Bachelor of Mechatronics Engineering (Honours)
Program Code: 40064
CRICOS Code: 032765A

Transition Arrangements

Last Updated October 2020

The following description outlines the approved transition arrangements for students who commenced in the Bachelor of Mechatronics Engineering (Honours) program prior to 2021. Students who commence the program in 2021 onwards must the complete the courses and follow the program structure that is outlined in the Program Handbook. If you need further advice, then please contact your Academic Program Advisor on programadvice@newcastle.edu.au.

Course Code and Title (Not yet completed)	**New Course Code and Title** (Course to be completed from 2021 onwards as offered)
'Completed' means successfully passed a course or received approved credit for a course	
CORE COURSES	
Mathematics Core Option **Option 1** MATH1110 Mathematics for Engineering, Science and Technology 1 **AND** MATH1120 Mathematics for Engineering, Science and Technology 2 ***OR*** **Option 2** MATH1210 Mathematical Discovery 1 **AND** MATH1220 Mathematical Discovery 2	**MATH1110 Mathematics for Engineering, Science and Technology 1** **AND** **MATH1120 Mathematics for Engineering, Science and Technology 2** ***Please note:*** ***After 2021****, the option to do MATH1210 and MATH1220 has been removed from the program.* ***From 2021 onwards****:* *1) if you have not yet completed MATH1210 you must complete MATH1110; and* *2) if you haven't completed MATH1220 then you must complete MATH1120.*
*PHYS1210 Advanced Physics 1 *(Or with Program Convenor approval, PHYS1205 Fundamentals of Engineering Physics)*	If you have not completed PHYS1210 *(or PHYS1205)* prior to 2021, then you will complete: **MECH1750 Engineering Materials 1*** (MECH1750 ***will count in place of*** PHYS1210)

MECH3695 Heat Transfer**	If you have not completed MECH3695 prior to 2021, then you will complete: **ENGG2100 Engineering Risk and Uncertainty**** (ENGG2100 ***will count in place of*** MECH3695)
MECH2710 Fluid Mechanics 1	**ENGG2300 Engineering Fluid Mechanics**
ELEC3730 Digital and Computer Electronics 2	**MCHA3400 Embedded Systems Engineering** (Added to the program in 2020)
ENGG3440 Linear Control and Estimation	**AERO3600 Embedded Control Systems** (Added to the program in 2020)
MCHA4000 Mechatronics Design 2	**MCHA4100 Mechatronics Systems (20 units) ***** This is not a direct replacement. Please refer to the table below for further information.
MECH4841A Mechanical Engineering Project A or ELEC4840A Final Year Engineering Project Part A (10 units)	**ENGG4801A Engineering Final Year Project A (10 units) ***** This is not a direct replacement. Please refer to the table below for further information.
MECH4841B Mechanical Engineering Project B or ELEC4840B Final Year Engineering Project Part B (20 units)	**ENGG4801B Engineering Final Year Project B (10 units) ***** This is not a direct replacement. Please refer to the table below for further information.
One 10-unit Elective	**ENGG3300 Machine Learning for Engineers ^** This is not a direct replacement. Please refer to the table below for further information.
One 10-unit Elective	**MCHA4400 Vision Based Navigation ^** This is not a direct replacement. Please refer to the table below for further information.

<u>*PHYS1210 Advanced Physics 1 and MECH1750 Engineering Materials 1</u>

From 2021 onwards PHYS1210 Advanced Physics 1 (10 units) *(or with Program Convenor approval, PHYS1205 Fundamentals of Engineering Physics (10 units))* was removed from the program and MECH1750 Engineering Materials 1 (10 units) was added as a new core course. If you completed PHYS1210 prior to 2021, it still counts towards your program. You do not have to complete MECH1750 Engineering Materials 1. Students in this situation who ***also*** have an available 10-unit Elective course are permitted to choose MECH1750 as one 10-unit Elective course.

If you did not complete PHYS1210 *(or PHYS1205)* prior to 2021 then you must complete MECH1750.

****MECH3695 Heat Transfer and ENGG2100 Engineering Risk and Uncertainty**

From 2021 onwards MECH3695 Heat Transfer (10 units) was removed from the program and ENGG2100 Engineering Risk and Uncertainty (10 units) was added as a new core course. If you completed MECH3695 prior to 2021, it still counts towards your program. You do not have to complete ENGG2100 Engineering Risk and Uncertainty. Students in this situation who ***also*** have an available 10-unit Elective course are permitted to choose ENGG2100 as one 10-unit Elective course.

If you did not complete MECH3695 prior to 2021 then you must complete ENGG2100.

***** MCHA4000 Mechatronics Design 2, MCHA4100 Mechatronics Systems (20 units) and Final Year Project courses** *(MECH4841A Mechanical Engineering Project A or ELEC4840A Final Year Engineering Project Part A (10 units) and MECH4841B Mechanical Engineering Project B or ELEC4840B Final Year Engineering Project Part B (20 units))*

- From 2021 onwards MCHA4000 Mechatronics Design 2 (10 units) has been removed from the program and MCHA4100 Mechatronics Systems (20 units) has been added as a new core course. To accommodate the additional 10 units in this new core course, the Final Year Project courses have been revised. MECH4841A Mechanical Engineering Project A or ELEC4840A Final Year Engineering Project Part A (10 units) and MECH4841B Mechanical Engineering Project B or ELEC4840B Final Year Engineering Project Part B (20 units) have been removed and ENGG4801A Engineering Final Year Project A (10 units) and ENGG4801B Engineering Final Year Project B (10 units) have been added.
- If you have completed MCHA4000 Mechatronics Design 2, it will still count towards your program. You cannot complete MCHA4100 Mechatronics Systems (20 units).
- **If you have completed MCHA4000 Mechatronics Design 2 but have not yet completed the Final Year Project courses MECH4841A/MECH4841B or ELEC4841A/ELEC4841B** prior to 2021, then you will still need to complete MECH4841A/MECH4841B (30 units) or ELEC4841A/ELEC4841B (30 units).
- **If you have not completed MCHA4000 Mechatronics Design 2 prior to 2021 but have successfully completed the Final Year Project courses MECH4841A/MECH4841B or ELEC4841A/ELEC4841B** then please refer to the table below for further advice.

Has not completed	Have already Completed	Must complete 2021 onwards
MCHA4000 Mechatronics Design 2 (10 units) **and** MECH4841A/ELEC48040A + MECH4841B/ELEC4840B (30 units)	-	MCHA4100 Mechatronics Systems (20 units) **and** ENGG4801A + ENGG4801B (20 units)
MECH4841A Mechanical Engineering Project A ***or*** ELEC4840A Final Year Engineering Project Part A (10 units) **and** MECH4841B Mechanical Engineering Project B ***or***	MCHA4000 Mechatronics Design 2 (10 units)	MECH4841A Mechanical Engineering Project A ***or*** ELEC4840A Final Year Engineering Project Part A (10 units) **and** MECH4841B Mechanical Engineering Project B ***or*** ELEC4840B Final Year Engineering Project Part B (20 units)

ELEC4840B Final Year Engineering Project Part B (20 units)		
MCHA4000 Mechatronics Design 2 (10 units)	MECH4841A Mechanical Engineering Project A ***or*** ELEC4840A Final Year Engineering Project Part A (10 units) **and** MECH4841B Mechanical Engineering Project B ***or*** ELEC4840B Final Year Engineering Project Part B (20 units)	MCHA4000 Mechatronics Design 2 (10 units) Please note: This is a special offering of MCHA4000 and enrolment will be restricted. If you have one 10-unit Elective remaining in your program, then you may take MCHA4100 Mechatronics Systems (20 units). **Students in this situation must contact Program Convenor and your Academic Program Advisor (programadvice@newcastle.edu.au) for further advice.**
MECH4841B Mechanical Engineering Project B ***or*** ELEC4840B Final Year Engineering Project Part B (20 units)	MCHA4000 Mechatronics Design 2 (10 units) **and** MECH4841A Mechanical Engineering Project A ***or*** ELEC4840A Final Year Engineering Project Part A (10 units)	MECH4841B Mechanical Engineering Project B ***or*** ELEC4840B Final Year Engineering Project Part B (20 units)

^ENGG3300 Machine Learning for Engineers and MCHA4400 Vision Based Navigation

From 2021 onwards, ENGG3300 Machine Learning for Engineers and MCHA4400 Vision Based Navigation have been added as new core courses to the program. For students commencing in 2021, their elective courses have been reduced by 20 units.

For students who commenced prior to 2021, you are not required to use your elective courses to take these courses. However, should you have remaining elective courses you are permitted ***and encouraged*** to take ENGG3300 Machine Learning for Engineers and/or MCHA4400 Vision Based Navigation.