

Credit for Massey University Engineering students transferring to Waikato University

Credit is on a paper-to-paper basis; if a student hasn't passed a paper listed, then they wouldn't receive the associated credit.

Terminology:

- Unspecified credit: Massey paper doesn't directly map to a specific Waikato paper but generates 15 points of credit at a particular level of study; often used in conjunction with a waiver.
- Pre-req waiver: Allowed to ignore a specific pre-requisite requirement for a higher level paper; given in consultation with convenor of the higher level paper where the missing pre-requisite won't create significant issues.
- Waiver: Allowing a different paper (or unspecified credit) to count in place of a specific paper in the degree structure.
- Dean's Waiver: This is being applied where any student is being awarded more than 240 points (more than half of their points towards a BE(Hons)).

Changing majors?

Students could change their major (e.g. Mechatronics to Mechanical) when they transfer to Waikato. There will likely be extra papers they'd have to pick up for the new major, the risk of having to do extra papers increases the further they have progressed in their current major.

Students interested in this opportunity are encouraged to contact Janine Williams (janine.williams@waikato.ac.nz), one of our engineering administrators, to explore the possibilities.

Fees discount?

Massey engineering students transferring to a Waikato engineering degree will receive a \$1000 fees discount. This is Waikato acknowledging the stressful situation Massey students have been put in, and that they hadn't planned on relocating to Hamilton.

Students **with less than 120 points left in their** Massey degree?

Due to there being a limit of 360 points of credit (even using a Dean's waiver), students with less than 120 points needed to complete their Massey degree are advised to enrol in relevant Waikato papers as Individual Paper Credits (IPC's) and then get them credited back to their Massey qualification.

Other questions?

Any questions regarding information in this document, or the process of transferring to Waikato, should be sent to Janine Williams (janine.williams@waikato.ac.nz), one of our engineering administrators.

Chemical & Bioprocess Engineering

Link to Waikato's Chemical & Biological Engineering degree:

<https://www.waikato.ac.nz/study/qualifications/bachelor-of-engineering-with-honours/chemical-and-biological-engineering>

Summary

Completed first year:	Credit for all first year papers (120pts), proceeding into normal second year.
Completed second year:	Credit for all first and second year papers (240pts), proceeding into normal third year.
Completed third year:	Credit for all first and second year papers, and a mix of third and fourth year papers (360pts + Dean's waiver), final year would be a mix of third and fourth year papers.
Practicums:	Any completed practicums would be credited as completed Waikato Work Placements (ENGEN271, ENGEN371).

Detail

First year

Massey code	Massey Title	Waikato Credit
123104	Chemistry for Biological Systems	15pts unspecified 100 lvl + waiver to count as first year elective
123105	Chemistry and the Physical World	15pts unspecified 100 lvl + waiver to count as ENGEN112
124104	Physics 1A: Mechanics and Thermodynamics	ENGEN110
160101	Calculus	ENGEN102
160102	Algebra	ENGEN101
228115	Engineering and Technology Principles	ENGEN180
247114	Science and Sustainability for Engineering and Technology	ENGEN170
120101 (elective)	Plant Biology	15pts unspecified 100 lvl + waiver to count as ENGEN103
159100 (elective)	Programming for Engineering and Technology	ENGEN103

Second year

Massey code	Massey Title	Waikato Credit
123201	Chemical Energetics	ENGME221
123271	Molecules to Materials	15pts unspecified 200 lvl + waiver to count as ENGEV241
141212	Food Technology 4: Manufacturing	ENGCB280
228211	Engineering Practice 3: Product Development	ENGEN270
228271	Engineering Mathematics 2	ENGEN201
280201	Industrial Microbiology	BIOMO203 (second year elective)
280271	Heat and Mass – Conservation and Transfer	ENGCB224
280272	Fluid Flow and Particle Technology	ENGCB223

Third year

Massey code	Massey Title	Waikato Credit
228312 (30pts)	Engineering Practice 5: Process Engineering with Constraints	ENGCB380 + ENGEN370
228371	Statistical Modelling for Engineers and Technologists	ENGEN301 + waiver to count as third year elective
280304	Bioseparation and Purification Processes	ENGCB327
280341	Environmental Technology	ENGEV341 (fourth year elective)
280371	Process Engineering Operations	ENGCB324
280371	Reaction Technologies and Process Modelling	ENGCB323
280760	Industrial Refrigeration	15pts unspecified 500 lvl + waiver to count as fourth year elective + pre-req waiver into ENGCB521

Fourth year study plan at Waikato, all papers 15pts unless stated otherwise:

ENGCB521A Advanced Process Control
 ENGCB581A Advanced Process Engineering Design
 ENGME352A Control and Applications
 ENGCB321B Thermal Engineering
 ENGEN570D Engineering and the Profession
 ENGEN582X Honours Research and Development Project (45pts)

Electronics & Computer Engineering

Link to Waikato's Electrical & Electronic Engineering degree:

<https://www.waikato.ac.nz/study/qualifications/bachelor-of-engineering-with-honours/electrical-and-electronic-engineering>

Summary

Completed first year: Credit for seven first year papers (105 points), one first year paper to do: COMPX102. If COMPX102 was done as a summer school paper (January 2024) then could proceed into normal second year.

Completed second year: Credit for seven first year papers, and a mix of second and third year papers (225 points). One first year paper to do: COMPX102 (recommended to do this as the 2024 summer school version). Assuming summer school COMPX102, third year would be a mix of second and third year papers.

Completed third year: Credit for seven first year papers, and a mix of second, third, and fourth year papers (330 points + Dean's waiver). This amount of credit and pre-requisite bottlenecks leads to an extended completion time.

Practicums: Any completed practicums would be credited as completed Waikato Work Placements (ENGEN271, ENGEN371).

Detail

First year

Massey code	Massey Title	Waikato Credit
124104	Physics 1A: Mechanics and Thermodynamics	ENGEN110 + waiver to count as ENGEN112
124105	Physics 1B: Electricity, Waves and Modern Physics	ENGEN111
159100	Programming for Engineering and Technology	ENGEN103
160101	Calculus	ENGEN102
160102	Algebra	ENGEN101
228115	Engineering and Technology Principles	ENGEN180
247114	Science and Sustainability for Engineering and Technology	ENGEN170
Elective	Elective	No credit

Missing first year Waikato paper = COMPX102 (available as Summer School paper in January, strongly recommended to do as the Summer School version, as multiple second year papers require it as a pre-requisite).

Second year

Massey code	Massey Title	Waikato Credit
159270	Hardware-Oriented Computing	COMPX203
228211	Engineering Practice 3: Product Development	ENGEN270
228212	Engineering Practice 4: Materials & Manufacturing	ENGEE281
228271	Engineering Mathematics 2	ENGEN201
281272	Signals and Systems	ENGEE331 (3 rd year of degree)
281281	Analogue Electronic Systems	ENGEE231
281282	Digital Electronic Systems	ENGEE233
297201	Data Wrangling and Machine Learning	COMPX310 (3 rd year of degree)

Third year

Massey code	Massey Title	Waikato Credit
158235	Networks, Security and Privacy	COMPX204 (second year of degree)
218741	Light and Lighting	15pt unspecified 500 lvl + waiver to use as fourth year elective
228311 (30pts)	Engineering Practice 5: Engineering Design with Constraints	ENGEN370
228371	Statistical Modelling for Engineers and Technologists	ENGEN301
281353	Control Engineering	ENGEE358
281384	Embedded Systems Design	COMPX349
297301	Applied Machine Learning and Big Data Processing	15pts unspecified 300 lvl + waiver to use as fourth year elective

Comment: Credit for ENGEE319 Smart Grids and the Internet of Things has not been given. This paper is a non-waivable pre-requisite for the final year ENGEN582 Honours Research and Development Project. As ENGEN582 is a whole year paper, students who have completed their third year at Massey would have their degree completion extended out by a whole year.

Third year study plan at Waikato (assuming COMPX102 has previously been completed as a Summer School paper), all papers 15pts unless stated otherwise:

ENGEE211A Electromagnetics

ENGEE332A Analogue Electronics

ENGEE358A Control Theory and Applications

ENGEN370A Engineering and the Environment

COMPX204B Practical Networking and Cyber Security

COMPX310B Embedded Systems

ENGEE319B Smart Grids and the Internet of Things

1x fourth year elective (needs to be B-trimester for workload balance)

Fourth year study plan at Waikato (assuming third year at Waikato):

ENGEN570D Engineering and the Profession

ENGEN582X Honours Research and Development Project (45pts)

ENGEN301A Engineering Maths and Modelling 3

3x fourth year electives

Fourth year (assuming third year at Massey):

Due to the extended completion time for this scenario, a study plan has not been provided. A study plan can be provided on a case-by-case basis.

Mechatronics

Link to Waikato's Mechatronic Engineering degree:

<https://www.waikato.ac.nz/study/qualifications/bachelor-of-engineering-with-honours/mechatronics-engineering>

Summary

- Completed first year: Credit for all first year papers (120pts), proceeding into normal second year.
- Completed second year: Credit for all first year papers, and credit for a mix of second year and third year papers (240pts), third year would be a mix of second and third year papers.
- Completed third year: Credit for all first and second year papers, and credit for a mix of third and fourth year papers (360pts + Dean's waiver), fourth year would be a mix of third and fourth year papers.
- Practicums: Any completed practicums would be credited as completed Waikato Work Placements (ENGEN271, ENGEN371).

Detail

First year

Massey code	Massey Title	Waikato Credit
124104	Physics 1A: Mechanics and Thermodynamics	ENGEN110
124105	Physics 1B: Electricity, Waves and Modern Physics	ENGEN111
159100	Programming for Engineering and Technology	ENGEN103
160101	Calculus	ENGEN102
160102	Algebra	ENGEN101
228115	Engineering and Technology Principles	ENGEN180
247114	Science and Sustainability for Engineering and Technology	ENGEN170
Elective	Elective	15pts unspecified 100lvl + waiver to count as ENGEN112 + pre-req (of ENGEN112) into ENGMP213

Second year

Massey code	Massey Title	Waikato Credit
159270	Hardware-Oriented Computing	COMPX203
228211	Engineering Practice 3: Product Development	ENGEN270
228212	Engineering Practice 4: Materials & Manufacturing	ENGMT280
228271	Engineering Mathematics 2	ENGEN201
281272	Signals and Systems	ENGEE331 (normally third year elective) + waiver to count as fourth year elective
281281	Analogue Electronic Systems	ENGEE231
281282	Digital Electronic Systems	ENGEE233
282260	Manufacturing Engineering and Computer Aided Design	ENGME380 (third year elective)

Third year

Massey code	Massey Title	Waikato Credit
228311 (30pts)	Engineering Practice 5: Engineering Design with Constraints	ENGEN370 + ENGMT380
228371	Statistical Modelling for Engineers and Technologists	ENGEN301
281353	Control Engineering	ENGEE358
281384	Embedded Systems Design	COMPX349
282371	Mechanics and Materials	ENGMP213 (second year of degree)
282372	Mechanism and Component Design	ENGME251 (second year of degree)
282373	Fluid Mechanics & Thermodynamics	15pts unspecified 300 lvl + waiver to use as 4 th year elective

+ pre-req waiver (of ENGME353) in to ENGEN582

Third year study plan at Waikato, all papers 15pts unless stated otherwise:

ENGMP213A Mechanics of Materials
 ENGEE358A Control Theory and Applications
 ENGEN301A Engineering Maths and Modelling
 ENGEN370A Engineering and the Environment
 COMPX310B Machine Learning
 COMPX349B Embedded Systems
 ENGME251B Dynamics and Vibration
 ENGMT380B Mechatronics Design and Real-Time Systems

Fourth year study plan at Waikato (following third year at Waikato), all papers 15pts unless stated otherwise:

ENGME353A Mechanical and Electrical Machines
 ENGMT558B Robotics
 ENGEN570D Engineering and the Profession
 ENGEN582X Honours Research and Development Project (45pts)
 2x fourth year electives

Fourth year study plan at Waikato (following third year at Massey), all papers 15pts unless stated otherwise:

ENGME353A Mechanical and Electrical Machines

COMPX310B Machine Learning

ENGMT558B Robotics

ENGEN570D Engineering and the Profession

ENGEN582X Honours Research and Development Project (45pts)

1x fourth year electives