

Contacts:

Academic questions: Christopher Hollitt (christopher.hollitt@vuw.ac.nz)

Administrative questions: Caleb Hochstetler (caleb.hochstetler@vuw.ac.nz)

A Brief Overview of VUW's BE(EEEN) Programme

While the Electrical and Electronic Engineering major at VUW has significant overlap with both the Electronics and Computer Engineering and Mechatronic Engineering programmes at Massey, there are some areas of notable difference.

1. The VUW EEEN programme includes an additional focus on electrical material. That is, the generation, storage and use of electrical energy for industrial and domestic uses. Some of the more specialised energy related material in the VUW programme is located in optional RESE coded courses, so transferring Massey students could opt not to take that. However, there is some core electrical material, most notably in EEEN313 Power Electronics and Electrical Machines. All students must also take EEEN401 Applied Electromagnetics and Compliance, which contains material that is not required at Massey.

2. The EEEN programme contains mechatronic material throughout, though it is not as strong a focus as in Massey's dedicated programme. Mechatronic material is included in EEEN201 Mechatronic Design and Prototyping and the optional course EEEN325 Robotics Engineering. The fourth year robotics course EEEN425 is on hiatus in 2024, but we expect it to return for 2025. The two control engineering courses EEEN315 and EEEN415 also contain additional mechatronic material. Safety Critical Systems (SWEN326) covers material important in many modern robotics systems.

Transfer Arrangements

The following section outlines transferring from the Massey BE programmes in Mechatronics or Electronics and Computer Engineering into Victoria's BE in Electrical and Electronic Engineering major. Transfers to other BE majors (Software Engineering or Cybersecurity Engineering) would be possible, but not so straightforward. Any students contemplating such switches would need to make contact to discuss individual circumstances.

Students could also consider switching to the BSc with a major in Electronic and Computer Systems (ELCO). This is a three year programme that allows students to take engineering courses with the increased flexibility of the BSc. Student transferring into that programme after one year of the Massey BE would be able to transfer 120 points, while those after second year would likely be able to transfer more. Again, individual conversations with any such students would be necessary.

For simplicity we have outlined the process for students having completed whole year levels in the Massey regulations. Given the strong overlap between the Electronics and Computer Engineering Engineering and Mechatronics Engineering curricula at Massey, there is no difference in the necessary transfer arrangements.

Completed First Year of the Massey BE

Students having completed the full first year of either the Massey Electronics and Computer Engineering or Mechatronics programmes would be able to transfer to VUW with 120 points of credit and with no particular extra requirements studies in later years.

An average of a B is required of first year BE students at VUW. Transferring students meeting that level could be confirmed as having satisfied the part one requirements of the BE. Students with a somewhat lower grade would still be able to transfer into the BE, but would need to perform at around the B level in the subsequent year, or they would need to transfer to the BSc. Students with lower GPAs could consider transferring directly into the BSc(ELCO).

Completed Second Year of the Massey BE

Students having completed the full second year of either the Massey Electronics and Computer Engineering or Mechatronics programmes would be able to transfer to VUW with 240 points of credit and with no particular subject requirements at third or fourth year at VUW.

On average, a transferring Massey student could expect to have a somewhat stronger product design background than a continuing VUW student, but a slightly lighter background in circuit analysis, analogue electronics and certain mathematical topics (notably multivariable calculus). As a result such students might expect to have a slightly easier time in project related courses (ENGR301, ENGR302), but need to spend some extra time on material in EEEN313 (for example).

Transferring Massey students would be encouraged to take the ethics and communications skills course ENGR201 “Engineering in Context” during their third year, but that would not be required if there were another course that they preferred.

Students beginning at VUW in the third year should expect a programme something like:

Trimester One	Trimester Two
ENGR301 Project Management 1	ENGR302 Project Management 2
EEEN301 Embedded Systems	EEEN313 Electrical Machines
EEEN315 Control Engineering	EEEN320 Signals, Systems and Statistics
EEEN325* Robotic Engineering (Optional)	ENGR201* Engineering in Context (Optional)

* EEEN325 and ENGR201 are optional, so students could study anything else of interest instead.

Completed Third Year of the Massey BE

Broadly speaking, the Massey third year programmes cover most of the core material required in the VUW equivalent. The main exception would be EEEN313 “Power Electronics and Electrical Machines“, which transferring students would need to take during a final VUW year (under an appropriate directed individual studies label). This would be necessary to meet the core technical competencies of the major as established through accreditation.

A student beginning at VUW in the fourth year would have a programme similar to

Trimester One	Trimester Two
ENGR489 Engineering Project	ENGR489 continued
ENGR401 Professional Practice	EEEN401 Electromagnetics and Compliance
ENGR440* Safety Critical Systems (SWEN326)	ENGR440 Electrical Machines (EEEN313)
Option	EEEN415* Advanced Control Engineering

* SWEN326 and EEEN415 are optional courses, but are the VUW courses most likely to be of interest to transferring mechatronics students.