Innovation & Design Programme
NUS College of Design and Engineering

Bachelor of Computing (Computer Science)
with Minor in Innovation & Design

Cohort AY2022/2023

Modular Requirements	Modular Credits (MCs)
Common Curriculum	
CS1101S Programming Methodology [1]	4
ES2660 Communicating in the Information Age [1]	4
GE: Data Literacy [2]	4
GE: Communities and Engagement [2]	4
GE: Cultures and Connections [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
CS2030S Programming Methodology II	4
CS2040S Data Structures and Algorithms	4
CS2100 Computer Organisation	4
CS2101 Effective Communication for Computing Professionals [4]	4
CS2103T Software Engineering [4]	4
CS2106 Introduction to Operating Systems	4
CS2109S Introduction to AI and Machine Learning	4
CS3230 Design and Analysis of Algorithms	4
MA1521 Calculus for Computing	4
MA2001 Linear Algebra I	4
ST2334 Probability and Statistics	4
Computer Science Breadth and Depth modules	32
Sub-total for Programme Requirements	**80**
Unrestricted Electives	
Group B module for Minor	4
EG3301R DCP Project (over 2 consecutive semesters)	12
Other unrestricted electives	24
Sub-total for Unrestricted Electives	**40**
Total	**160**

Notes:

[1] Digital Literacy and Critique and Expression pillars are satisfied by CS1101S and ES2660, respectively.

[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 CS2103T must take CS2101 in the same semester.

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Recommended semester schedule
(for students who may want to upgrade to a Second Major)

Semester 1	MCs	Semester 2	MCs
MA1521 Calculus for Computing	4	MA2001 Linear Algebra I	4
CS1101S Programming Methodology	4	CS2030S Programming Methodology II	4
CS1231S Discrete Structures	4	CS2040S 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
CS2101 Effective Communication for Computing Professionals	4	CS2109S Introduction to AI and Machine Learning	4
CS2103T Software Engineering	4	CS3230 Design and Analysis of Algorithms	4
CS2106 Introduction to Operating Systems	4	ES2660 Communicating in the Information Age	4
ST2334 Probability and Statistics	4	GE	4
Group B module for Minor	4	EG3301R DCP Project	6
Sub-total	**20**	**Sub-total**	**22**

Semester 5	MCs	Semester 6 – can be used for SEP or IA	MCs
EG3301R DCP Project	6	CS Breadth / Depth module 1	4
Interdisciplinary Module 2	4	CS Breadth / Depth module 2	4
GE *	4	CS Breadth / Depth module 3	4
GE *	4	UE	4
GE *	4	UE	4
Sub-total	**22**	**Sub-total**	**20**

Semester 7	MCs	Semester 8	MCs
CS Breadth / Depth module 4	4	CS Breadth / Depth module 7	4
CS Breadth / Depth module 5	4	CS Breadth / Depth module 8	4
CS Breadth / Depth module 6	4	UE	4
UE	4	UE	4
UE	4		
Sub-total	**20**	**Sub-total**	**16**

^ 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 are not planning to upgrade to a Second Major)

Semester 1	MCs	Semester 2	MCs
MA1521 Calculus for Computing	4	MA2001 Linear Algebra I	4
CS1101S Programming Methodology	4	CS2030S Programming Methodology II	4
CS1231S Discrete Structures	4	CS2040S 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
CS2101 Effective Communication for Computing Professionals	4	CS2109S Introduction to AI and Machine Learning	4
CS2103T Software Engineering	4	CS3230 Design and Analysis of Algorithms	4
CS2106 Introduction to Operating Systems	4	ES2660 Communicating in the Information Age	4
ST2334 Probability and Statistics	4	GE	4
Interdisciplinary Module 1 ^	4	Group A module for Minor	4
Sub-total	**20**	**Sub-total**	**20**

Semester 5	MCs	Semester 6	MCs
Interdisciplinary Module 2	4	EG3301R DCP Project	6
CS Breadth / Depth module 1	4	CS Breadth / Depth module 3	4
CS Breadth / Depth module 2	4	CS Breadth / Depth module 4	4
GE *	4	UE	4
Group B module for Minor	4	UE	4
Sub-total	**20**	**Sub-total**	**22**

Semester 7	MCs	Semester 8	MCs
EG3301R DCP Project	6	CS Breadth / Depth module 7	4
CS Breadth / Depth module 5	4	CS Breadth / Depth module 8	4
CS Breadth / Depth module 6	4	UE	4
UE	4	UE	4
UE	4		
Sub-total	**22**	**Sub-total**	**16**

^ 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.

(updated 16 June 2022)