Innovation & Design Programme
NUS College of Design and Engineering

Bachelor of Computing (Information Security)
with Minor in Innovation & Design

Cohort AY2022/2023

Modular Requirements	Modular Credits (MCs)
Common Curriculum	
CS1010 Programming Methodology [1]	4
GE: Critique and Expression [2]	4
GE: Communities and Engagement [2]	4
GE: Cultures and Connections [2]	4
GE: Data Literacy [2]	4
GE: Singapore Studies [2]	4
IS1108 Digital Ethics and Data Privacy	4
Interdisciplinary Modules [3]	8
Group A module for Minor [3] (double-counted as Cross-disciplinary Module)	4
Sub-total for Common Curriculum	**40**
Programme Requirements	
CS1231S Discrete Structures	4
CS2040C Data Structures and Algorithms	4
CS2100 Computer Organisation	4
CS2101 Effective Communication for Computing Professionals [4]	4
CS2105 Introduction to Computer Networks	4
CS2106 Introduction to Operating Systems	4
CS2107 Introduction to Information Security	4
CS2113T Software Engineering & Object-Oriented Programming [4]	4
CS3235 Computer Security	4
IS4231 Information Security Management	4
MA1521 Calculus for Computing	4
MA2001 Linear Algebra I	4
ST2334 Probability and Statistics	4
IFS4205 Information Security Capstone Project or CS4238 Computer Security Practice and IFS4103 Penetration Testing Practice	8
Programme electives	12
Computing modules [5]	12
Sub-total for Programme Requirements	**84**
Unrestricted Electives	
Group B module for Minor	4
EG3301R DCP Project (over 2 consecutive semesters)	12
Other unrestricted electives	20
Sub-total for Unrestricted Electives	**36**
Total	**168**

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<u>Notes:</u>

[1] Digital Literacy is satisfied by CS1010.

[2] Students may read equivalent modules in USP/NUSC, UTCP, and RVRC.

[3] Students in this Minor are highly recommended to read DTK1234 Design Thinking or EG1311 Design and Make as an Interdisciplinary Module before taking the Group A module.

[4] Students taking CS2113T must take CS2101 in the same semester.

[5] Students are required to satisfy at least 6 MCs of Industrial Experience Requirement. Those with CAP of 4.00 or higher may opt to replace Industry Experience Requirement with CP4101 B.Comp. Dissertation.

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(updated 16 June 2022)

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Recommended semester schedule
(for students who opt for vacation internship and may want to upgrade to a Second Major)

Semester 1	MCs	Semester 2	MCs
MA1521 Calculus for Computing	4	MA2001 Linear Algebra I	4
CS1010 Programming Methodology	4	ST2334 Probability and Statistics	4
CS1231S Discrete Structures	4	CS2040C Data Structures and Algorithms	4
IS1108 Digital Ethics and Data Privacy	4	CS2100 Computer Organisation	4
Interdisciplinary Module 1 ^	4	Group A module for Minor	4
Sub-total	20	Sub-total	20

Semester 3	MCs	Semester 4	MCs
CS2105 Introduction to Computer Networks	4	CS2101 Effective Communication for Computing Professionals	4
CS2106 Introduction to Operating Systems	4	CS2113T Software Engineering & Object-Oriented Programming	4
CS2107 Introduction to Information Security	4	CS3235 Computer Security	4
GE	4	GE	4
Group B module for Minor	4	EG3301R DCP Project	6
Sub-total	20	Sub-total	22

Summer vacation between Semesters 4 and 5	MCs
CP3200 Internship	6
Sub-total	6

Semester 5	MCs	Semester 6 – can be used for SEP	MCs
EG3301R DCP Project	6	Computing module	4
IFS4205 Information Security Capstone Project	8	Interdisciplinary Module 2	4
GE *	4	GE *	4
GE *	4	UE	4
		UE	4
Sub-total	22	Sub-total	20

Semester 7	MCs	Semester 8	MCs
IS4231 Information Security Management	4	Programme elective 2	4
Computing module	2	Programme elective 3	4
Programme elective 1	4	UE	4
UE	4		
UE	4		
Sub-total	18	Sub-total	12

^ Students in this Minor 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 these modules earlier.

(updated 16 June 2022)

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Recommended semester schedule
(for students who opt for full-semester internship and may want to upgrade to a Second Major)

Semester 1	MCs	Semester 2	MCs
MA1521 Calculus for Computing	4	MA2001 Linear Algebra I	4
CS1010 Programming Methodology	4	ST2334 Probability and Statistics	4
CS1231S Discrete Structures	4	CS2040C Data Structures and Algorithms	4
IS1108 Digital Ethics and Data Privacy	4	CS2100 Computer Organisation	4
Interdisciplinary Module 1 ^	4	Group A module for Minor	4
Sub-total	**20**	**Sub-total**	**20**

Semester 3	MCs	Semester 4	MCs
CS2105 Introduction to Computer Networks	4	CS2101 Effective Communication for Computing Professionals	4
CS2106 Introduction to Operating Systems	4	CS2113T Software Engineering & Object-Oriented Programming	4
CS2107 Introduction to Information Security	4	CS3235 Computer Security	4
GE	4	GE	4
Group B module for Minor	4	EG3301R DCP Project	6
Sub-total	**20**	**Sub-total**	**22**

Semester 5	MCs	Semester 6	MCs
EG3301R DCP Project	6	CP3880 Advanced Technology Attachment Programme	12
IFS4205 Information Security Capstone Project	8		
GE *	4		
GE *	4		
Sub-total	**22**	**Sub-total**	**12**

Semester 7	MCs	Semester 8	MCs
IS4231 Information Security Management	4	Interdisciplinary Module 2	4
Programme elective 1	4	Programme elective 2	4
GE *	4	Programme elective 3	4
UE	4	UE	4
UE	4	UE	4
UE	4		
Sub-total	**24**	**Sub-total**	**20**

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Recommended semester schedule
(for students who opt for vacation internship and not planning to upgrade to a Second Major)

Semester 1	MCs	Semester 2	MCs
MA1521 Calculus for Computing	4	MA2001 Linear Algebra I	4
CS1010 Programming Methodology	4	ST2334 Probability and Statistics	4
CS1231S Discrete Structures	4	CS2040C Data Structures and Algorithms	4
IS1108 Digital Ethics and Data Privacy	4	CS2100 Computer Organisation	4
GE	4	GE	4
Sub-total	**20**	**Sub-total**	**20**

Semester 3	MCs	Semester 4	MCs
CS2105 Introduction to Computer Networks	4	CS2101 Effective Communication for Computing Professionals	4
CS2106 Introduction to Operating Systems	4	CS2113T Software Engineering & Object-Oriented Programming	4
CS2107 Introduction to Information Security	4	CS3235 Computer Security	4
GE	4	GE	4
Interdisciplinary Module 1 ^	4	Group A module for Minor	4
Sub-total	**20**	**Sub-total**	**20**

Summer vacation between Semesters 4 and 5	MCs
CP3200 Internship	6
Sub-total	**6**

Semester 5	MCs	Semester 6	MCs
IFS4205 Information Security Capstone Project	8	EG3301R DCP Project	6
Interdisciplinary Module 2	4	Computing module	4
GE *	4	UE	4
Group B module for Minor	4	UE	4
Sub-total	**20**	**Sub-total**	**18**

Semester 7	MCs	Semester 8	MCs
EG3301R DCP Project	6	Programme elective 2	4
IS4231 Information Security Management	4	Programme elective 3	4
Computing module	2	UE	4
Programme elective 1	4	UE	4
UE	4		
Sub-total	**20**	**Sub-total**	**16**

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(updated 16 June 2022)

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Recommended semester schedule
(for students who opt for full-semester internship and not planning to upgrade to a Second Major)

Semester 1	MCs	Semester 2	MCs
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CS1231S Discrete Structures	4	CS2040C Data Structures and Algorithms	4
IS1108 Digital Ethics and Data Privacy	4	CS2100 Computer Organisation	4
GE	4	GE	4
Interdisciplinary Module 1 ^	4	Group A module for Minor	4
Sub-total	**20**	**Sub-total**	**20**

Semester 3	MCs	Semester 4	MCs
CS2105 Introduction to Computer Networks	4	CS2101 Effective Communication for Computing Professionals	4
CS2106 Introduction to Operating Systems	4	CS2113T Software Engineering & Object-Oriented Programming	4
CS2107 Introduction to Information Security	4	CS3235 Computer Security	4
GE	4	GE	4
Interdisciplinary Module 1 ^	4	Group A module for Minor	4
		Group B module for Minor	4
Sub-total	**20**	**Sub-total**	**24**

Semester 5	MCs	Semester 6	MCs
CP3880 Advanced Technology Attachment Programme	12	EG3301R DCP Project	6
		Interdisciplinary Module 2	4
		GE *	4
		UE	4
		UE	4
Sub-total	**22**	**Sub-total**	**22**

Semester 7	MCs	Semester 8	MCs
EG3301R DCP Project	6	Programme elective 2	4
IFS4205 Information Security Capstone Project	8	Programme elective 3	4
IS4231 Information Security Management	4	UE	4
Programme elective 1	4	UE	4
		UE	4
Sub-total	**22**	**Sub-total**	**20**

^ Students in this Minor 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.

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