sub-total</b>	<b>20</b>	<b>Sub-total</b>	<b>22</b>

Semester 5	MCs	Semester 6	MCs
EG3301R DCP Project	6	IS4010 Industry Internship Programme	12
Interdisciplinary Module 2	4		
Programme Elective 1	4		
Programme Elective 2	4		
GE *	4		
<b>Sub-total</b>	<b>22</b>	<b>Sub-total</b>	<b>12</b>

Semester 7	MCs	Semester 8	MCs
EG4301 DCP Dissertation or EG4301A Ideas to Start-up	6	EG4301 DCP Dissertation or EG4301A Ideas to Start-up	6
Innovation & Enterprise Elective 1	4	Innovation & Enterprise Elective 2	4
IS4103 Information Systems Capstone Project	8	Programme Elective 4	4
Programme Elective 3	4	Programme Elective 5	4
		UE	4
<b>Sub-total</b>	<b>22</b>	<b>Sub-total</b>	<b>22</b>

^ Students in this Second Major are highly recommended to read DTK1234 Design Thinking or EG1311 Design and Make as an Interdisciplinary Module before taking the Group A module.

\* Students in UTCP and RVRC will need to overload in Semesters 2 to 4 in order to clear this module earlier.

**Recommended semester schedule**

(for students in year-long NOC programmes)

Semester 1	MCs	Semester 2	MCs
MA1312 Calculus with Applications or MA1521 Calculus for Computing	4	IS2101 Business and Technical Communication	4
CS1101J Programming Methodology	4	BT1101 Introduction to Business Analytics	4
IS1108 Digital Ethics and Data Privacy	4	CS2030 Programming Methodology II	4
GE	4	ST2334 Probability and Statistics	4
Interdisciplinary Module 1 ^	4	Group A module for Second Major	4
<b>Sub-total</b>	<b>20</b>	<b>Sub-total</b>	<b>20</b>

Semester 3	MCs	Semester 4	MCs
BT2102 Database Management and Visualization	4	IS3103 Information Systems Leadership and Communication	4
CS2040 Data Structures and Algorithms	4	IS3106 Enterprise Systems Interface Design and Development	4
IS2102 Enterprise Systems Architecture and Design	4	GE	4
IS2103 Enterprise Systems Server-side Design and Development	4	GE	4
Group B module for Second Major	4	EG3301R DCP Project	6
<b>Sub-total</b>	<b>20</b>	<b>Sub-total</b>	<b>22</b>

Semester 5	MCs	Semester 6 – NOC	MCs
EG3301R DCP Project	6	NOC	
Interdisciplinary Module 2	4		
Programme Elective 1	4		
Programme Elective 2	4		
GE *	4		
<b>Sub-total</b>	<b>22</b>	<b>Sub-total</b>	<b>20</b>

Semester 7 – NOC	MCs	Semester 8	MCs
NOC		IS4103 Information Systems Capstone Project	8
		Programme Elective 3	4
		Programme Elective 4	4
		Programme Elective 5	4
<b>Sub-total</b>	<b>20</b>	<b>Sub-total</b>	<b>20</b>

^ Students in this Second Major are highly recommended to read DTK1234 Design Thinking or EG1311 Design and Make as an Interdisciplinary Module before taking the Group A module.

\* Students in UTCP and RVRC will need to overload in Semesters 2 to 4 in order to clear this module earlier.

A year-long NOC programme comprises the following modules:

- TR3201N Entrepreneurship Practicum (8 MCs) – replaces EG4301A (4 MCs out of 12 MCs) and UE (4 MCs)
- TR3202N Start-up Internship Programme (12 MCs) – replaces IS4010 Industry Internship Programme (12 MCs)
- TR3203N Start-up Case Study and Analysis (8 MCs) – replaces EG4301A (8 MCs out of 12 MCs)
- Entrepreneurship courses (up to 12 MCs) – replaces Innovation & Enterprise electives (up to 8 MCs) while the rest are counted as UE

**Recommended semester schedule**  
(for students in one-semester NOC programmes)

Semester 1	MCs	Semester 2	MCs
MA1312 Calculus with Applications <u>or</u> MA1521 Calculus for Computing	4	IS2101 Business and Technical Communication	4
CS1101J Programming Methodology	4	BT1101 Introduction to Business Analytics	4
IS1108 Digital Ethics and Data Privacy	4	CS2030 Programming Methodology II	4
GE	4	ST2334 Probability and Statistics	4
Interdisciplinary Module 1 ^	4	Group A module for Second Major	4
<b>Sub-total</b>	<b>20</b>	<b>Sub-total</b>	<b>20</b>

Semester 3	MCs	Semester 4	MCs
BT2102 Database Management and Visualization	4	IS3103 Information Systems Leadership and Communication	4
CS2040 Data Structures and Algorithms	4	IS3106 Enterprise Systems Interface Design and Development	4
IS2102 Enterprise Systems Architecture and Design	4	GE	4
IS2103 Enterprise Systems Server-side Design and Development	4	GE	4
Group B module for Second Major	4	EG3301R DCP Project	6
<b>Sub-total</b>	<b>20</b>	<b>Sub-total</b>	<b>22</b>

Semester 5	MCs	Semester 6 – NOC	MCs
EG3301R DCP Project	6	NOC	
Interdisciplinary Module 2	4		
Programme Elective 1	4		
Programme Elective 2	4		
GE *	4		
<b>Sub-total</b>	<b>22</b>	<b>Sub-total</b>	<b>20</b>

Semester 7	MCs	Semester 8	MCs
EG4301 DCP Dissertation <u>or</u> EG4301A Ideas to Start-up	6	EG4301 DCP Dissertation <u>or</u> EG4301A Ideas to Start-up	6
IS4103 Information Systems Capstone Project	8	Programme Elective 4	4
Programme Elective 3	4	Programme Elective 5	4
		UE	4
<b>Sub-total</b>	<b>18</b>	<b>Sub-total</b>	<b>18</b>

^ Students in this Second Major are highly recommended to read DTK1234 Design Thinking or EG1311 Design and Make as an Interdisciplinary Module before taking the Group A module.

\* Students in UTCP and RVRC will need to overload in Semesters 2 to 4 in order to clear this module earlier.

A one-semester NOC programme comprises the following modules:

- TR3202S Start-up Internship Programme (12 MCs) – replaces IS4010 Industry Internship Programme (12 MCs)
- TR3204 Entrepreneurship Practicum (4 MCs) – replaces Innovation & Enterprise Elective 1
- Entrepreneurship course (4 MCs) – replaces Innovation & Enterprise Elective 2