Welcome to Medical Imaging at the University of Auckland

On behalf of the Medical Imaging academic team, I would like to welcome you to the Medical Imaging learning community at the University of Auckland. Your contributions and online presence are the essence of the vibrant student voices and spirit. Whether you’re a new or returning student, we hope you will enjoy the journey and acquire an ongoing curiosity for learning.

We pride ourselves that we are the only tertiary institution in New Zealand that offers a series of postgraduate registrable programmes that are accredited by the Medical Radiation Technologists Board of New Zealand.

As a team, we strive to:
- promote a safe and conducive learning environment to encourage students to push the knowledge frontier;
- adopt a holistic approach to student learning, encouraging reflective and critical thinking which are key attributes of effective healthcare practitioners;
- challenge you to constantly enhance your clinical practice and better your patient care delivery.

Together, we will provide you with a learning experience that is not only enjoyable, but also one that challenges you to push the professional boundary. I encourage you to make the most of the educational opportunities over the next academic year, embrace the unknown and to excel.

Immerse yourself in this informative Programme handbook. In it, you will find all the gems you need to get started.

“Excellence is the gradual result of always striving to do better.”
– Pat Riley

“The secret of joy in work is contained in one word – excellence. To know how to do something well is to enjoy it.”
– Pearl S Buck

Best wishes,

Associate Professor Jenny Sim PhD
Programme Director Medical Imaging
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What is Medical Imaging?

Medical Imaging Technologists (MITs) can work in a variety of roles within Medical Imaging including general x-ray, CT scanning, mammography, ultrasound, MRI and nuclear medicine.

The study of Medical Imaging involves knowledge of human anatomy, physiology and pathology, positioning and imaging techniques, physics and radiation physics, as well as how to use x-ray equipment alongside the safety issues related to the use of radiation equipment and radioactive materials.

Medical imaging is a patient-centred profession. The role involves acting as an advocate for patients, displaying a high level of professionalism, and functioning as part of the multidisciplinary team. Technologists are required to perform high quality diagnostic imaging procedures and ensure holistic patient care. The role of the Medical Imaging Technologist (MIT) is ever-changing with the introduction of more complex technologies, increased demand on clinical imaging and educational opportunities.

Medical Imaging postgraduate study is available for those working professionally in Medical Imaging departments and also for other interested professionals who wish to broaden their knowledge base of Medical Imaging. Postgraduate qualifications are required for professional registration purposes in the imaging technology sub-specialties of Magnetic Resonance Imaging (MRI), Ultrasound and Nuclear Medicine.

Medical Imaging

Medical Imaging is the practice of obtaining diagnostic images and providing imaging guidance in interventional procedures, using a range of technologies. It is performed by Medical Imaging Technologists, historically known as radiographers. These health practitioners are required to combine scientific skills and knowledge with patient care into their working practice. In New Zealand, these practitioners are required to be registered with the Medical Radiation Technologists Board (MRTB) in order to be eligible to practise clinically and hold an Annual Practising Certificate (APC).

New Zealand Graduates

The New Zealand qualification required for registration as a Medical Imaging Technologist is a Bachelor of Health Science (Medical Imaging), Bachelor of Applied Science (Medical Imaging) or Bachelor of Medical Imaging. From 2019, a Bachelor of Medical Imaging (Honours) degree is being offered at the University of Auckland. This programme is the first undergraduate Medical Imaging programme to be offered by a university in New Zealand and the only degree to offer an honours option in Medical Imaging.

Mammography

Mammographers are qualified MITs specialising in diagnostic and/or BreastScreen Aotearoa (BSA) breast imaging services. This career pathway is also suitable for radiotherapists wishing to enter diagnostic imaging and work within BSA. Mammography is a challenging but rewarding clinical environment to participate in and is highly patient focussed. Mammographers require a sound understanding of the technical aspects of imaging breast anatomy and pathology, whilst addressing the emotional requirements of client care and communication.

Nuclear Medicine

A career in Nuclear Medicine is people orientated and provides exposure to health sciences and computer technology. Compared to other modalities, Nuclear Medicine is unique in that it uses radioactive tracers to provide both structural and physiological information on almost any organ of the body to assist with the diagnosis and treatment of disease.

Ultrasound

Sonographers are health professionals who utilise their knowledge of human anatomy, pathophysiology, technology and physics in order to obtain diagnostic images, which assist in the diagnosis of disease and foetal abnormalities. Sonographers are employed in hospitals, universities and private clinics. They may also run their own business. Sonography is a highly sought after career, with New Zealand trained sonographers in demand around the world. A career in ultrasound requires highly developed people skills, and a commitment to lifelong learning.

Magnetic Resonance Imaging (MRI)

Magnetic Resonance Imaging (MRI) Technologists use very high-field strength magnets to obtain diagnostic images of the human body. These images provide information to assist doctors in diagnosing a wide range of neurological, musculoskeletal and body pathologies. MRI Technologists usually obtain an undergraduate degree in Medical Imaging first, before completing specialist postgraduate study and training in MRI. They should have an interest in physics as well as anatomy and pathology to ensure images of optimal quality are obtained, in addition to good people skills as they have responsibility for the safety and care of patients in the MRI environment. These technologists work primarily in mid-to-large sized hospitals and private radiology departments.
About the Department of Anatomy and Medical Imaging

The Department of Anatomy and Medical Imaging makes a major contribution to general courses in biomedical science teaching and offers specialist courses in the anatomical and imaging sciences. It comprises the disciplines of Anatomy and Medical Imaging and forms part of the School of Medical Sciences of the Faculty of Medical and Health Sciences.

The department also delivers the only postgraduate programmes in New Zealand for the Medical Imaging profession.

The research activities of staff are similarly wide ranging and multidisciplinary, extending from the molecular level, through biological structure, to studies on the whole body.

The department is widely recognised for several outstanding developments, including:

- the initiation of a state-of-the-art Biomedical Imaging Research Unit
- an internationally recognised human brain bank for neuroscience research
- a fully integrated facility that underpins anatomy, radiology and pathology teaching on the human body
- Auckland Medical Research Foundation (AMRF)
- Medical Sciences Learning Centre - Whakaaro Pai
- a broad range of high quality histology techniques Histology Laboratory.

Address
Department of Anatomy and Medical Imaging
Faculty of Medical and Health Sciences
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Medical Imaging Website
www.fmhs.auckland.ac.nz/medical-imaging
The Medical Imaging Team

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Email: k.wiki@auckland.ac.nz

**Loren Katchel**  
Academic Casual Staff (Clinical Specialist)
Our postgraduate programmes

Postgraduate Certificate in Health Sciences (Medical Imaging)

Includes:
- CT pathway
- Image Evaluation pathway

Postgraduate Certificate in Health Sciences (Mammography)

Postgraduate Diploma in Health Sciences (Medical Imaging)

Includes:
- Nuclear Medicine pathway
- Image Evaluation pathway

Postgraduate Diploma in Health Sciences (Magnetic Resonance Imaging)

Postgraduate Diploma in Health Sciences (Ultrasound)

All of these programmes are predominantly comprised of courses selected from Medical Imaging (MEDIMAGE) and/or Clinical Imaging (CLINIMAG). These courses present the state-of-the-art in each discipline, are research-led and supported by the cutting-edge clinical and educational facilities offered in the faculty.

All MEDIMAGE and CLINIMAG courses are worth 1.5 points and are available only by distance learning (with the exception of the on-campus ultrasound course CLINIMAG 709). All of these courses are fully online and delivered via the University’s learning management system CANVAS. They incorporate a range of learning approaches including videos, webpages and digital resources from the Philson library.

A Medical Imaging Orientation workshop is offered at the beginning of each semester for those students new to the University and some courses may include 1-2 day block courses. These are on-campus events and while not compulsory, attendance is highly recommended.

A major feature of postgraduate study is a requirement for self-directed learning. This is achieved through assignments, reading, seminar presentations and online discussions.

Study at postgraduate level means making a commitment to both professional and personal development as well as to new and challenging academic work. Postgraduate study is about investigating, analysing, critically evaluating, reflecting and responding to the challenges posed by practice and the academic environment.

A clinical competency assessment requirement must be successfully completed for the specialty modalities of Mammography, MRI, Nuclear Medicine, and Ultrasound. For the postgraduate diploma programmes, this will enable registration with the Medical Radiation Technologists Board (MRTB) in the appropriate Scope of Practice.

The faculty also offers the following research degrees, which may be of interest to students who have already completed some postgraduate study:

- Master of Health Sciences – MHSc
- Doctor of Philosophy – PhD
Heather Gunn

Heather is a Professional Teaching Fellow in the Medical Imaging programme, providing specialist expertise in the evaluation of radiographic images.

“I’ve taught for approximately 15 years – the last eight at the University of Auckland. In this time I’ve developed and delivered four online postgraduate courses in image evaluation for Medical Imaging Technologists (MITs). I’ve also developed an online Radiology course for the Year 4, 5 and 6 Medical students.

“MITs operate sophisticated medical equipment, producing images that assist in diagnosing an extensive range of pathological disorders. I’m passionate about MITs also being able to identify and evaluate the information provided on the images that they produce. This allows MITs to perform their role at a high cognitive level – improving patient care and offering the professional satisfaction of delivering the best quality service.

“Teaching needs to be engaging and fun, so I design activities that are enjoyable, meaningful and applicable to the clinical setting. I use authentic clinical cases and scenarios in my teaching. These are designed to foster critical thinking whilst developing the specialist knowledge required to produce highly competent MITs.”
Postgraduate Certificate in Health Sciences (Medical Imaging)

**PGCertHSc (Medical Imaging) programme**

The Postgraduate Certificate in Health Sciences (PGCertHSc) in Medical Imaging is designed for Medical Imaging Technologists (MITs) seeking to extend their understanding of Medical Imaging and contribute to the improvement of clinical health services by implementing their knowledge and expertise within Medical Imaging services. Upon completion of the PGCertHSc in Medical Imaging students can progress to the PGDipHSc in Medical Imaging.

Students may choose to follow a CT or Image Evaluation pathway as seen in the tables to the right, or to develop a more personalised pathway to suit their individual needs. Please email the Medical Imaging team to confirm your proposed pathway meets the programme requirements.

The Medical Imaging team
Email: medicalimaging@auckland.ac.nz

Many students complete a postgraduate certificate while looking for a clinical training position in MRI, ultrasound or nuclear medicine. These pathways provide the opportunity for students to demonstrate to potential employers their enthusiasm and aptitude for training in these modalities. In addition, should the student obtain a clinical training position within 5 years of completion of this certificate, the courses may be credited towards their postgraduate diploma programme.

To be eligible for admission to this programme, the student needs to have completed an undergraduate qualification in Medical Imaging.

**Graduate profile**

Graduates of the Postgraduate Certificate in Health Sciences in Medical Imaging will have the core attributes and skills of all certificate graduates and will be able to:

- Apply a scientific body of knowledge relevant to a chosen medical imaging pathway
- Critically evaluate their own practice using an evidence-based approach
- Solve problems through systematic enquiry and critical reflection
- Adapt to a rapidly changing health care environment
- Integrate personal capabilities with professional practice

**For more information:**
www.auckland.ac.nz/medical-imaging

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**Schedule of courses**

**Postgraduate Certificate in Health Sciences in Medical Imaging**

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>S1</th>
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<tbody>
<tr>
<td>MEDIMAGE 701</td>
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<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
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<tr>
<td>At least 15 points from the following courses: MEDIMAGE 707-722, CLINIMAG 701-718</td>
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<td>up to 15 points from courses listed in the Master of Health Sciences Schedule</td>
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**Postgraduate Certificate in Health Sciences in Medical Imaging (CT pathway)**

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<th>Course Code</th>
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<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
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<tr>
<td>MEDIMAGE 710*</td>
<td>CT Imaging Technology</td>
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<tr>
<td>CLINIMAG 717*</td>
<td>CT Clinical Applications</td>
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*Please note that MEDIMAGE 710 and CLINIMAG 717 will not be offered in 2019

**Postgraduate Certificate in Health Sciences in Medical Imaging (Image Evaluation pathway)**

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<th>Course Code</th>
<th>Course Name</th>
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<tr>
<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
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<tr>
<td>MEDIMAGE 711*</td>
<td>MSK Trauma Image Evaluation</td>
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<tr>
<td>MEDIMAGE 712*</td>
<td>MSK Pathology Image Evaluation</td>
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<td>MEDIMAGE 718*</td>
<td>Acute Chest Image Evaluation</td>
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<tr>
<td>MEDIMAGE 719*</td>
<td>Paediatric Image Evaluation</td>
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*Students choose any two of these courses to complete the PGCertHSc (Medical Imaging - Image Evaluation pathway). Please note that the Image Evaluation courses will not be offered in 2019

**Postgraduate Certificate in Health Sciences in Medical Imaging (pre-MRI pathway)**

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<td>MEDIMAGE 701</td>
<td>Imaging Anatomy and Pathology</td>
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<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
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<tr>
<td>MEDIMAGE 714</td>
<td>Fundamentals of Clinical MRI</td>
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<tr>
<td>MEDIMAGE 715</td>
<td>MRI Technology</td>
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**Postgraduate Certificate in Health Sciences in Medical Imaging (pre-ultrasound pathway)**

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<td>MEDIMAGE 701</td>
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<td>MEDIMAGE 716</td>
<td>Fundamentals of Clinical Ultrasound</td>
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<tr>
<td>MEDIMAGE 717</td>
<td>Ultrasound Imaging Technology</td>
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Specialisations

Postgraduate Certificate in Health Sciences (Mammography)

PGCertHSc (Mammography) programme

The Postgraduate Certificate in Health Sciences (Mammography) provides a combination of academic and clinical elements ensuring graduates from this programme meet the mammography competencies as defined by the New Zealand Medical Radiation Technologists Board (MRTB).

Graduates of the Postgraduate Certificate in Health Sciences in Mammography will be able to provide high level expertise in breast imaging and may contribute to national breast screening programmes. They will also be able to progress to further study in Medical Imaging.

For admission to this programme, the student must satisfy the Programme Director that they are employed in an appropriate clinical training position. It is the responsibility of the student to obtain this position. Appropriate supervision of the student must also be provided by a qualified and experienced member of staff who is registered in the Medical Imaging Scope of Practice and holds a current Annual Practising Certificate (APC).

This qualification is a New Zealand Medical Radiation Technologists Board (MRTB) approved pathway for:
- Radiation Therapists to practise in Mammography
- Return to work pathway for Medical Imaging Technologists to return to work in Mammography only (Please note this pathway must be approved by the Board before study is commenced)

Workplace clinical requirements

In order to develop the necessary technical, clinical and diagnostic skills, students must be exposed to a large number and wide range of mammographic examinations. Completion of the training period will demand that the student has experienced a minimum of 300 clinical hours.

Additionally, the minimum total number of mammographic examinations to be recorded is 300, of which no fewer than 200 must be performed without assistance.

Assessment of clinical competency will also occur in the student’s workplace throughout the duration of their enrolment within this programme until the completion of CLINIMAG 708 (Mammographic Clinical Practice). Students will not be able to compensate an inadequate clinical assessment with excellent academic work.

Graduate profile

PGCertHSc in Mammography

Graduates of the Postgraduate Certificate in Health Sciences in Mammography will have the core attributes and skills of all certificate graduates and will also be able to, will be able to:
- Apply a scientific body of knowledge in the field of mammography
- Critically evaluate their own practice using an evidence-based approach
- Solve problems through systematic enquiry and critical reflection
- Adapt to a rapidly changing health care environment
- Integrate personal capabilities with professional practice

Schedule of courses

Postgraduate Certificate in Health Sciences in Mammography

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<th>Course Code</th>
<th>Course Name</th>
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<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
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<tr>
<td>MEDIMAGE 707</td>
<td>Mammographic Technology</td>
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<tr>
<td>CLINIMAG 708</td>
<td>Mammographic Clinical Practice</td>
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<td>15 points from courses listed in the Master of Health Sciences Schedule</td>
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<td>Dependent on student choice</td>
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For more information:

www.fmhs.auckland.ac.nz/mammography

Left: Clinical Supervisor Fathima Okoroigwe working with student Aleisha Rackley at BreastScreen Waitemata Northland
Aleisha Rackley

Postgraduate Certificate in Health Sciences (Mammography) student Aleisha Rackley works as a trainee mammographer at BreastScreen Waitemata Northland.

"During my undergraduate training, I spent time in the mammography department and I really enjoyed the patient contact and challenges involved in mammography. This inspired me to join the BreastScreen team and commence my postgraduate studies.

"The University of Auckland is well recognised in the Medical Imaging profession and it provides up-to-date and relevant papers that work cohesively with my workplace training. The mammography postgraduate qualification is a pre-requisite to doing mammography at BreastScreen, and the academic study complements my clinical experience. The online delivery of the courses, and the support from the university staff, make it easy to balance study and work.

"The support of Clinical Supervisors and Assessors who work in the same workplace is also invaluable. The clinical assessments I need to perform as part of my programme are relevant and helpful for me to gauge my progress. This allows me to discuss areas I need to work on, and use the feedback given effectively. The BreastScreen mammographers provide a lot of advice and assistance in the clinical environment and they teach me how to trouble shoot in practice. They are always willing to help and provide further training in any areas I am struggling with.

"Breast Screen Aotearoa is a programme I am passionate about. The work we are doing is making a difference for women and their families within New Zealand. I hope to use this qualification for a baseline in my mammography practice and further my skills in the coming years."
“I was looking for a good way of getting CPD points and to increase my knowledge of radiography. I was specifically interested in image evaluation papers so I chose to study at the University of Auckland because they provided these in a distance learning environment and I could study while working. The best thing about this programme is the teaching staff. Everyone is friendly, approachable and helpful. They listen to concerns, are always supportive, and they answer all questions no matter how silly the questions feel!

“Doing this study has really improved my job satisfaction; the papers are very relevant to my clinical practice and I have a far greater understanding of what I am looking at on images. As I work in a very small remote hospital, I frequently get asked by the GPs my opinion on images so I wanted to increase my knowledge so I could give a more informed opinion.

“Doing these papers has also increased my confidence to make decisions on my own, such as bringing particular studies to the attention of the GPs when necessary. I am also able to better advocate for my patients either by not doing examinations that are unnecessary, discussing what examinations may be better given the indications, or even adding additional views to ensure the correct diagnosis.

“I am very interested in research, and encouraging other radiographers to get involved. I hope in the future there will be more scope for radiographers to get into leadership areas, using their research skills to improve radiology services and help improve patient outcomes. I definitely intend on continuing further study and am aiming to start my Master’s degree soon and pursuing a PhD after that.”
Postgraduate Diploma in Health Sciences (Medical Imaging)

PGDipHSc (Medical Imaging)

The Postgraduate Diploma in Health Sciences (PGDipHSc) in Medical Imaging is designed for Medical Imaging Technologists (MITs) seeking to extend their understanding of Medical Imaging.

Graduates of the PGDipHSc in Medical Imaging will be prepared to contribute to the improvement of clinical health services offered to the New Zealand public by implementing their knowledge and expertise within Medical Imaging. Graduates will also be able to advance to Masters level study and contribute to the development of Medical Imaging services through research.

Graduate profile

Graduates of the Postgraduate Diploma in Health Sciences in Medical Imaging will have the core attributes and skills of all diploma graduates and graduates of the Postgraduate Certificate in Health Sciences in Medical Imaging. In addition, they will be able to:

- Contribute to the development of advanced practice in medical imaging
- Develop ideas and lead strategies to improve medical imaging practice
- Accept professional responsibilities related to leadership, supervision and management

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Postgraduate Diploma in Health Sciences in Medical Imaging (Image Evaluation pathway)

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<td>MEDIMAGE 701</td>
<td>Imaging Anatomy and Pathology</td>
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<tr>
<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
<td></td>
<td></td>
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<tr>
<td>MEDIMAGE 711</td>
<td>MSK Trauma Image Evaluation</td>
<td></td>
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<tr>
<td>MEDIMAGE 712</td>
<td>MSK Pathology Image Evaluation</td>
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<tr>
<td>MEDIMAGE 718</td>
<td>Acute Chest Image Evaluation</td>
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<tr>
<td>MEDIMAGE 719</td>
<td>Paediatric Image Evaluation</td>
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<tr>
<td>30 points from courses listed in the Master of Health Sciences Schedule</td>
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</table>

For more information:

www.auckland.ac.nz/medical-imaging
Rachel Barrass
Postgraduate Diploma in Health Sciences (Medical Imaging) student Rachel Barrass works as a trainee Nuclear Medicine Technologist at Specialist Radiology & MRI in Auckland.

“I chose to become a Nuclear Medicine Technologist because I liked the varied aspects of Nuclear Medicine as a modality, allowing a good combination of lab and image processing work whilst still having plenty of patient contact.

“The University of Auckland is the only university which provides a Nuclear Medicine postgraduate qualification in New Zealand. With its great reputation I knew it would offer a fantastic learning environment. I have particularly liked that the academic programme is relevant to the clinical setting and that all of the courses aided and complemented my clinical learning.

“All of the lecturers and support staff whom I encountered during my study were extremely helpful, approachable and friendly. I used the Student Services learning advisers for help and advice on improving future assignments. I found this to be extremely helpful and I would recommend other students take advantage of this service. I also couldn’t have asked for a more supportive, knowledgeable Clinical Supervisor.

“I am anticipating that this qualification will enable me to be a confident and competent Nuclear Medicine Technologist. After completing my postgraduate studies I intend to focus on consolidating my existing knowledge base, then maybe consider further study in the future.”
Postgraduate Diploma in Health Sciences (Medical Imaging – Nuclear Medicine pathway)

**PGDipHSc (Medical Imaging) – Nuclear Medicine pathway**

The Postgraduate Diploma in Health Sciences (Medical Imaging – Nuclear Medicine Pathway) provides a combination of academic and clinical elements ensuring graduates from this programme will be eligible for registration with the regulatory body, the New Zealand Medical Radiation Technologists Board (MRTB).

Graduates of the PGDipHSc in Medical Imaging (Nuclear Medicine pathway) will be prepared to contribute to the improvement of clinical health services offered to the New Zealand public by implementing their knowledge and expertise within Medical Imaging, and specifically within Nuclear Medicine. Graduates will also be able to advance to Masters level study and contribute to the development of Medical Imaging services through research.

For admission to this programme, the student must satisfy the Programme Director that they are employed in an appropriate clinical training position. It is the responsibility of the student to obtain this position. Appropriate supervision of the student must also be provided by a qualified and experienced member of staff who is registered in the Nuclear Medicine Scope of Practice and holds a current Annual Practising Certificate (APC).

**Workplace clinical requirements**

In order to develop the necessary technical, clinical and diagnostic skills, trainees must be exposed to a large number and wide range of Nuclear Medicine examinations. By completion of the training period the requirement is that the student has experienced a minimum of 2000 clinical hours.

Additionally, the minimum total number of Nuclear Medicine examinations to be recorded is 1000, of which no fewer than 500 must be performed without assistance. Within the Nuclear Medicine pathway, there is also a requirement for familiarisation and competency of processes and procedures additional to imaging. These are predominantly laboratory based and include a significant focus on quality assurance and radiation safety.

Assessment of clinical competency will also occur in the student’s workplace throughout the duration of their enrolment within this programme. Students will not be able to compensate an inadequate clinical assessment with excellent academic work.

A final clinical competency assessment, Structured Observation and Assessment of Practice (SOAP), must be performed at the student’s workplace and passed. Successful completion of this qualification will enable registration with the MRTB in the Nuclear Medicine Scope of Practice.

**Graduate Profile**

**PGDipHSc in Medical Imaging (Nuclear Medicine pathway)**

Graduates of the Nuclear Medicine pathway in the Postgraduate Diploma in Health Sciences (Medical Imaging) will have the core attributes and skills of all diploma graduates and will also be able to:

- Adapt to a rapidly changing health care environment
- Integrate personal capabilities with professional practice
- Develop ideas and lead strategies to improve Nuclear Medicine practice
- Accept professional responsibilities related to leadership, supervision and management

**Schedule of courses**

**Postgraduate Diploma in Health Sciences in Medical Imaging (Nuclear Medicine pathway)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>S1</th>
<th>S2</th>
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</thead>
<tbody>
<tr>
<td>MEDIMAGE 701</td>
<td>Imaging Anatomy and Pathology</td>
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<td>□</td>
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<tr>
<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>MEDIMAGE 720</td>
<td>Fundamentals of Clinical Nuclear Medicine</td>
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<td>Next offered in 2021</td>
</tr>
<tr>
<td>MEDIMAGE 708</td>
<td>Nuclear Medicine Technology</td>
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<td>CLINIMAG 705</td>
<td>Nuclear Medicine Clinical Applications</td>
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<tr>
<td>CLINIMAG 706</td>
<td>Nuclear Medicine Specialised Clinical Applications</td>
<td></td>
<td>Next offered in 2020</td>
</tr>
<tr>
<td>CLINIMAG 716</td>
<td>Nuclear Medicine Clinical Practice</td>
<td></td>
<td>Next offered in 2020</td>
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<td>15 points from courses listed in the Master of Health Sciences Schedule</td>
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<td>Dependent on student choice</td>
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</tr>
</tbody>
</table>

For more information

[www.fmhs.auckland.ac.nz/nuclear-medicine](http://www.fmhs.auckland.ac.nz/nuclear-medicine)
Moana Tipene-Boyd
Postgraduate Diploma in Health Sciences (MRI) student
Moana Tipene-Boyd works as a trainee MRI Technologist at Northland District Health Board in Whangarei.

“Ever since finishing my undergraduate studies, I knew that MRI was the modality that I wanted to pursue. I chose this modality as I believe MRI is the way of the future. The technology behind it is ever-changing and the amazing images that we produce are getting better and better all the time with advancing technology. It is a very complex imaging modality to grasp, but I am eager to keep learning and further my skill set as an MRT.

“I chose to study at the University of Auckland as the MRI programme offered here is well renowned. I also like that there are support groups there such as MAPAS (Māori and Pacific Admission Scheme) that can help in many aspects of your study such as essay writing.

“The academic programme has been a great help in my clinical training as I find the course work and assessments very relevant to my clinical practice. I would learn something in academic and be shown how to put it to use in the clinical side, or on the other hand be shown something in my clinical training and it be supported and further explored through the academic curriculum.

“The teaching staff are very supportive and offer a safe online learning environment. Distance learning can be very challenging at times, so being comfortable with classmates and lecturers is very important in order to succeed. I found orientation very useful as a first time online distance learner. It helped me to be able to navigate and become familiar with the learning platform that I would use for the duration of my postgraduate studies. I was also able to meet others who were on my course, who we often reach out to if we need support or advice.

“I hope that this qualification will take me around the world (eventually). I also hope that by gaining this qualification, I can inspire other Māori to pursue a career in Medical Imaging and/or further their studies in Medical Imaging.”
Postgraduate Diploma in Health Sciences (Magnetic Resonance Imaging)

PGDipHSc (MRI) programme

The Postgraduate Diploma in Health Sciences (MRI) provides a combination of academic and clinical elements ensuring graduates from this programme will be eligible for registration with the regulatory body, the New Zealand Medical Radiation Technologists Board (MRTB).

Graduates of the PGDipHSc in Magnetic Resonance Imaging will be prepared to contribute to the improvement of clinical health services offered to the New Zealand public by implementing their knowledge and expertise within Medical Imaging, and specifically within MRI. Graduates will also be able to advance to masters level study and contribute to the development of Medical Imaging services through research.

For admission to this programme, the student must satisfy the Programme Director that they are employed in an appropriate clinical training position. It is the responsibility of the student to obtain this position. Appropriate supervision of the student must also be provided by a qualified and experienced member of staff who is registered in the Magnetic Resonance Imaging Scope of Practice and holds a current Annual Practising Certificate (APC).

Workplace clinical requirements

In order to develop the necessary technical, clinical and diagnostic skills, trainees must be exposed to a large number and wide range of MRI examinations. By completion of the training period the requirement is that the student has experienced a minimum of 2000 clinical hours.

Additionally, the minimum total number of MRI examinations to be recorded is 1000, of which no fewer than 500 must be performed without assistance.

Assessment of clinical competency will also occur in the student’s workplace throughout the duration of their enrolment within this programme. Students will not be able to compensate an inadequate clinical assessment with excellent academic work.

A final clinical competency assessment, Structured Observation and Assessment of Practice (SOAP), must be performed at the student’s workplace and passed. Successful completion of this qualification will enable registration with the MRTB in the Magnetic Resonance Imaging Scope of Practice.

Maximise your chances of obtaining an MRI clinical training position

To obtain a training position, you need to approach MRI Team Leaders of the District Health Boards and/or private radiology facilities in your area who provide MRI services to see if any training positions are available. These positions are also often advertised on websites such as:

seek.co.nz
kiwihealthjobs.com

We offer Medical Imaging practitioners the opportunity to enrol in a Postgraduate Certificate in Health Sciences (Medical Imaging) and complete four courses that may then be credited towards the MRI diploma should you succeed in obtaining a training position within five years. This option demonstrates to potential employers your enthusiasm and aptitude! For further information on this pathway, please see pg. 6.

Graduate profile

Graduates of the Postgraduate Diploma in Health Sciences in Magnetic Resonance Imaging will have the core attributes and skills of all diploma graduates will also be able to:

- Apply a scientific body of knowledge in the field of medical resonance imaging
- Contribute to the development of advanced practice in MRI
- Critically evaluate their own practice using an evidence-based approach
- Solve problems through systematic enquiry and critical reflection
- Adapt to a rapidly changing health care environment
- Integrate personal capabilities with professional practice
- Develop ideas and lead strategies to improve medical imaging practice
- Accept professional responsibilities related to leadership, supervision and management

Schedule of courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>S1</th>
<th>S2</th>
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</thead>
<tbody>
<tr>
<td>MEDIMAGE 701</td>
<td>Imaging Anatomy and Pathology</td>
<td></td>
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<tr>
<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
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<td></td>
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<tr>
<td>MEDIMAGE 714</td>
<td>Fundamentals of Clinical MRI*</td>
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</tr>
<tr>
<td>MEDIMAGE 715</td>
<td>MRI Technology</td>
<td></td>
<td></td>
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<tr>
<td>MEDIMAGE 721</td>
<td>MRI Safety (recommended)</td>
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<tr>
<td>CLINIMAG 710</td>
<td>MRI Clinical Applications</td>
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<tr>
<td>CLINIMAG 711</td>
<td>MRI Specialised Clinical Applications</td>
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<tr>
<td>CLINIMAG 712</td>
<td>MRI Clinical Practice</td>
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</tbody>
</table>

*As this course is a pre-requisite for all of the other MRI-specific courses, it is expected that students complete this in the first semester of their programme of study.

For more information

www.fmhs.auckland.ac.nz/MRI
Postgraduate Diploma in Health Sciences (Ultrasound)

PGDipHSc (Ultrasound) programme

The Postgraduate Diploma in Health Sciences (Ultrasound) provides a combination of academic and clinical elements ensuring graduates from this programme will be eligible for registration with the regulatory body, the New Zealand Medical Radiation Technologists Board (MRTB).

Graduates of the PGDipHSc in Ultrasound will be prepared to contribute to the improvement of clinical health services offered to the New Zealand public by implementing their knowledge and expertise within Medical Imaging, and specifically within ultrasound. Graduates will also be able to advance to masters level study and contribute to the development of Medical Imaging services through research.

For admission to this programme, the student must satisfy the Programme Director that they are employed in an appropriate clinical training position. It is the responsibility of the student to obtain this position. Appropriate supervision of the student must also be provided by a qualified and experienced member of staff who is registered in the Ultrasound Scope of Practice and holds a current Annual Practising Certificate (APC).

The Ultrasound programme is designed to be completed part-time and by distance learning, with the exception of CLINIMAG 709 (Principles of Clinical Ultrasound) which requires on-campus attendance.

Workplace clinical requirements

In order to develop the necessary technical, clinical and diagnostic skills, trainees must be exposed to a large number and wide range of Ultrasound examinations. By completion of the training period the requirement is that the student has experienced a minimum of 2000 clinical hours. Additionally, the minimum total number of Ultrasound examinations to be recorded is 2000, of which no fewer than 1000 must be performed without assistance.

Assessment of clinical competency will also occur in the student’s workplace throughout the duration of their enrolment within this programme. Students will not be able to compensate an inadequate clinical assessment with excellent academic work.

A final clinical competency assessment, Structured Observation and Assessment of Practice (SOAP), must be performed at the student’s workplace and passed. Successful completion of this qualification will enable registration with the MRTB in the Ultrasound Scope of Practice.

Maximise your chances of obtaining an ultrasound clinical training position

To obtain a training position, you need to approach Ultrasound Team Leaders of the District Health Boards and/or private radiology facilities in your area who provide ultrasound services to see if any training positions are available. These positions are also often advertised on websites such as seek.co.nz and kiwihealthjobs.com

We offer Medical Imaging practitioners and graduates from other health science related fields such as biomedical science, or an allied health profession such as nursing or physiotherapy, the opportunity to enrol in a Postgraduate Certificate in Health Sciences and complete four courses that may then be credited towards the ultrasound diploma should you succeed in obtaining a training position within five years. This option demonstrates to potential employers your enthusiasm and aptitude! For further information on this pathway, please see pg. 6.

Please note that ultrasound training positions are very highly sought after (particularly in Auckland) and you will need to be very committed to this pathway to succeed.

Graduate Profile

PGDipHSc in Ultrasound

Graduates of the Postgraduate Diploma in Health Sciences in Ultrasound will have the core attributes and skills of all diploma graduates and will also be able to:

- Apply a scientific body of knowledge in the field of ultrasound
- Contribute to the development of advanced practice in ultrasound
- Critically evaluate their own practice using an evidence-based approach,
- Solve problems through systematic enquiry and critical reflection
- Adapt to a rapidly changing health care environment
- Integrate personal capabilities with professional practice
- Develop ideas and lead strategies to improve Medical Imaging practice
- Accept professional responsibilities related to leadership, supervision and management

Schedule of courses

Postgraduate Diploma in Health Sciences in Ultrasound

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>S1</th>
<th>S2</th>
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<tbody>
<tr>
<td>MEDIMAGE 701</td>
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<td>Professional Issues in Medical Imaging</td>
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<tr>
<td>MEDIMAGE 716</td>
<td>Fundamentals of Clinical Ultrasound*</td>
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<td>MEDIMAGE 717</td>
<td>Ultrasound Imaging Technology</td>
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<tr>
<td>CLINIMAG 709</td>
<td>Principles of Clinical Ultrasound OR</td>
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<tr>
<td>CLINIMAG 719</td>
<td>Ultrasound Abdominal Clinical Applications</td>
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<tr>
<td>CLINIMAG 713</td>
<td>Ultrasound Clinical Applications in Obstetrics and Gynaecology</td>
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<tr>
<td>CLINIMAG 715</td>
<td>Ultrasound Clinical Practice</td>
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<tr>
<td>CLINIMAG 720</td>
<td>Ultrasound Specialised Clinical Applications</td>
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</table>

*As this course is a pre-requisite for all of the other ultrasound-specific courses, it is expected that students complete this in the first semester of their programme of study.

For more information

www.fmhs.auckland.ac.nz/ultrasound
Dray Dominguez
Postgraduate Diploma in Health Sciences (Ultrasound) student Dray Dominguez works as a trainee sonographer for the Auckland District Health Board.

“I chose to undertake training in sonography as it is a rapidly growing and dynamic career, forming an integral part of the diagnostic process in all facets of healthcare. There is a significant amount of responsibility and satisfaction in knowing that you as the sonographer play a big role in the diagnosis of the patient. That provides me with a career that is both challenging and greatly rewarding at the same time.

“The ultrasound programme at the University of Auckland offers an introductory 12-week intensive course where, from the very first week of the course, you are given the ultrasound probe and also provided with live demonstrations on volunteers. This gives the students firm learning foundations to start off their careers as sonographers and I enjoyed this very hands-on learning approach.

“The intensive course helped set me up so that I had the necessary tools to be immediately helpful when entering clinical practice. The course also ensured that I had the right mind-set; encouraging a deeper sense of understanding into the profession of ultrasound, not just learning “what a sonographer is seeing” but also what the sonographer should be looking for and the reasons why.

“The complementary online courses which are part of the programme, provide students with the theoretical knowledge required to become successful in clinical practice. Often during my time working, I find myself referring to specific course content in order to help prepare me for a scan I am about to undertake, or to help my understanding when I encounter an unusual or interesting case.

“I have found the teaching staff at the University to be vastly experienced in their respective fields and they are more than willing to offer any help required. Often times, staff go out of their way to ensure that we as students have all the necessary information to be successful throughout our learning.”
MEDIMAGE 707
Mammographic Technology
Provides students with an in-depth understanding of mammographic technology and its application. The course addresses the scientific principles of the modality including image formation, technical parameters, radiation safety specific to mammography, image quality, artefacts and quality assurance. Equipment developments and new and evolving techniques will be examined.

MEDIMAGE 708
Nuclear Medicine Technology
Provides students with an in-depth understanding of Nuclear Medicine technology and its application. The course addresses scientific principles of the modality relating to standard clinical practice including image quality and quality assurance, Single Photon Emission Computed Tomography (SPECT), SPECT/CT, Positron Emission Tomography (PET) and PET/CT.

MEDIMAGE 710
CT Imaging Technology
Provides students with an in-depth understanding of CT technology and its application. The course addresses the scientific principles of the modality including image formation and reconstruction, technical parameters, radiation safety and dose reduction, image quality, artefacts, quality assurance and contrast agents. Equipment developments and new and evolving techniques will be examined.

MEDIMAGE 711
Musculoskeletal Trauma Image Evaluation
Provides students with the knowledge to evaluate radiographs of common musculoskeletal trauma in the clinical setting. Using a systematic method of image interrogation and a critical approach, students will develop the ability to provide a preliminary clinical image evaluation of common musculoskeletal trauma radiographs.

MEDIMAGE 712
Musculoskeletal Pathology Image Evaluation
Provides students with the knowledge to evaluate radiographs of common musculoskeletal pathologies in the clinical setting. Using a systematic method of image interrogation and a critical approach, students will develop the ability to provide a preliminary clinical image evaluation of common musculoskeletal pathology radiographs.

MEDIMAGE 714
Fundamentals of Clinical MRI
Provides a fundamental understanding of MRI technology and applications and addresses scientific principles of the modality including resonance and relaxation, image contrast, spatial encoding and digital image formation. Students will examine components of the clinical environment including MRI equipment, contrast agents, bio-effects and safety. In addition, students will analyse standard imaging protocols of the lumbar spine, knee and brain and normal and abnormal MR imaging appearances of these areas.

MEDIMAGE 715
MRI Technology
Provides an in-depth understanding of MRI technology and its applications and addresses scientific principles of the modality relating to standard clinical practice including pulse sequences, image quality and quality assurance, technical parameters and trade-offs, image optimisation, artefacts, parallel imaging, scanning at 3T, diffusion and MR angiography.

MEDIMAGE 716
Fundamentals of Clinical Ultrasound
Provides a fundamental understanding of ultrasound technology and applications. Students will examine components of the clinical environment including transducer technology, quality assurance, bio-effects and safety. In addition, students will analyse standard imaging techniques and normal and abnormal imaging appearances of the renal tract, pelvis and first trimester of pregnancy.
**MEDIMAGE 717**

**Ultrasound Imaging Technology**  
Provides students with the advanced scientific principles of ultrasound and their application. The course addresses Doppler principles, artefacts and instrumentation, electronic array technology, contrast agents, 3-D and 4-D scanning, equipment developments and new and evolving techniques.  
**Prerequisite:** MEDIMAGE 716

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**MEDIMAGE 718**

**Acute Chest Image Evaluation**  
Provides students with the knowledge to evaluate acute chest radiographs in the clinical setting. Using a systematic method of image interrogation and a critical approach, students will develop the ability to provide a preliminary clinical image evaluation of common acute chest radiographs.

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**MEDIMAGE 719**

**Paediatric Image Evaluation**  
Provides students with the knowledge to evaluate radiographs of common paediatric trauma and pathologies in the clinical setting. Using a systematic method of image interrogation and a critical approach, students will develop the ability to provide a preliminary clinical image evaluation of common paediatric radiographs.

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**MEDIMAGE 720**

**Fundamentals of Clinical Nuclear Medicine**  
Provides a fundamental understanding of Nuclear Medicine technology and applications and addresses scientific principles of the modality including radioactivity, radiation detection and decay, dosimetry and radiopharmacy. Students will examine components of the clinical environment including equipment, laboratory procedures, bio-effects and radiation safety. In addition, students will analyse standard imaging protocols, normal and altered biodistribution and imaging appearances of the skeletal system.

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**MEDIMAGE 721**

**MRI Safety**  
Extends students’ understanding of the underlying physical principles related to a range of MRI safety issues. The course will provide students with the opportunity to explore these safety issues in detail and to apply this knowledge in critically evaluating current policies and practices. New and emerging safety topics will also be examined.

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**CLINIMAG 705**

**Nuclear Medicine Clinical Applications**  
Addresses normal and altered radiopharmaceutical biodistribution appearances, protocol selection and development, and clinical applications associated with the endocrine, respiratory, gastrointestinal, hepatobiliary, genitourinary and central nervous systems.  
**Prerequisite:** MEDIMAGE 720

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**CLINIMAG 706**

**Nuclear Medicine Specialised Clinical Applications**  
Addresses normal and altered radiopharmaceutical biodistribution appearances, and protocol selection and development, associated with cardiovascular, lymphatic and oncological applications in Nuclear Medicine. Students will also examine non-imaging radionuclide investigations and therapeutic applications associated with current and evolving Nuclear Medicine techniques.  
**Prerequisite:** MEDIMAGE 720

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**CLINIMAG 707**

**CT Clinical Practice**  
Addresses normal and abnormal computed tomography (CT) imaging appearances, technique evaluation and adaptation, and includes reflection on clinical practice relating to CT. The course will ensure students develop the knowledge, competencies, skills and attitudes needed to demonstrate mastery in academic and professional capability in CT practice.  
**Prerequisite:** MEDIMAGE 710

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**CLINIMAG 708**

**Mammographic Clinical Practice**  
Addresses normal and abnormal mammographic imaging appearances, technique evaluation and adaptation, and includes reflection on clinical practice relating to mammography. The course will ensure students develop the knowledge, competencies, skills and attitudes needed to demonstrate mastery in academic and professional mammographic practice.  
**Prerequisite:** MEDIMAGE 707

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**CLINIMAG 709**

**Principles of Clinical Ultrasound**  
Provides a fundamental understanding of ultrasound technology and applications. Students will integrate physical principles of ultrasound including transducer technology, quality assurance, bio-effects and safety, and apply these to clinical practice. In addition, they will analyse standard imaging techniques, normal and abnormal imaging appearances of the abdomen, pelvis and lower leg veins and perform examinations of these areas.  
**Corequisite:** MEDIMAGE 716  
**Restriction:** CLINIMAG 719

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**CLINIMAG 710**

**MRI Clinical Applications**  
Addresses normal and abnormal imaging appearances, protocol selection and development, and applications associated with standard neurological, musculoskeletal and body MRI examinations.  
**Prerequisite:** MEDIMAGE 714  
**Restrictions:** CLINIMAG 701, 702

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**CLINIMAG 711**

**MRI Specialised Clinical Applications**  
Addresses complex scientific principles of MRI relevant to a range of specialised applications. Students will examine advanced pulse sequences, and specialised procedures including breast MR, enterography, MR angiography, functional MRI and cardiac MRI. Techniques such as perfusion, spectroscopy, diffusion tensor imaging (DTI) and tractography will be investigated in addition to new and evolving techniques.  
**Prerequisite:** MEDIMAGE 714  
**Restriction:** CLINIMAG 702

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**CLINIMAG 712**

**MRI Clinical Practice**  
Develops the knowledge, competencies, skills and attitudes needed to demonstrate mastery in both academic and professional capability in MRI practice.  
**Prerequisite:** Departmental approval required
CLINIMAG 713
Ultrasound Clinical Applications in Obstetrics & Gynaecology
Addresses normal and abnormal ultrasound imaging appearances, in addition to adaptation of scanning techniques relating to gynaecology and obstetrics ultrasound imaging. Students will develop theoretical knowledge and reflect on competencies, skills and attitudes required for mastery in academic and professional ultrasound practice.
Prerequisite: MEDIMAGE 716
Restriction: CLINIMAG 703

CLINIMAG 715
Ultrasound Clinical Practice
Develops the knowledge, competencies, skills and attitudes needed to demonstrate mastery in both academic and professional capability in ultrasound practice.
Prerequisite: Departmental approval required

CLINIMAG 716
Nuclear Medicine Clinical Practice
Develops the knowledge, competencies, skills and attitudes needed to demonstrate mastery in both academic and professional capability in Nuclear Medicine practice.
Prerequisite: Departmental approval required

CLINIMAG 717
CT Clinical Applications
Addresses normal and abnormal Computed Tomography (CT) imaging appearances, protocol selection and modification, and application to clinical practice. The course will ensure students develop the knowledge, skills and attitudes needed to demonstrate both academic and professional clinical decision making capability in CT practice.
Restriction: CLINIMAG 707
MEDIMAGE 710 is recommended as a prerequisite course, although not required.

CLINIMAG 719
Ultrasound Abdominal Clinical Applications
Addresses normal and abnormal ultrasound imaging appearances, scanning techniques and applications associated with abdominal ultrasound examinations. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical decision making and clinical competence.
Prerequisite: MEDIMAGE 716
Restriction: CLINIMAG 704, 714

CLINIMAG 720
Ultrasound Specialised Clinical Applications
Addresses normal and abnormal ultrasound imaging appearances, scanning techniques and applications associated with musculoskeletal, vascular, small parts and paediatric ultrasound examinations. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical decision making and clinical competence.
Prerequisite: MEDIMAGE 716
Restriction: CLINIMAG 704, 714
# Course schedule 2019

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>S1</th>
<th>S2</th>
<th>Course Coordinator</th>
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<tbody>
<tr>
<td>MEDIMAGE 701</td>
<td>Imaging Anatomy and Pathology</td>
<td></td>
<td></td>
<td>Adrienne Young</td>
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<tr>
<td>MEDIMAGE 702</td>
<td>Professional Issues in Medical Imaging</td>
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<td>Rhonda-Joy Sweeney</td>
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<td>MEDIMAGE 707</td>
<td>Mammographic Technology</td>
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<td>Catherine Lyman</td>
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<td>MEDIMAGE 711</td>
<td>Musculoskeletal Trauma Image Evaluation</td>
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<td>Heather Gunn</td>
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<td>Musculoskeletal Pathology Image Evaluation</td>
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<td>Heather Gunn</td>
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</tr>
<tr>
<td>MEDIMAGE 714</td>
<td>Fundamentals of Clinical MRI</td>
<td></td>
<td></td>
<td>Adrienne Young</td>
</tr>
<tr>
<td>MEDIMAGE 715</td>
<td>MRI Technology</td>
<td></td>
<td></td>
<td>Beau Pontré</td>
</tr>
<tr>
<td>MEDIMAGE 716</td>
<td>Fundamentals of Clinical Ultrasound</td>
<td></td>
<td></td>
<td>Adriana Mijatovic</td>
</tr>
<tr>
<td>MEDIMAGE 717</td>
<td>Ultrasound Imaging Technology</td>
<td></td>
<td></td>
<td>Beau Pontré</td>
</tr>
<tr>
<td>MEDIMAGE 718</td>
<td>Acute Chest Image Evaluation</td>
<td></td>
<td></td>
<td>Heather Gunn</td>
</tr>
<tr>
<td>MEDIMAGE 719</td>
<td>Paediatric Image Evaluation</td>
<td></td>
<td></td>
<td>Heather Gunn</td>
</tr>
<tr>
<td>MEDIMAGE 720</td>
<td>Fundamentals of Clinical Nuclear Medicine</td>
<td></td>
<td></td>
<td>Adrienne Young</td>
</tr>
<tr>
<td>MEDIMAGE 721</td>
<td>MRI Safety</td>
<td></td>
<td></td>
<td>Adrienne Young</td>
</tr>
<tr>
<td>CLINIMAG 705</td>
<td>Nuclear Medicine Clinical Applications</td>
<td></td>
<td></td>
<td>Shelley Park</td>
</tr>
<tr>
<td>CLINIMAG 706</td>
<td>Nuclear Medicine Specialised Clinical Applications</td>
<td></td>
<td></td>
<td>Shelley Park</td>
</tr>
<tr>
<td>CLINIMAG 707</td>
<td>CT Clinical Practice</td>
<td></td>
<td></td>
<td>Catherine Lyman</td>
</tr>
<tr>
<td>CLINIMAG 708</td>
<td>Mammographic Clinical Practice</td>
<td></td>
<td></td>
<td>Rhonda-Joy Sweeney</td>
</tr>
<tr>
<td>CLINIMAG 709</td>
<td>Principles of Clinical Ultrasound</td>
<td></td>
<td></td>
<td>Karen Wallis</td>
</tr>
<tr>
<td>CLINIMAG 710</td>
<td>MRI Clinical Applications</td>
<td></td>
<td></td>
<td>Shelley Park</td>
</tr>
<tr>
<td>CLINIMAG 711</td>
<td>MRI Specialised Clinical Applications</td>
<td></td>
<td></td>
<td>Shelley Park</td>
</tr>
<tr>
<td>CLINIMAG 712</td>
<td>MRI Clinical Practice</td>
<td></td>
<td></td>
<td>Shelley Park</td>
</tr>
<tr>
<td>CLINIMAG 713</td>
<td>Ultrasound Clinical Applications in Obstetrics and Gynaecology</td>
<td></td>
<td></td>
<td>Cathy Sorensen</td>
</tr>
<tr>
<td>CLINIMAG 715</td>
<td>Ultrasound Clinical Practice</td>
<td></td>
<td></td>
<td>Karen Wallis</td>
</tr>
<tr>
<td>CLINIMAG 716</td>
<td>Nuclear Medicine Clinical Practice</td>
<td></td>
<td></td>
<td>Shelley Park</td>
</tr>
<tr>
<td>CLINIMAG 717</td>
<td>CT Clinical Applications</td>
<td></td>
<td></td>
<td>Catherine Lyman</td>
</tr>
<tr>
<td>CLINIMAG 719</td>
<td>Ultrasound Abdominal Clinical Applications</td>
<td></td>
<td></td>
<td>Adriana Mijatovic</td>
</tr>
<tr>
<td>CLINIMAG 720</td>
<td>Ultrasound Specialised Clinical Applications</td>
<td></td>
<td></td>
<td>Cathy Sorensen</td>
</tr>
</tbody>
</table>

This course schedule lists all courses that will be offered in 2019 (subject to sufficient student numbers)
Postgraduate Certificate in Health Sciences

Eligibility

To gain admission to the Mammography or Medical Imaging specialisations, a student needs to have completed an undergraduate degree in Medical Imaging or an equivalent qualification, and hold current registration with the New Zealand Medical Radiation Technologists Board or as a Medical Radiation Technologist in their country of domicile. In addition, for the PGCertHSc (Mammography), the student must have adequate access to clinical work to undertake the programme in circumstances approved by the University of Auckland. Entry to the PGCertHSc (Mammography) programme is restricted to students who have already obtained a relevant clinical training position in a University of Auckland approved Radiology/Medical Imaging/BreastScreen Aotearoa department.

Duration and points value

Postgraduate certificates consist of 60 points of taught courses (usually four courses). Students in full-time work or with family responsibilities are advised to consider completing the programme over two years.

| Points required: | 60 |
| Time to complete: | Within one semester if enrolled full-time, within two years in enrolled part-time |
| Start semester: | One or Two |

This programme has a total enrolment clause of 90 points. This is the maximum number of points you can enrol in (including failed or withdrawn courses) towards this programme.

End of study extension

If further time is required to complete the programme of study, an end of study extension may be requested under specific circumstances.

Please seek advice from fmhs@auckland.ac.nz regarding the application process for withdrawals, late deletions and suspensions of study.

Regulations

Detailed information on admission criteria, programme structure and content, and the schedule of courses can be found in the Calendar Regulations for the Postgraduate Certificate in Health Sciences.

[www.auckland.ac.nz/pgcerthsc-regulations](http://www.auckland.ac.nz/pgcerthsc-regulations)

Students who successfully complete a postgraduate certificate may go on to complete a postgraduate diploma by completing a further 60 points (usually four courses).

Transfer Credits and Reassignments

Transfer credits (credit from another tertiary institution) may not be awarded for a Postgraduate Certificate.

With the approval of the Head of Department, courses may be reassigned to a Postgraduate Certificate. Up to two COPs may be reassigned provided that the enrolment in the postgraduate qualification is no later than three semesters from the initial enrolment in the course(s) reassigned from a COP. This must be applied for at the time of admission to the postgraduate certificate programme.

Please note that all regulations should be read in conjunction with the General Regulations – Postgraduate Certificates.
Postgraduate Diploma in Health Sciences

Postgraduate diplomas can be used to give students a postgraduate qualification in an area of interest or in which they have some professional involvement. The PGDipHSc (MRI), PGDipHSc (Ultrasound) and PGDipHSc (Medical Imaging) programmes offer courses suitable for registered Medical Imaging Technologists who wish to advance their career and/or own professional development. Within the Medical Imaging specialisation, students can choose their own combination of courses to suit their professional needs or follow prescribed pathways in Nuclear Medicine or Image Evaluation.

The PGDipHSc (MRI), PGDipHSc (Ultrasound) and PGDipHSc (Medical Imaging – Nuclear Medicine pathway) programmes provide a route to registration for Magnetic Resonance Technologists, Sonographers and Nuclear Medicine Technologists in New Zealand. These programmes have been accredited by the New Zealand Medical Radiation Technologists Board (MRTB).

Eligibility

To gain admission to the Magnetic Resonance Imaging, Ultrasound or Medical Imaging specialisations a student needs to have completed an undergraduate degree in Medical Imaging or an equivalent qualification, and hold current registration with the New Zealand Medical Radiation Technologists Board or as a Medical Radiation Technologist in their country of domicile. In addition, the student must have adequate access to clinical work to undertake the programme in circumstances approved by the University of Auckland.

Entry to the PGDipHSc (MRI), PGDipHSc (Ultrasound) and PGDipHSc (Medical Imaging – Nuclear Medicine pathway) programmes is restricted to students who have already obtained a relevant clinical training position in a University of Auckland approved Radiology/Medical Imaging department.

Duration and points value

<table>
<thead>
<tr>
<th>Points required:</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to complete:</td>
<td>Within one year if enrolled full-time, within four years if enrolled part-time</td>
</tr>
<tr>
<td>Start semester:</td>
<td>One or Two</td>
</tr>
</tbody>
</table>

This programme has a total enrolment clause of 160 points. This is the maximum number of points you can enrol in (including failed or withdrawn courses) towards this programme. The Postgraduate Diploma may be awarded with Distinction or Merit where a student’s overall grade is sufficiently high.

End of study extension

If further time is required to complete the programme of study, an end of study extension may be requested under specific circumstances. Please seek advice from fmhs@auckland.ac.nz regarding the application process for withdrawals, late deletions and suspensions of study.

Regulations

Detailed information on admission criteria, programme structure and content, and the schedule of courses can be found in the Calendar Regulations for the Postgraduate Diploma in Health Sciences.

www.auckland.ac.nz/pgdiphsc-regulations

Students who successfully complete a University of Auckland Postgraduate Certificate in Health Sciences (or its equivalent) may go on to complete a Postgraduate Diploma in Health Sciences by completing a further 60 points (usually four courses). Students must apply to credit their certificate courses to this diploma - please request this when applying online.

Transfer credits, cross-credits and reassignments

Transfer credits

Transfer credits (credit from another tertiary institution) may be awarded for a maximum of 30 points provided that the enrolment in the post graduate qualification at the University of Auckland is no later than three semesters from the initial enrolment in the course(s) for which credit is to be given. This must be applied for at the time of admission to the postgraduate diploma programme. Transfer credit will not be given for courses from completed qualifications.

Credit from a postgraduate certificate

In the case of a student who has completed a Postgraduate Certificate for which credit is granted to a Postgraduate Diploma, admission to the Postgraduate Diploma must take place within five years of completion of the Postgraduate Certificate.

In addition, the requirements for the postgraduate diploma must be completed within:

<table>
<thead>
<tr>
<th>One semester of admission</th>
<th>If enrolled full time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two years of admission</td>
<td>If enrolled part time</td>
</tr>
</tbody>
</table>

Reassignments

With the approval of the Head of Department, courses may be reassigned to a Postgraduate Diploma. Up to two courses may be reassigned provided that the enrolment in the postgraduate qualification is no later than three semesters from the initial enrolment in the course(s) reassigned from a COP. This must be applied for at the time of admission to the postgraduate diploma programme. Please note that all regulations should be read in conjunction with the General Regulations - Postgraduate Diplomas.
The Degree of Master of Health Sciences – MHSc

Thesis, dissertation or research portfolio?

This is usually decided in consultation with an academic supervisor/adviser as part of the discussion on a suitable topic and research question.

The aim of the research, whether a thesis, dissertation or research portfolio, is to give you the opportunity to research a health issue and the following skills will be learned in the context of your specific project:

- Identifying and accessing the resources necessary to undertake the research
- Reviewing and analysing relevant literature
- Choosing a research methodology appropriate to the problem and scope of the study (depending on whether the project is a dissertation, thesis or portfolio) and rigorously applying that methodology whether it be qualitative, quantitative or conceptual
- Reporting the project by covering purpose, backgrounds, method, findings, conclusions, and recommendations
- Interpreting the findings and identifying the wider implications of the project especially for healthcare in New Zealand
- Identifying and addressing ethical issues

Scope of a thesis

A thesis generally constitutes 120 points and is a formal body of academic research which should display the following:

- It should constitute an investigation designed to analyse a proposition, problem area, or concept.
- It should display a critical approach to the topic.
- Relevant research literature will be reviewed, and will make clear the parameters used for including literature and the search strategy.
- The planning and execution of the research or analysis should be competent.
- The findings of the research or the outcomes of the analysis should be clearly described, supported by appropriate argument, and suitably documented.
- The implications for future research should be discussed.
- The thesis should meet standards of technical accuracy in writing and presentation, readability, debate and analytical thinking.

- Its length may vary, but is expected to be about 40,000 – 50,000 words, including tables, figures and references; appendices can be additional. Length will vary with the nature of the topic, the methodology used and the credit point value.

Scope of a dissertation

A dissertation, at 60 points, may also be a formal academic research work, though with lesser workload and expectation than a thesis. It may also be a critical review or a comprehensive proposal for a research that may involve a pilot study, or analysis of data that has already been collected. On completion of a dissertation students should have demonstrated they understand, can interpret and critique research.

The topic of a dissertation is preferably uncomplicated by requirements such as ethics approval or sample recruitment.

The expectations of a dissertation are:

- The dissertation should comprise a coherent and competently organised document.
- The rationale for the study should be clear, with a soundly constructed research question and objectives identified clearly.
- Relevant research literature will be reviewed, and will make clear the parameters used for including literature and the search strategy.
- Implications of the study and recommendations for theory and/or practice and for future research will be specified.
- The final document will meet standards of technical accuracy in writing and presentation, readability, debate and analytical thinking.
- Its length may vary but is expected to be about 20,000 words in length, including tables, figures and references; appendices are additional.
Lisa Mittendorff
Master of Health Sciences student
Lisa Mittendorff works as a Senior MRI Technologist at Mercy Radiology in Auckland. Lisa’s first involvement with the University of Auckland was as a Clinical Supervisor.

“My Masters research is investigating MRI safety and the relationship between MRI safety education and MRI technologists’ ability to practise in a safe and confident manner. I have been a registered Medical Radiation Technologist for thirty years, of which twenty three years have been spent exclusively in the MRI department. I decided to study this topic because over this period of time I have seen the role of the MRI technologist evolving and there is now the need to undertake a higher level of clinical decision making in daily clinical practice. This research is important because the MRI technologist is at the frontline when it comes to making decisions and having responsibility for the safe care of the patient in the MRI environment.

“I chose to complete my Master’s degree at the University of Auckland because it is a leading university and I was honoured to be invited to continue my studies here. I value the support and encouragement of my supervisors, and the online study environment enables me to continue working while completing my degree which was an essential factor in my decision.

“I anticipate that my research will provide insight into how confident MRI Technologists in New Zealand and Australia currently feel when making clinical decisions related to MRI safety and to identify whether or not current educational opportunities are meeting their needs. If not, I intend to make recommendations for future improvement. On a personal note, I hope that completing this research will provide opportunities to being involved in new areas complementary to my clinical practice, such as teaching or further research.”
Admission
For information regarding application for admission in 2019, students should visit The University of Auckland website: www.auckland.ac.nz/applynow
All students need to upload the official documents listed below with their application:
- Verification of legal name, date of birth and citizenship status: passport, birth certificate or certificate of citizenship. If names have been changed, for example through marriage, such documentation must be provided.
- Verification of admission qualifications: your highest qualification, eg. hospital training certificate, polytechnic diploma, polytechnic degree, or university degree.
- If you hold a Polytechnic diploma or University or Polytechnic degree you must send in an official academic transcript.
- For Mammography, MRI, Nuclear Medicine and Ultrasound students, a completed clinical training position agreement form is required.

Admission with an undergraduate degree
Students with an undergraduate degree may apply for either the Postgraduate Certificate in Health Sciences or Postgraduate Diploma in Health Sciences.
Students must have an undergraduate qualification in Medical Imaging to be admitted to the Medical Imaging and Mammography specialisations, although students with an undergraduate qualification in radiation therapy will also be considered for the Mammography specialisation.
A range of backgrounds including allied health professionals will be considered for admission to the Ultrasound, MRI and Nuclear Medicine specialisations. For more information contact: medicalimaging@auckland.ac.nz

Admission without an undergraduate degree
The University of Auckland may allow MITs to enrol in a postgraduate programme without an undergraduate degree, if they have a health professional qualification and at least two years clinical practice.

Admission with a postgraduate diploma
Students with a Postgraduate Diploma having achieved a grade point average of B or higher may apply for the Master of Health Science.

What’s the difference between admission and enrolment?
They are two separate processes. First you must be admitted to the University (through the admission process) and then you can enrol in the individual courses you want to take.
New students – do this first.
Submit the online Application for Admission: www.auckland.ac.nz/applynow
Once you have met the entry requirements for the programme you have applied for, go online and accept the University’s offer of a place. Within about 30 minutes you should be able to enrol yourself in courses online.

When should I enrol?
Students can enrol from 1 November for the following academic year. New students can enrol once they have gained admission and accepted their offer of a place.
Enrol early and get into the courses you want. You can change your mind after you have enrolled, but be aware of the deadlines for you to make changes to your enrolment.
The deadline for adding and dropping courses is the second Friday of the semester.
If you miss the deadlines, changes to your enrolment become ‘late enrolments’ and ‘withdrawals’. Certain fees or regulations may apply.

Enrolment
Once you have gained admission to the programme of your choice, you should enrol for your courses online for future semesters: www.studentservices.auckland.ac.nz/uoa/
Help and guidance on the enrolment process can be found on: www.auckland.ac.nz/enrolment

Applying for an enrolment concession
For some courses you may be asked to apply for an enrolment concession. Please follow these step-by-step instructions:
1. Sign into Student Services Online.
2. Click on the ‘Enrol’ icon.
3. Click on the “Enrolment Cart” button.
4. Add required courses to your enrolment cart.
5. Click the ‘Validate choice(s)’ button to check for enrolment errors.
6. Review enrolment error messages. You may be able to apply for an enrolment concession for courses showing an enrolment error. Click ‘Return to Enrolment Cart’.
7. Re-select your class(es).
8. Read the Terms and Conditions and then select ‘I Accept’.
9. Click on the green ‘Confirm Enrolment’ button to complete your enrolment request.
10. The Concessions button will be activated if you are able to submit an enrolment concession request for the listed course(s).
11. Click the green ‘Concessions’ button to apply for an enrolment concession. The ‘Apply for a concession’ page will appear, showing the course(s) that can be submitted.
12. Click on the ‘select’ button to change from ‘no’ to ‘yes’ to select a course and apply for an enrolment concession.
13. Select the concession reason that matches your circumstances from the drop-down list.
14. Enter any additional comments to support your application in the space provided (not required).
15. Click the green ‘Submit’ button. Your concession request has been submitted to the faculty for review.

View progress or withdraw an enrolment concession request:
1. Sign into Student Services Online (SSO).
2. From the home page quick link menu, click ‘Concession Requests’.
3. Select the term (semester) of the course your request applies to.

What happens next?
The faculty will review your request, make a decision and let you know the outcome by email. The final status of your request will also show in Student Services Online.
Applying to study at the University of Auckland is a four-step process:
1. Apply for admission to the University
2. Send required documentation to the University of Auckland
3. Accept an Offer of Place
4. Enrol in the course

Go to www.auckland.ac.nz
Click on the red 'Apply Now' button.
Complete the online application for a place in your programme of choice before the closing date.
For assistance, please phone the student helpdesk on: 0800 61 62 65
You will receive an acknowledgement of your application asking you to provide specific verified documentation before your application can be assessed. It will also tell you how to access the University’s Student Services Online system to complete the next steps.

Apply for a place in a programme(s)

Offer
Your application will be assessed and if successful, you will receive an ‘Offer of a place in a programme’. To accept the offer and view your application status online go to: www.studentservices.auckland.ac.nz/ua

Accept
Accept or decline your offer of a place in a programme online.

Enrol in your choice of courses
Enrol in your chosen courses via the online Student Services Online system: www.studentservices.auckland.ac.nz/uaa/so-enrol-in-course

Congratulations! You are now a student at the University of Auckland
How to apply and enrol online

This guide will help you to complete the online Application for Admission to the University of Auckland.

1. To begin your application, please apply online via: www.apply.auckland.ac.nz.

Have you applied or registered before? Have you applied or registered before?
Please use your student ID number, or email address and password to log in. If you do not remember your login details please phone 0800 61 62 63 or email onelogon@auckland.ac.nz

OR

Is this your first time applying with us?
Click, 'Sign up for a new account' below the Password entry field. Proceed through to the 'Register for a new account' page to start entering in your personal details and set up your log in details for future access.

2. To complete your Application for Admission please ensure you have provided all your personal information required and details of your academic history and qualifications.

3. The next step is to complete the Programme Selection. Please choose the following:

Programme type: e.g., Postgrad Diploma/Certificate.

Programme name: e.g., PG Diploma in Health Sciences, PG Certificate in Health Sciences, Certificate of Proficiency.

Major or specialisation: e.g., Medical Imaging, Mammography, MRI or Ultrasound*.

Select Part-time.

Start term: Choose the appropriate term.

Campus: Select 'Unspecified within New Zealand'.

*Note: You must have a Medical Imaging undergraduate qualification to select Medical Imaging. You must have a clinical training position to select Mammography, MRI or Ultrasound. All other students must select Health Science as their specialisation.
1. Go to the next page and complete the Supplementary Information section:

   - Term: Choose the appropriate term.
   - Course name: Select the appropriate course from the drop down list. This is an indication only. This does not mean you are enrolled.
   - Subject: Select the subject you intend to study from the drop down list, e.g., Clinical Imaging or Medical Imaging.
   - Specific questions: Answer all questions.

2. Complete the remainder of the application. Once all sections are complete you will be able to submit your application. On the summary page you can update any sections if necessary.

3. Click on the declaration. Read and make sure you understand the declaration. You must select I agree to be able to submit your application.

4. Click on the Submit button. You will receive an acknowledgement email from us within two working days.

What happens next? See next page.
What happens next?

1. Check your email
The acknowledgement email will be sent to the email address you registered your application with. It will include a list of specific certified documents (and, in some cases, other requirements) necessary to assess your application. This email will also include your Student ID number. Check your application status by signing into your online Application for Admission > Your applications via www.apply.auckland.ac.nz

2. What supporting documents are required?
The following requested documents are required in order for us to accurately assess your application for admission, as you will be entering formal postgraduate level study at the University. You will be required to submit the following:

- Recent (no older than six months), professional, colour passport-size ID photo. You can upload your ID photo from your Application for Admission > Things you need to do list.
- Proof of your academic credentials such as all your official academic transcripts, official programme completion certificates e.g., your completion certificate when you graduated such as a copy of your current MRTB Annual Practice Certificate. You can upload these also from your Application for Admission > Things you need to do list. A certified hard copy of these documents may be required in future for auditing purposes.
- Proof of your identity such as a certified hard copy of the photo page of your passport. NZ and Australian applicants may alternatively provide a certified hard copy of their birth certificate or Citizenship Certificate. If you hold a foreign passport, please ensure you provide certified hard copies of any relevant visas (e.g., NZ Residence Visa). You will not be able to upload these. For more information see ‘How do I submit copies of my identity documents?’ below.

For full details please check your online Application for Admission > Things you need to do via www.apply.auckland.ac.nz

3. Assessment of your application and offer of place
This may take three to four weeks during peak admission periods. You will be notified of the outcome of your application by email. You can check the status of your Application for Admission at any time by signing into your online Application for Admission > Your applications www.apply.auckland.ac.nz

4. Accept your offer of place online
Sign into your Application for Admission at www.apply.auckland.ac.nz and select Accept.

Congratulations! You are now a student at the University of Auckland. All communication from now will be to your university email. You can start enrolling into your course/s.

How do I obtain certified copies of documents?
Staff at the Student Information Centre are able to make hard copies and certify documents for admission purposes. Alternatively, if you are in New Zealand, a Justice of Peace (JP), Solicitor or Notary Public can certify hard copies of your documents. A certified document is a copy of the original endorsed with the statement “Original sighted. Certified true copy”, and where the full details of the certifier are included.

Please ensure that your certified documents reach us as soon as possible to ensure smooth processing of your application.

How do I submit copies of my identity documents?
You can submit hard copies of your identity documents (e.g., passport, birth certificates etc) by post or in person. Our contact details are below:

<table>
<thead>
<tr>
<th>By post:</th>
<th>In person:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications and Admissions The University of Auckland Private Bag 92019 Auckland 1142 New Zealand</td>
<td>AskAuckland Central Alfred Nathan House City Campus Entrance past the General Library from Alfred Street</td>
</tr>
<tr>
<td></td>
<td>Open: Monday to Friday 8am-6pm</td>
</tr>
<tr>
<td></td>
<td>Closed: on public holidays</td>
</tr>
</tbody>
</table>

If you are unable to source and submit any of your academic transcripts that have been requested for assessment, it is important that you notify us as soon as possible, outlining what you are unable to submit and why, by emailing: admission@auckland.ac.nz.
Fees and funding

Fees
Information about fees is listed in the University of Auckland Calendar 2019 and is available at: www.auckland.ac.nz/uo/a/tp-tuition-fees
Under government-to-government reciprocal agreements, students from Australia who are resident in New Zealand enrolled in a graduate programme pay the same fees as New Zealand students. For other international students, the fees vary between faculties. Contact the University of Auckland International Office for further details.

Tuition fees 2019
MEDIMAGE courses
Domestic students: $1,159.35
International students: $5,358.75
CLINIMAG courses
Domestic students: $1,159.35
International students: $9,666.00

University awards, scholarships and grants
The University of Auckland offers postgraduate students a wide range of awards, scholarships, and research grants.

For more information on funding: www.auckland.ac.nz/uoa/cs-postgraduate-research-funding
For information on internal scholarship opportunities, see the University of Auckland Scholarships and Awards website: www.auckland.ac.nz/scholarships or email: scholarships@auckland.ac.nz
For information on a range of external awards, see the Universities NZ website: www.universitiesnz.ac.nz
For a list of upcoming scholarships closing soon, see “Scholarship closing dates”: www.auckland.ac.nz/scholarships-closing

University of Auckland Masters, Honours and PGDip Scholarships
The University of Auckland masters, honours and PGDip scholarships are highly competitive and as such are rewarded to the very highest achieving students.
In the recent past the GPA of successful recipients has been around 7.5 or above (assessed by the Scholarships GPA over the last two years of full-time graded study, or equivalent.). Māori and Pacific Island students are encouraged to also apply for the University of Auckland Māori and Pacific Graduate Scholarships.

Changing programmes
Students enrol in the programme specific to their clinical specialisation. If for any reason a change of programme is required, students must first contact the Medical Imaging Programme Coordinator by email at: medicalimaging@auckland.ac.nz
When a decision to change programmes has been approved, the student needs to apply to do so on Student Services Online (SSO) at the following link:
www.student.services.auckland.ac.nz

Apply to change your programme
To change your programme at the University of Auckland, you simply apply for the new one online. This applies to students who are changing from a postgraduate certificate to postgraduate diploma programme when a clinical training position is secured.
If you receive and accept an offer of place for the new programme, you should withdraw from your current programme by contacting the Faculty student centre.
Website: www.auckland.ac.nz/uo/a/cs-ss-faculty-student-centres

Apply to change your plan
If you want to change your plan (major, minor or specialisation) but not your programme (degree, diploma or certificate), please contact your faculty student centre. This applies to students who are enrolled in the Postgraduate Diploma (Medical Imaging) or a generic postgraduate diploma in Health Sciences and need to change specialisation when securing a clinical training position.

Faculty Student Centre
Ground floor, Building 503, Faculty of Medical and Health Sciences, 85 Park Road, Grafton, Auckland
Phone: +64 9 923 2760
Fax: +64 9 308 2380
Email: fmhs@auckland.ac.nz

Changing course enrolment
Deletions
If you drop (delete) a course by the deadline, we’ll refund your fees for the course and it will not appear on your academic record.

Deadline for Deletions
Semester One courses: 15 March 2019
Semester Two courses: 2 August 2019

Withdrawals
A withdrawal is when you drop a course after the deadline.
If you are considering withdrawing from a course, think this decision through carefully and seek help and advice before proceeding.
If you withdraw from a course, please be aware that:
• You will not receive a refund of fees for the course(s) you withdraw from.
• The course will remain on your academic record as a Withdrawal (W), which is counted as a 0 (zero) when your GPA is calculated.
• The course you withdraw from is counted as a failed course for purposes such as student allowance applications and satisfactory progress regulations.

Deadlines for Withdrawals
Semester One courses: 17 May 2019
Semester Two courses: 4 October 2019

Late Deletion
Late Deletion is available to students who are unable to continue with their study because of exceptional circumstances such as illness, injury or events beyond their control. Applications must include independent evidence to verify the circumstances.
Circumstances that would not normally qualify for late deletion are situations that were known at the point of enrolling, were due to personal choice (e.g., financial circumstances, accepting a job offer) or Grade Point Average concerns.
Please contact the Medical Imaging Programme Coordinator by email:
Email: fmhs@auckland.ac.nz
The Medical Imaging Programme Coordinator can explain how this process may impact on your programme and progression - you will not be required to explain your circumstances.
The University of Auckland resources and facilities

Libraries and Learning Services
Libraries and Learning Services provide resources, workshops and advice to support staff and students in their teaching, learning and research activities. The Philson Library, Grafton Information Commons and Student Learning Advisors all offer resources and advice to help you succeed in your postgraduate study.

Philson Library
Medical and Health Sciences
The Philson Library is located on the first floor, Building 503 on the Grafton Campus. The collection of print and electronic resources supports student learning and research; staff will assist you to find the information you need. There are computers, borrowable laptops, and printer/photocopiers available in the library along with group and individual study spaces.

For full contact details and opening hours go to: www.library.auckland.ac.nz/about-us/libraries/philson

To borrow or access resources from the Philson Library students need a current University ID card. For more information see: www.auckland.ac.nz/uoa/cs-id-cards

Libraries and Learning Services website
www.library.auckland.ac.nz
The Libraries and Learning Services website provides access to various online resources and guides including information about referencing. For specific resources in the Medical & Health Sciences including Medical Imaging go to the Libraries and Learning Services website, select: Subject Guides > Medical & Health Sciences

Flexible Service – distance students
A flexible service is available to students of the Faculty of Medical & Health Sciences. You may request books or journal articles to be sent to you, whether or not they are held in a University of Auckland Library.

For more information: www.library.auckland.ac.nz/flexible-service

Intercampus requests
The Intercampus service allows you to obtain books or photocopies of articles held in other libraries within The University of Auckland, e.g., Tāmaki Library, General Library. Search the Catalogue for the item you require, click on the ‘Request’ tab and fill in the appropriate details. Flexible students should select ‘Flexible – Medical’ as the pickup location (after registration, see Flexible Service above).

Interloan requests
To obtain books or journal articles not held in a University of Auckland Library, fill in the online form: www.library.auckland.ac.nz/interloans

Note: Electronic delivery of articles to students by email can only be made to their University of Auckland email address.

Associate Membership
Access to the library is suspended for students enrolled in a programme of study who are not enrolled in a course. If you would like access, you may pay to be an Associate Member. For more information including fees see: www.library.auckland.ac.nz

Click About > Membership > Associate Membership

Copy and print service
Photocopying and printing services are available in the Philson Library and the Grafton Information Commons. Your University ID card is your photocopying/printing card. An EFTPOS machine for loading money onto an ID card is located in the Grafton Information Commons. The cost is 10 cents per A4 copy, or 20 cents per A4 colour copy.

Grafton Information Commons
Offers more than 80 computers which provide access to a wide range of software and internet resources. In addition there are scanners, printer/photocopiers, a HelpDesk Service, and a range of casual seating.

After hours
Students and staff will need to carry their University ID and access cards at all times to allow entry and internal movement around the Grafton Campus buildings and facilities. However, public access to the café and library will continue to remain available during normal opening hours.

The Atrium main entrance is open Monday to Friday at 7am and its closure depends on the library hours. During weekends it is open according to the library.

Students may be in the building when the library or Information Commons is open or if they have scheduled teaching or tests. Postgraduates may have access outside of these times if permission is obtained from a supervisor, however nobody may be here alone at any time.
University of Auckland Systems

Username and password

All students have a username and password, in addition to your Student ID number. Your username and password allow you to:

- Log in to computers in the Library, Information Commons and computer labs.
- Access Library electronic resources off campus, i.e., databases, e-journals and course readings.
- Access the internet on campus.
- Use the Copy and Print Service (CAPS) on campus.
- Access Student email.
- Access Canvas and Student Services Online (SSO).
- Access to your electronic clinical portfolio.

Student email

Each student is allocated an email address. Your address is your username then the electronic campus email address:

e.g., jbon007@aucklanduni.ac.nz

To access your email from the University of Auckland website, click 'Students', then under the heading 'My tools', click 'Student email'.

www.auckland.ac.nz

Note: All official University communications go to your University (electronic campus) email. Check it regularly or redirect to your preferred email address, e.g. home or work.

Student Services Online

Student Services Online is the University’s academic management system which students access online. Student Services Online allows you to apply for admission to the University, enrol in classes, update your details and much more.

Website: www.studentservices.auckland.ac.nz/uoa

Phone: 0800 61 62 63

Email: studentinfo@auckland.ac.nz

Use Student Services Online to:

- Find out about courses available.
- View your programme requirements.
- Enrol in and delete courses.
- Keep contact details updated.
- View your academic records.
- Apply for graduation.
- Change your programme.

Student Services Online has video tutorials and an online Help function, to guide you through using the various features.

AMRF Medical Sciences Learning Centre - Whakaaro Pai

The AMRF Medical Sciences Learning Centre is a purpose-built and architecturally-designed facility for undergraduate, graduate and postgraduate education in anatomy, radiology and pathology.

The Centre combines the Medical School’s anatomy and pathology museums and contains a wide range of anatomical models and specimens covering all body systems, over 1100 pathology specimens and an extensive online radiology and pathology image database.

Student Advice Hub

We’re here to help!

Unfortunately, life and studies sometimes don’t run as smoothly as you hope. The Student Advice Hub is where you can access AUSA’s advocacy, welfare and representation services when things go wrong. We offer free and confidential support to all students and are independent from the University. Our staff can help you with:

- Academic complaints and study problems
- Debt or funding issues
- Housing and tenancy queries
- Employment issues and much more!

Visit us at the Student Advice Hub in Old Choral Hall at City Campus in rooms G15 or G09. You can also contact us or make an appointment at:

Email: cityhub@ausa.org.nz

Phone: 09 923 7299 or ext: 87294
Support for postgraduate study

Orientation to study for new Medical Imaging students
Each semester the Medical Imaging team in conjunction with the Libraries and Learning Services runs an on-campus orientation workshop for new students. All students who are new to study at the University of Auckland are strongly advised to attend. There is no charge associated with the orientation days.

The Medical Imaging Team sessions include:
• Logistics for getting started
• Online learning tools
• Clinical competency requirements
• Electronic Clinical Portfolios

The Student Learning Services sessions include topics such as:
• Managing your postgraduate studies
• Achieving your academic potential
• Understanding expectations for postgraduate writing
• Reviewing the literature
• Academic integrity

The library sessions include:
• Accessing library resources
• Using the library catalogue
• Finding electronic articles
• Searching databases to find information for your assignments
• Referencing

Two-day Medical Imaging orientation workshops will be held for new students in the first week of each semester.
• Semester 1, 2019: Monday 25 February and Tuesday 26 February
• Semester 2, 2019: Thursday 18 July and Friday 19 July

English Language Enrichment (ELE)
ELE provides opportunities for any student enrolled at the University of Auckland to improve their academic English. At ELE on the City Campus you can use English language resources, get advice about your English, and join language learning groups. Visit whenever you like and for as long as you like.

Language Exchange (LEX) enables you to find others who can help you improve your spoken English, and ELE Online provides language learning materials, including vocabulary, grammar and pronunciation tools to help improve your academic English.

You can access these resources anytime, anywhere with your University username and password.

Email: sls.ele@auckland.ac.nz
Website: www.library.auckland.ac.nz/ele/

Student Learning Services
Student Learning Services (SLS) offers academic development workshops relevant to all phases of undergraduate and postgraduate study. Topics include strategies for succeeding at university, writing academic essays, reading and note-taking, critical thinking, developing academic English skills, research techniques and thesis writing. SLS also has a Māori and Pacific programme: Te Fale Pouāwhina.

Find workshop details and book online at: www.library.auckland.ac.nz/booking

Student Learning Advisers are available for individual or small group advisory sessions. Contact the Student Learning Services Helpdesk to book an advisory session.

Student Learning Services
Building 503 Room 113
Philson Library, 85 Park Road, Grafton
Phone: +64 9 923 9269 or 923 8850
Email: slc@auckland.ac.nz
Website: www.library.auckland.ac.nz/student-learning/

Student Disability Services
The Learning Disabilities Programme provides learning assessments, recommendations for special exam conditions and academic development opportunities to University of Auckland students.

The Learning Disabilities (LD) Programme supports students with specific learning and/or other invisible disabilities such as: dyslexia, dyspraxia, Autism Spectrum Disorder, attention deficit disorders and mental health conditions.

Website: www.auckland.ac.nz/disability-services

Student representation
Postgraduate Medical Imaging students are represented on the Medical Imaging Postgraduate Board of Studies. Students are encouraged to nominate who they would like to represent them.

The 2019 Medical Imaging student representative is Sophie Peryman. If you have any queries or issues that you would like presented to the Medical Imaging team or Board of Studies on your behalf, please email Sophie.

Sophie Peryman
Email: sper123@aucklanduni.ac.nz

Academic integrity course
As a student of the University of Auckland, you are a member of a distinguished academic community. The University is committed to providing all the support you need to understand what working to a high level of academic integrity means for you. University-level work requires that you acknowledge all sources according to the referencing requirements of your subject.

The University of Auckland offers an Academic Integrity course to help you understand the high level of academic integrity expected of you. All students new to the University are required to complete the course.

For more information: www.auckland.ac.nz/academic-integrity
Supporting websites

The University home page
Access to a computer is essential for all postgraduate students. So is knowing your way around the University’s website. Take some time to familiarise yourself with it at:
www.auckland.ac.nz

Students
If you click on Students in the top navigation bar, you can access most of the generic information you will need.

Our Faculty of Medical and Health Sciences website
www.fmhs.auckland.ac.nz

Important information for postgraduate students
Click Study with us on the green menu bar, for general information about studying at the University of Auckland.
For details of individual MEDIMAGE and CLINIMAG courses including learning outcomes, assessment overview and required textbooks where applicable:
www.fmhs.auckland.ac.nz/pg-all-courses

The Medical Imaging discipline website
www.auckland.ac.nz/medical-imaging
Go to our website for more information about our programmes and the Medical Imaging team.

Dr Beau Pontré, leading a physics tutorial
It is the student's responsibility to check that the final programme complies with University Regulations. The Faculty of Medical & Health Sciences Student Centre is the final authority on all programme regulations.

See the Faculty of Medical & Health Sciences Student Centre for degree planning advice.

Pathway endorsed by:

(Student's name and iD number)

A postgraduate pathway for:

Postgraduate Certificate in Health Sciences (PGCertHSc)
60pts – 2 years part time

Postgraduate Diploma in Health Sciences (PGDipHSc)
120pts – 4 years part time

Master of Health Sciences (MHSc)
120pts + PGDipHSc* 

Combine to make 60 points

Combine to make 120 points

Option 1
Research Masters
Thesis (120 pts)
or
research Portfolio (120 pts)

Option 2
Research Masters
research Portfolio (90 pts)
and
30 pts of courses

Option 3
60 pts of courses
and
30 pts of courses

* B grade average (gPa5) required to progress to Masters

If completing a Master of Health Sciences with a Thesis or research Portfolio, then a research course is a prerequisite.

For more information about courses and course dates, see our website:
www.fmhs.auckland.ac.nz/medical-imaging

For more information about enrolment contact the Faculty Student Centre:
fmsstudentcentre@auckland.ac.nz

For individual advice on course selection email the Faculty of Health Sciences Student Centre. medicalimaging@auckland.ac.nz

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Graduation

When you have successfully completed the requirements for a postgraduate diploma or masters programme, you are invited to apply to graduate online. There are two graduations each year, one in autumn in early May, and one in spring in November. More information:
www.auckland.ac.nz/graduation

Certificate completion

Students do not attend a graduation ceremony on completion of a postgraduate certificate – the certificate needs to be requested from Graduation Office, City Campus, by emailing a completed AS-39B form to:
Email: graduation@auckland.ac.nz

Right: Medical Imaging student graduation, Autumn 2018
Below: Medical Imaging student graduation, Spring 2018
**Important dates**

### Closing date for applications 2019*

<table>
<thead>
<tr>
<th>Semester 1 admission</th>
<th>17 January 2019</th>
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</thead>
<tbody>
<tr>
<td>Semester 2 admission</td>
<td>4 July 2019</td>
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</tbody>
</table>

*Late applications will be accepted on a case-by-case basis

### Semester One 2019 (Semester code: 1193)

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation Welcome</td>
<td>In week beginning 25 February 2019</td>
</tr>
<tr>
<td>Semester One begins</td>
<td>Monday 4 March 2019</td>
</tr>
<tr>
<td>Mid-semester break/Easter</td>
<td>Monday 15 April - Saturday 27 April 2019</td>
</tr>
<tr>
<td>ANZAC Day</td>
<td>Thursday 25 April 2019</td>
</tr>
<tr>
<td>Graduation</td>
<td>Monday 29 April, Wednesday 1 May, Friday 3 May 2019</td>
</tr>
<tr>
<td>Queen's Birthday</td>
<td>Monday 3 June 2019</td>
</tr>
<tr>
<td>Lectures end</td>
<td>Friday 7 June 2019</td>
</tr>
<tr>
<td>Study break</td>
<td>Saturday 8 June - Wednesday 12 June 2019</td>
</tr>
<tr>
<td>Exams</td>
<td>Thursday 13 June - Monday 1 July 2019</td>
</tr>
<tr>
<td>Semester One ends</td>
<td>Monday 1 July 2019</td>
</tr>
<tr>
<td><strong>Inter-semester break</strong></td>
<td>Tuesday 2 July - Saturday 20 July 2019</td>
</tr>
</tbody>
</table>

### Semester Two 2019 (Semester code: 1195)

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation Welcome</td>
<td>In week beginning 15 July 2019</td>
</tr>
<tr>
<td>Semester Two begins</td>
<td>Monday 22 July 2019</td>
</tr>
<tr>
<td>Courses and Careers Day</td>
<td>Saturday 31 August 2019</td>
</tr>
<tr>
<td>Mid-semester break</td>
<td>Monday 2 September - Saturday 14 September 2019</td>
</tr>
<tr>
<td>Lectures end</td>
<td>Friday 25 October 2019</td>
</tr>
<tr>
<td>Study break</td>
<td>Saturday 26 October - Wednesday 30 October 2019</td>
</tr>
<tr>
<td>Labour Day</td>
<td>Monday 28 October 2019</td>
</tr>
<tr>
<td>Exams</td>
<td>Thursday 31 October - Monday 18 November 2019</td>
</tr>
<tr>
<td>Semester Two ends</td>
<td>Monday 18 November 2019</td>
</tr>
</tbody>
</table>