# CHECKLIST Bachelor of Engineering (Honours) – Software Engineering: Transition to new program

# \* This checklist is for the BE(Hons) component ONLY for dual programs with Bachelor of Mathematics and Bachelor of Science

Fuil name:	Full	name:
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\_\_\_\_\_Student Number:\_

Date:\_\_\_\_\_

# Points to note

- You need to ensure that you meet minimum program and major requirements (listed below)
- You cannot count the same course twice
- You need to ensure that you don't take courses that are incompatible with courses that you have already counted towards your program, and that any prerequisites have been met
- Please ensure you read the program rules to check for any special rules with your dual program, as course restrictions may apply
- Please contact the relevant Faculty for information regarding the other component of your dual program

For the BE(Hons) component, with a specialisation in Software Engineering:

- I. 8 units for all BE(Hons) Core Courses; and
- II. 36 units for one Specialisation in Software Engineering; and
- III. One of the following:
  - a. 16 units for one Major from Software Engineering Major Options\*, or
  - b. 16 units for Software Engineering Minor Options\*\*, or
  - c. 16 units for Software Engineering Specialisation No Major option

## \*Major available in: Computer Engineering

#### \*\*Minor available in: Data Science, Design

✓/X compl.	You must complete (NEW Program requirements)	Sem offering	#	First offered	Approved substitution	Last offered
	8 units for all: Core Courses					
	ENGG1100 Professional Engineering	1,2	2		Course must be completed [ENGG1211 (4 units) will count as 2 units towards Part A in lieu of ENGG1100, and 2 units towards program electives]	
	ENGG1001 Programming for Engineers (NEW) or CSSE1001 Introduction to Software Engineering	1,2	2	1/21	Course must be completed	
	MATH1051 Calculus & Linear Algebra I or MATH1071 Advanced Calculus & Linear Algebra I	1,2	2		Course must be completed	
	MATH1052 Multivariate Calculus & Ordinary Differential Equations or MATH1072 Advanced Multivariate Calculus & Ordinary Differential Equations	1,2	2		Course must be completed	

Software Engineering specialisation list (36 units)	Sem	#	First	Approved substitution	Last
is for all	offering		offered		offered
is for all Ilsory Courses					
ISON y Courses	1,2	2		Course must be completed	
200 Introduction to Information Systems	1,2	2		Course must be completed	
1061 Discrete Mathematics	1,2	2		Course must be completed	
002 Programming in the Large	1,2	2		Course must be completed	
010 Introduction to Computer Systems	1,2	2		Course must be completed	
<b>310</b> Computer Systems, Principles and Programming	1,2	2		Course must be completed	
2500 Human-Computer Interaction	1	2		Course must be completed	
203 Probability Models and Data Analysis for Engineering	2	2		Course must be completed	
3400 Functional and Logic Programming	1	2		Course must be completed	
3506 Algorithms and Data Structures	2	2		Course must be completed	
012 The Software Process	1	2	1/21	CSSE3002 The Software Process (discontinued)	1/20
200 Project Design Testing and Evaluation (NEW)	2	2	2/22	DECO2800 Design Computing Studio 2 - Testing & Evaluation	
801 Design Computing Studio Build	2	2		Course must be completed	
400 Software Architecture (NEW)	1	2	1/22	Course must be completed	
1900 Professional Practice and the Business Environment	1,2	2		Course must be completed	
1811 or REIT4841 Research and Development Methods and Practice (NEW)	1	4	1/22	ENGG4801 Thesis Project (discontinued)	1/21
1812 or REIT4842 Research and Development Methods and Practice (NEW)	2		2/22	ENGG4802 Thesis Project (discontinued)	2/21
from Program Electives					
1812 or RI	EIT4842 Research and Development Methods and Practice (NEW)	EIT4842 Research and Development Methods and Practice (NEW) 2	EIT4842 Research and Development Methods and Practice (NEW) 2	EIT4842 Research and Development Methods and Practice (NEW) 2 2/22	eIT4842 Research and Development Methods and Practice (NEW) 2 2/22 or ENGG4802 Thesis Project (discontinued)

### Software Engineering No Major Option

Complete 16 units comprising:

- i. 2 units for Software Engineering Extension Compulsory course; and
- ii. 6 to 14 units from Software Engineering Advanced Electives with 4 units at Level 3 or higher; and
- iii. 0 to 8 units from Software Engineering Breadth Electives; and
- iv. 0 to 4 units from Program Electives; and
- v. 0 to 4 units from General Electives.

√/X	2 units for:	Sem	#	First	Approved substitution	Last
compl.	Software Engineering Extension Course	offering		offered		offered
	DECO3800 Design Computing Studio 3 – Proposal	1	2		Course must be completed	
	6 to 14 units from:					
	Software Engineering Advanced Electives (4 units at level 3 or higher)					
	COMP3301 Operating Systems Architecture	2	2		No substitution	
	COMP3400 Functional & Logic Programming	1	2		No substitution	
	COMP3702 Artificial Intelligence	2	2		No substitution	
	COMP3710 Pattern Recognition and Analysis	2	2		No substitution	
	COMP3820 Digital Health Software Project (NEW)	2	2	2/21	No substitution	
	COMP4403 Compilers and Interpreters	1	2		No substitution	
	COMP4500 Advanced Algorithms & Data Structures	2	2		No substitution	
	COMP4702 Machine Learning	1	2		No substitution	
	CYBR3000 Information Security	2	2	2/21	COMS3000 Information Security (discontinued)	2/20
	COMS3200 Computer Networks I	1	2		No substitution	
	COMS4507 Advanced Topics in Security	1	2		No substitution	
	COMS6200 Computer Networks II	2	2	2/21	COMS4200 Computer Networks II (discontinued)	2/2
	COSC3000 Visualization, Computer Graphics & Data Analysis	1	2		No substitution	
	COSC3500 High-Performance Computing	2	2		No substitution	
	CSSE3010 Embedded Systems Design & Interfacing	1	2		No substitution	
	CSSE3100 Reasoning About Programs	1	2		No substitution	
	CSSE4010 Digital System Design	2	2		No substitution	
	CSSE4630 Principles of Program Analysis	2	2		No substitution	
	DECO3500 Social & Mobile Computing	2	2		No substitution	
	DECO3800 Design Computing Studio 3 - Proposal	1	2		No substitution	
	DECO6500 Advanced Human-Computer Interaction	2	2		No substitution	
	INFS2200 Relational Database Systems	2	2		No substitution	
	INFS3200 Advanced Database Systems	1,2	2	1	No substitution	
	INFS3202 Web Information Systems	1	2		No substitution	
	INFS3208 Cloud Computing	2	2		No substitution	
	INFS4203 Data Mining	2	2		No substitution	

INFS4205 Advanced Techniques for High Dimensional Data	1	2	No substitution	
0 to 8 units from:				
Software Engineering Breadth Electives				
COMP3880 International Software Development	2	2	No substitution	
ENGG4020 Systems Safety Engineering	2	2	No substitution	
MATH2001 Calculus & Linear Algebra II	1,2,S	2	MATH2000 Calculus & Linear Algebra II (discontinued)	

Software Engineering Breadth Electives can also be chosen from course lists for the following major:

o Computer Engineering

Courses on this list may require pre-requisites. Please seek academic advice if required.

✓/X compl.	Major in Computer Engineering (16 units)	Sem offering	#	First offered	Approved substitution	Last offered
	6 units for:					
	Computer Engineering Courses for Software Engineers only					
	CSSE3010 Embedded Systems Design & Interface	1	2		Course must be completed	
	DECO3800 Design Computing Studio 3 – Proposal	1	2		Course must be completed	
	ELEC2400 Electronic Circuits and Amplifiers (NEW)	1	2	1/22	ELEC3400 Electronic Circuits (discontinued)	1/21
	4 units for:					
	Computer Engineering Compulsory Courses					
	CSSE4010 Digital System Design	2	2		Course must be completed	
	CSSE4011 Advanced Embedded Systems	1	2		Course must be completed	
	2 units from:					
	Computer Engineering Electives					
	COMP2140 Web/Mobile Programming (NEW)	2	2	2/22	No substitution	
	COMP3301 Operating Systems Architecture	2	2		No substitution	
	COMP3702 Artificial Intelligence	2	2		No substitution	
	COMP3710 Pattern Recognition and Analysis	2	2		No substitution	
	COMP4403 Compilers and Interpreters	1	2		No substitution	
	COMP4500 Advanced Algorithms & Data Structures	2	2		No substitution	
	COMP4702 Machine Learning	1	2		No substitution	
	CYBR3000 Information Security	2	2	2/21	COMS3000 Information Security (discontinued)	2/20
	COMS3200 Computer Networks I	1	2		No substitution	
	COMS4113 Photonics	1	2	1/21	COMS4103 Photonics (discontinued)	1/20

COMS4104 Microwave Engineering	1	2		No substitution	
COMS4105 Communication Systems	2	2		No substitution	
COMS4507 Advanced Topics in Security	1	2		No substitution	
COMS6200 Computer Networks II	2	2	2/21	COMS4200 Computer Networks II (discontinued)	2/20
CSSE3012 The Software Process	1	2	1/21	CSSE3002 The Software Process (discontinued)	1/20
CSSE3100 Reasoning About Programs	1	2		No substitution	
CSSE3200 Project Design Testing and Evaluation (NEW)	2	2	2/22	DECO2800 Design Computing Studio 2 - Testing & Evaluation	
CSSE4004 Distributed Computing	1	2		No substitution	
CSSE4400 Software Architecture (NEW)	1	2	1/22	No substitution	
CSSE4630 Principles of Program Analysis	2	2		No substitution	
COSC3500 High Performance Computing	2	2		No substitution	
DECO1400 Introduction to Web Design	1	2		No substitution	
DECO2500 Human-Computer Interaction	1	2		No substitution	
ELEC3310 Electrical Energy Conversion & Utilisation	2	2	2/21	ELEC3300 Electrical Energy Conversion & Utilisation (discontinued)	2/20
ELEC4310 Power Systems Analysis	1	2	1/21	ELEC4300 Power Systems Analysis (discontinued)	1/20
ELEC4620 Digital Signal Processing	2	2		No substitution	
ELEC4630 Image Processing and Computer Vision	1	2		No substitution	
ENGG2800 Team Project I	1,2	2		No substitution	
ENGG3800 Team Project II	2	2		No substitution	
ENGG4800 Project Management	1	2		No substitution	
INFS1200 Introduction to Information Systems	1,2	2		No substitution	
INFS2200 Relational Database Systems	2	2		No substitution	
MATH1061 Discrete Mathematics		2		No substitution	
METR3100 Control System Implementation	1	2		No substitution	
METR4202 Robotics & Automation	2	2		No substitution	

### Software Engineering with Minor Option

Complete 16 units comprising:

i. 8 units for one of the following minors: Data Science Design

and

- ii. 2 units for Software Engineering Extension Course; and
- iii. 6 units from Software Engineering Advanced Electives

✓/X compl.	Minor in Data Science (8 units)	Sem offering	#	First offered	Approved substitution	Last offered
	DATA2001 Introduction to Data Science (NEW)	2	2	2/22	Course must be completed	
	INFS1200 Introduction to Information Systems	1,2	2		Course must be completed	
	4 units from: Data Science Electives					
	COMP4702 Machine Learning	1	2		No substitution	
	INFS2200 Relational Database Systems	2	2		No substitution	
	INFS3208 Cloud Computing	2	2		No substitution	
	INFS4203 Data Mining	2	2		No substitution	
	STAT2003 Mathematical Probability	1	2		No substitution	
	STAT2004 Statistical Modelling & Analysis	2	2		No substitution	

Where courses are compulsory in both the specialisation and minor, the compulsory course in the minor must be substituted by courses from Data Science Minor Electives.

✓/X compl.	Minor in Design (8 units)	Sem offering	#	First offered	Approved substitution	Last offered
	2 units for all: Design Minor Compulsory Courses					
	DSGN1500 Design for a Better World	2	2	2/21	Course must be completed	
	6 units from: Design Electives					
	DSGN1100 Design: Interaction	1	2		No substitution	
	DSGN1200 Design: Experience	2	2		No substitution	
	DSGN2100 Design: Organisation	1	2		No substitution	

DSGN2200 Design: Environment	2	2	No substitution	
DSGN3100 Design: Infrastructure	1	2	No substitution	