The aim of the Graduate Diploma in Engineering is to create a set of multi-disciplinary technology professionals who have the ability to undertake the high-level design, specification and project management within a specific selection of subject areas. In addition, the Graduate Diploma will provide technology professionals with multi-disciplinary skills and knowledge covering a number of strands including Mechatronics. This range of knowledge will enable graduates to provide optimal design solutions by being able to compare and evaluate the differing alternatives provided by, and within, each discipline area. They will have an understanding of the practical application of the discipline and the technical skills to specify and manage projects.

Graduate Diplomas are intended to provide the equivalent of a major in a subject other than that in which the student has majored for their first degree. The Graduate Diploma in Engineering aims to cater for engineering graduates and working engineering professionals wishing to gain further specialist knowledge in a discipline area. The Graduate Diploma aims to cater for both full and part time students primarily but not exclusively from the Auckland region and abroad, including:

- Engineering professionals currently employed with relevant industry experience wishing to upskill in a further engineering specialisation: broaden their engineering knowledge; update their current knowledge base
- Degree graduates - (domestic and international) wishing to supplement their previous area of study.

**CAREERS:** Work in areas including technical sales, or field services engineering, production manager, or working in a role supporting professional engineering activities including development, design, building operation and/or maintenance of equipment, plants or structures.

**LENGTH:** 1 year full-time (5 days per week).

Part-time students study 1-2 papers per semester. The length will depend on how many courses can be committed to per year. Students attend classes along with full time students (during the day).

**FURTHER STUDY:** Bachelor of Engineering, Postgraduate Diplomas, Masters

**ADMINISTRATION:**

DDI: 09 968 8056
Email: technology.administration@manukau.ac.nz
Postal Address: Private Bag 94006, MANUKAU 2241
Physical Address: P101, P Block, Gate 8, Otara Road, OTARA
Office Hours: Monday to Friday – 7:30am to 5:00pm

Please ensure that all fees are paid or you have applied for a student loan to pay course fees prior to the start of your course. Payment may be made at the Cashiers in L block by cash, cheque, credit card, EFTPOS or by student loan. Student Loans are applied through StudyLink.

**ENTRY:**

Special entry may be granted by the Head of School responsible for the programme to an applicant who does not meet all entry criteria, where the Head of School is satisfied the applicant is capable of undertaking the programme of study.

**OR**

- A 3 year bachelor's degree in an electrical / mechanical engineering discipline (excluding a Mechatronics specialisation)

**OR**

- Equivalent practical, professional or educational experience of an appropriate kind.

Applicants must be physically capable of completing the practical aspects of the programme AND

Applicants must have sufficient competence in the English language to undertake this programme which is taught and assessed in English.

This will be demonstrated by meeting the current NZQA requirements.
Students who graduate from this programme:

On successful completion of the Graduate Diploma in Engineering, students will have the ability to:

- Apply specialised technical knowledge and skills to a specific engineering field
- Apply skills in an organised approach to problem solving
- Display well-developed critical thinking capabilities, including analysing, evaluating and critically reflecting on information, decisions and behaviour to enable strategic thinking and adaptability in a constantly changing global environment
- Recognise, adopt and where necessary, instill in others ethical dimensions inherent in business decision making having particular regard for issues of social responsibility and sustainable practice
- Exercise self-direction and adopt independent working practices, and an ability to foster these in others
- Accept responsibility for the quality of their own work outcomes, and, where applicable, for the quality of others’ work outcomes
- Apply independent learning skills that encourage the regular accessing of new knowledge and information
- Use effective written communication and well-developed inter-personal skills
- Use technology and communication systems effectively.

Students completing the Mechatronics Strand will also be able to:

- Design, specify, plan, organise, and implement a mechatronic system
- Manage and work effectively with a team of domain specialists in the core technologies of Mechanical Systems, Power Systems, Control Systems and Automation Systems
- Integrate and test multi-disciplinary mechatronic projects
- Compare, contrast and evaluate alternative approaches to mechatronic system designs
- Effectively plan the extension and upgrading of existing implementations.

Graduates will also have the appropriate skills and knowledge to pursue further study and professional development opportunities.
## PROGRAMME STRUCTURE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Course Fee (Domestic)</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>527.702</td>
<td>MG7017 Robotics</td>
<td>$779</td>
<td>Nil</td>
</tr>
<tr>
<td>524.708</td>
<td>MG7018 Systems &amp; Control</td>
<td>$779</td>
<td>Nil</td>
</tr>
<tr>
<td>505.705</td>
<td>MG7013 Embedded Systems</td>
<td>$779</td>
<td>Nil</td>
</tr>
<tr>
<td>271.701</td>
<td>MG7024 Fluids Power and Advanced Fluid Mechanics</td>
<td>$779</td>
<td>Nil</td>
</tr>
<tr>
<td>115.719</td>
<td>MG7101 Engineering Development Project</td>
<td>$2338</td>
<td>Nil</td>
</tr>
<tr>
<td>527.613</td>
<td>MG6020 Automation</td>
<td>$810</td>
<td>Nil</td>
</tr>
<tr>
<td>243.620</td>
<td>MG6033 Mechanics of Machines</td>
<td>$779</td>
<td>Nil</td>
</tr>
</tbody>
</table>

Total: $6,264

## TIMETABLE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Lecturer</th>
<th>Activity</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>115.719</td>
<td>MG7101</td>
<td>Nigel Shepstone</td>
<td>Lecture</td>
<td>Monday</td>
<td>1:00 – 2:00</td>
<td>P206</td>
</tr>
<tr>
<td></td>
<td>Engineering Development Project</td>
<td>Note: Students must attend class. Project supervision time to be arranged with the supervisors.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>243.620</td>
<td>MG6003</td>
<td>Thomas Vuong</td>
<td>Lecture</td>
<td>Monday</td>
<td>10:00 – 12:00</td>
<td>P107</td>
</tr>
<tr>
<td></td>
<td>Mechanics of Machines</td>
<td>Note: Students must attend both classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>271.701</td>
<td>MG7024</td>
<td>Thomas Vuong</td>
<td>Lecture</td>
<td>Wednesday</td>
<td>8:00 – 10:00</td>
<td>P107</td>
</tr>
<tr>
<td></td>
<td>Fluids Power and Advanced Fluid Mechanics</td>
<td>Note: Students must attend both classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>524.708</td>
<td>MG7018</td>
<td>Nethra Chigateri</td>
<td>Lecture</td>
<td>Monday</td>
<td>5:00 – 7:00</td>
<td>P212</td>
</tr>
<tr>
<td></td>
<td>Systems and Control</td>
<td>Note: Students must attend both classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>527.613</td>
<td>MG7013</td>
<td>Helen Zhou</td>
<td>Lecture</td>
<td>Thursday</td>
<td>1:00 – 3:00</td>
<td>P110</td>
</tr>
<tr>
<td></td>
<td>Automation</td>
<td>Note: Students must attend both class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The minimum contact hours per week for each course is 4 hours and 20 minutes. For courses currently scheduled for 4 hours, the additional time will be taught at some time through the semester at the lecturers discretion.
2016 SEMESTER DATES

SEMESTER ONE

Commences: Monday 29th February 2016
Ends: Friday 1st July 2016

Easter: Friday 25th March 2016 to Tuesday 29th March 2016 (inclusive)
Mid Semester Break: Monday 18th April 2016 to Friday 29th April 2016 (inclusive)
Anzac Day: Monday 25th April 2016
Queen’s Birthday: Monday 6th June 2016
Exam Dates: Monday 20th June 2016 to Friday 1st July 2016 (inclusive)
Results Released: Friday 15th July 2016

SEMESTER TWO

Commences: Monday 25th July 2016
Ends: Friday 2nd December 2016

Mid Semester Break: Monday 26th September 2016 to Friday 7th October 2016 (inclusive)
Labour Day: Monday 24th October 2016
Exam Dates: Monday 21st November 2016 to Friday 2nd December 2016 (inclusive)
Results Released: Friday 16th December 2016

USEFUL LINKS

Course Outlines:

Learner Portal:
To check your personal information, enrolment, results etc: https://ebs4portal-live.manukau.ac.nz/

eMIT:
https://emit.manukau.ac.nz/webapps/login/

MIT Email:
http://home.manukau.ac.nz/

Library:
http://library.manukau.ac.nz/

Like us on Facebook:
https://www.facebook.com/ManukauEngineering