Innovation & Design Programme
NUS College of Design and Engineering

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

Cohort AY2021/2022

Modular Requirements	Modular Credits (MCs)
University Level Requirements [1]	
GE1: Critique and Expression [2]	4
GE2: Communities and Engagement [2]	4
GE3: Cultures and Connections [2]	4
GE4: Singapore Studies [2]	4
Sub-total for University Level Requirements	**16**
Programme Requirements	
BT1101 Introduction to Business Analytics [1]	4
BT2102 Database Management and Visualization <u>or</u> CS2102 Database Systems	4
CS1101J Programming Methodology [1]	4
CS2030 Programming Methodology II	4
CS2040 Data Structures and Algorithms	4
IS1103 Ethics in Computing	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
IS3107 Data Engineering	4
IS4103 Information Systems Capstone Project	8
IS4301 Agile IT with DevOps	4
MA1312 Calculus with Applications <u>or</u> MA1521 Calculus for Computing <u>or</u> MA2002 Calculus	4
ST2334 Probability and Statistics	4
Programme electives	28
IS4010 Industry Internship Programme <u>or</u> CP4101 B.Comp. Dissertation [3]	12
Sub-total for Programme Requirements	**108**
Unrestricted Electives	
Group A module for Second Major	4
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 [3] (over 2 consecutive semesters)	12
Sub-total for Unrestricted Electives	**40**
Total	**164**

<u>Notes:</u>

[1] Data Literacy and Digital Literacy pillars are satisfied by BT1101 and CS1101J, respectively.

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

[3] Subject to approval from SoC, students with CAP of 4.00 and above may read EG4301/EG4301A in lieu of CP4101 (or vice-versa).

(updated 16 June 2022)

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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
IS1103 Ethics in Computing	4	CS2030 Programming Methodology II	4
GE1	4	ST2334 Probability and Statistics	4
GE2	4	Group A module for Second Major	4
Sub-total	**20**	**Sub-total**	**20**

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	IS3107 Data Engineering	4
IS2103 Enterprise Systems Server-side Design and Development	4	GE3	4
Group B module for Second Major	4	EG3301R DCP Project	6
Sub-total	**20**	**Sub-total**	**22**

Semester 5	MCs	Semester 6	MCs
EG3301R DCP Project	6	IS4010 Industry Internship Programme	12
Programme Elective 1	4	Programme Elective 4	4
Programme Elective 2	4	Programme Elective 5	4
Programme Elective 3	4		
GE4 *	4		
Sub-total	**22**	**Sub-total**	**20**

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 6	4
IS4301 Agile IT with DevOps	4	Programme Elective 7	4
Sub-total	**22**	**Sub-total**	**18**

* 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)

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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
IS1103 Ethics in Computing	4	CS2030 Programming Methodology II	4
GE1	4	ST2334 Probability and Statistics	4
GE2	4	Group A module for Second Major	4
Sub-total	**20**	**Sub-total**	**20**

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	IS3107 Data Engineering	4
IS2103 Enterprise Systems Server-side Design and Development	4	GE4	4
GE3	4	EG3301R DCP Project	6
Group B module for Second Major	4		
Sub-total	**24**	**Sub-total**	**22**

Semester 5	MCs	Semester 6 – NOC	MCs
EG3301R DCP Project	6		
IS4301 Agile IT with DevOps	4		
Programme Elective 1	4	NOC	
Programme Elective 2	4		
Programme Elective 3	4		
Sub-total	**22**	**Sub-total**	**20**

Semester 7	MCs	Semester 8	MCs
		IS4103 Information Systems Capstone Project	8
		Programme Elective 4	4
NOC		Programme Elective 5	4
		Programme Elective 6	4
		Programme Elective 7	4
Sub-total	**20**	**Sub-total**	**24**

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

(updated 16 June 2022)

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Recommended semester schedule
(for students in one-semester 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
IS1103 Ethics in Computing	4	CS2030 Programming Methodology II	4
GE1	4	ST2334 Probability and Statistics	4
GE2	4	Group A module for Second Major	4
Sub-total	**20**	**Sub-total**	**20**

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	IS3107 Data Engineering	4
IS2103 Enterprise Systems Server-side Design and Development	4	GE3	4
Group B module for Second Major	4	EG3301R DCP Project	6
Sub-total	**20**	**Sub-total**	**22**

Semester 5	MCs	Semester 6 – NOC	MCs
EG3301R DCP Project	6		
Programme Elective 1	4		
Programme Elective 2	4	NOC	
Programme Elective 3	4		
GE4 *	4		
Sub-total	**22**	**Sub-total**	**20**

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
IS4103 Information Systems Capstone Project	8	Programme Elective 5	4
IS4301 Agile IT with DevOps	4	Programme Elective 6	4
Programme Elective 4	4	Programme Elective 7	4
Sub-total	**22**	**Sub-total**	**18**

* 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