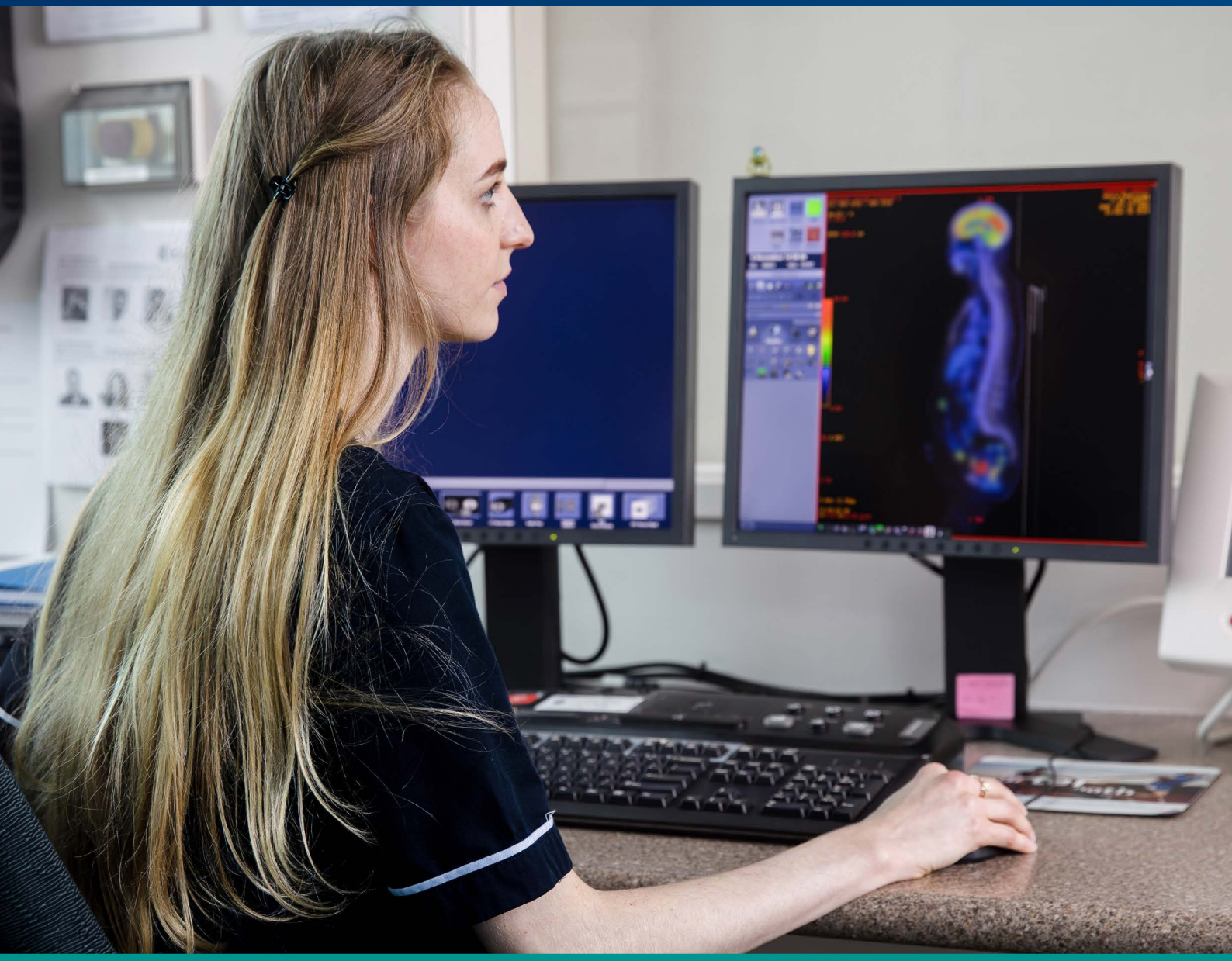
UNIVERSITY OF AUCKLAND
Waipapa Taumata Rau

MEDICAL IMAGING
POSTGRADUATE HANDBOOK 2025



#1 UNIVERSITY IN NEW ZEALAND[1]

#1 GRADUATE EMPLOYABILITY[2]

TOP 50 IN THE WORLD FOR 8 SUBJECTS[3]

Nau mai, haere mai

Welcome to Medical Imaging at the University of Auckland

Medical Imaging is a dynamic and growing profession globally, and the need for advanced imaging services is constantly increasing. Among the areas at the forefront of these developments are imaging equipment capabilities and intelligent medical imaging analytics. These developments ensure that the medical imaging profession remains a modern and enterprising profession that is congruent with technological advancements, patient care and safety, service delivery, and research.

These developments also bring about changes that are essential in the growth of the profession including: 1) a shift in practice owning to technological advancements, 2) skills mix and role changes that require practitioners to be adaptable while welcoming new knowledge, skills, and practice, 3) changing service needs and demands due to changing demographics, rise in chronic conditions, considerations for carbon emissions and the need for early diagnosis, which is essential for a favourable prognosis.

Our teaching staff are closely involved in new developments in the industry and this helps to ensure our programmes remain relevant whilst also developing new programmes that align with the industry's demands. Our recent developments include the following:

- The introduction of New Zealand's first Cardiac Ultrasound training programme (PGDipHSc (Cardiac Ultrasound)) accredited by the Medical Radiation Technologists Board (MRTB).
- The introduction of a new Positron Emission Tomography-Computed Tomography (PGCertHSc (PET-CT)) to address the growing need for the skills in this area due to the increase in PET-CT practices in New Zealand.
- A new six-week Ultrasound Intensive Course.

Whether you are a recent graduate looking to expand your knowledge or specialise or are a professional already working in the field, exploring postgraduate study in Medical Imaging means you will learn how to use the latest technology and develop skills that support leading discoveries in patient diagnosis and treatment.

You can choose from Postgraduate Diplomas with specialisations in Medical Imaging, MRI, Nuclear Medicine, Ultrasound and Cardiac Ultrasound as well as Postgraduate Certificates in Medical Imaging, PET-CT and Mammography.

Graduates of our MRI, Nuclear Medicine, Ultrasound and Cardiac Ultrasound specialisations are eligible for registration with the regulatory body, the MRTB and can practise clinically anywhere in New Zealand and internationally.

Our programmes are not only recognised for registration with the MRTB, but equip graduates with the knowledge and skills needed to be able to adapt to advancements in the discipline and offer exciting career opportunities. Programmes are designed to enhance critical thinking and reflective practice, which have been highlighted as fundamental skills required to practise in Medical Imaging.

We are thrilled to invite you to join us as we advance the profession and enhance service delivery in New Zealand. Our Medical Imaging team are here to ensure you have an excellent experience with your studies and achieve success.

DOCTOR SIBUSISO MDLETSHE
Medical Imaging
Postgraduate Programme Director
Mātauranga Hauora |
Faculty of Medical and Health Sciences
Waipapa Taumata Rau | University of Auckland

Cover attributions *[1]Times Higher Education 2025; and 65th worldwide QS World University Rankings 2025, [2]QS World Rankings Graduate Employability, number one in NZ and 68th Worldwide in 2023, [3]QS World Rankings by Subject 2024*

Contents

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Our postgraduate programmes

Intended primarily for medical imaging technologists, our postgraduate medical imaging programmes are designed to produce graduates who will add to the clinical excellence of New Zealand's health sector and the research strengths of our country.

Our goal is to provide graduates with the knowledge, skills and attributes to enable them to meet the increasing levels of professional responsibility created by a rapidly evolving technological, clinical field.

Our focus is not just on acquiring new knowledge as an essential part of postgraduate education; we also see the development of clinical competence, critical thinking and reflective learning as crucial attributes for modern healthcare practitioners.

We have a range of postgraduate medical imaging programmes available – from postgraduate certificates and diplomas, through to masters and doctoral degrees for students who have already completed a form of postgraduate study.

You'll find a full description of the following programmes in this handbook:

- Postgraduate Certificate in Health Sciences (Mammography)
- Postgraduate Certificate in Health Sciences (Medical Imaging)
- Postgraduate Certificate in Health Sciences (PET-CT)
- Postgraduate Diploma in Health Sciences (Cardiac Ultrasound)
- Postgraduate Diploma in Health Sciences (Magnetic Resonance Imaging)
- Postgraduate Diploma in Health Sciences (Medical Imaging)
- Postgraduate Diploma in Health Sciences (Nuclear Medicine)
- Postgraduate Diploma in Health Sciences (Ultrasound)

We also offer the following research degrees, which may be of interest to students who have already completed some form of postgraduate study:

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

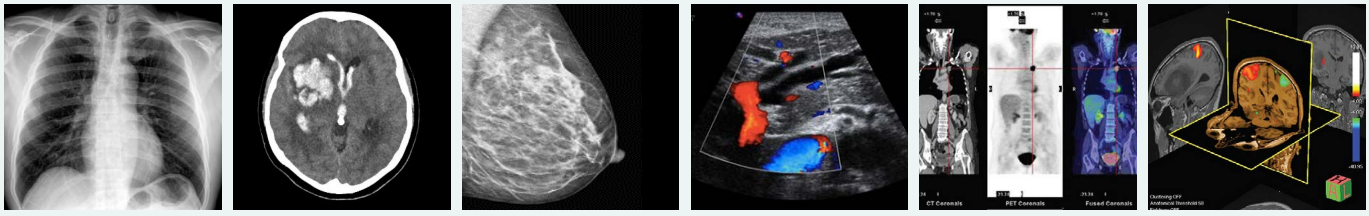
The strengths of our programmes:

- Our teaching is research-led and informed by the latest education theories.
- The majority of our courses are delivered entirely online, so they can be completed from anywhere in the world, at any time, enabling flexibility to suit students' individual needs.
- Students may progress from individual certificates of proficiency through to postgraduate certificate, postgraduate diploma, masters and doctoral qualifications.
- Our Cardiac ultrasound, MRI, Nuclear Medicine and Ultrasound programmes are accredited by the New Zealand Medical Radiation Technologists Board (MRTB) and provide a route to registration.

A major feature of postgraduate study is a requirement for self-directed learning. This is achieved through assignments, readings, 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 practise and the academic environment.

All of our postgraduate 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.

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



Medical Imaging

This programme is designed for medical imaging technologists 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.

Postgraduate Certificate in Health Sciences in Medical Imaging

PGCertHSc (Medical Imaging)

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 five years of completing this certificate, some courses may be credited towards their postgraduate diploma programme.

To be eligible for entry into this programme, the student needs to have completed an undergraduate qualification in medical imaging.

Schedule of courses 2025

Course Code	Course Name	S1	S2
MEDIMAGE 701	Imaging Anatomy and Pathology		▪
MEDIMAGE 702	Professional Issues in Medical Imaging	▪	▪
At least 15 points from the following courses: MEDIMAGE 707-729, CLINIMAG 706-725		Dependent on student choice	
Up to 15 points from courses listed in the Master of Health Sciences Schedule			

Postgraduate Diploma in Health Sciences in Medical Imaging

PGDipHSc (Medical Imaging)

This programme is designed for medical imaging technologists seeking to extend their understanding of medical imaging.
The PGDipHSc (Medical Imaging) will prepare our graduates to contribute to improving clinical health services for New Zealanders by implementing their medical imaging knowledge and expertise. Graduates will also be able to advance to masters level study and contribute to the development of medical imaging services through research.

Please note that this programme does not lead to registration with the Medical Radiation Technologists Board (MRTB).

Schedule of courses 2025

Course Code	Course Name	S1	S2
MEDIMAGE 701	Imaging Anatomy and Pathology		▪
MEDIMAGE 702	Professional Issues in Medical Imaging	▪	▪
60 points from MEDIMAGE 707-729, CLINIMAG 706-725		Dependent on student choice	
30 points from courses listed in the Master of Health Sciences Schedule		Dependent on student choice	

Please email the Postgraduate Academic Coordinator to confirm your proposed pathway meets the programme requirements.

Adrienne Young
Postgraduate Academic Coordinator

Email: medicalimaging@auckland.ac.nz

Find out more

auckland.ac.nz/medical-imaging

Cardiac Ultrasound

This programme 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).

Postgraduate Diploma in Health Sciences in Cardiac Ultrasound

PGDipHSc (Cardiac Ultrasound)

By pursuing the PGDipHSc (Cardiac Ultrasound), our students will be equipped to implement their ultrasound knowledge and expertise to improve clinical health services for New Zealanders. Graduates will also be able to advance to master's level study and contribute to the development of medical imaging services through research.

To satisfy admission into this programme, the student must be employed in an appropriate clinical training position. This is a paid position in a cardiac ultrasound department in New Zealand and it is the responsibility of the student to find and secure 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 (specifically cardiac ultrasound) and holds a current Annual Practising Certificate (APC).

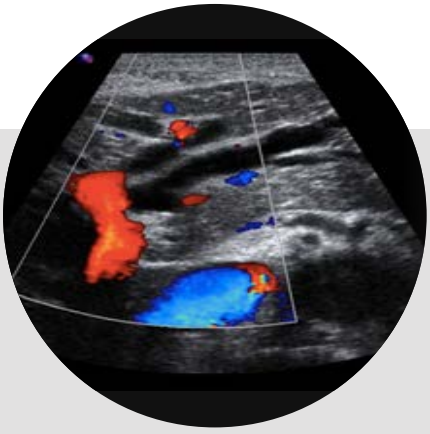
The Cardiac Ultrasound programme is designed to be completed part-time and by distance learning, with the exception of some compulsory on-campus attendance events.

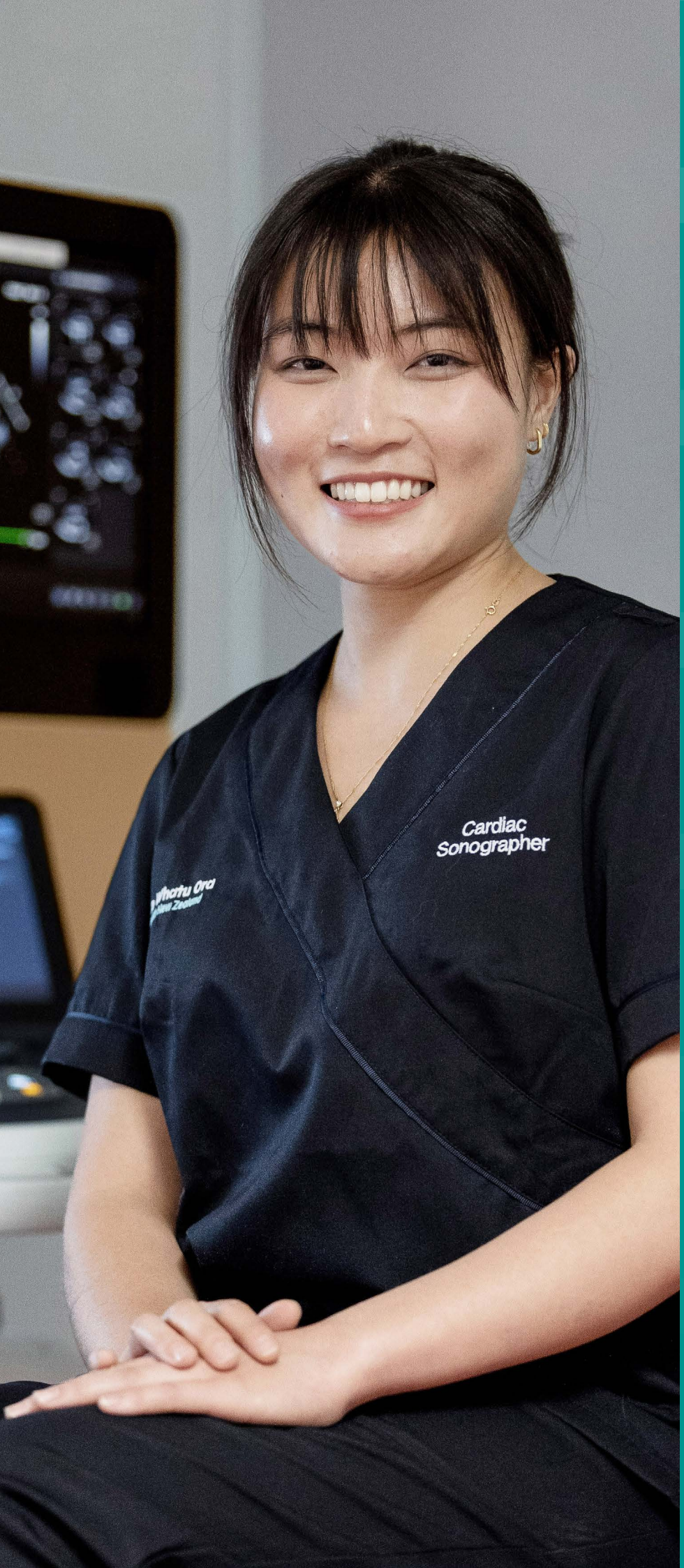
For those interested in pursuing a career in ultrasound and who are not medical imaging technologists, please contact the Medical Imaging team at **medicalimaging@auckland.ac.nz** to determine your eligibility.

Schedule of courses 2025

Course Code	Course Name	S1	S2
MEDIMAGE 702	Professional Issues in Medical Imaging	▪	▪
MEDIMAGE 717	Ultrasound Imaging Technology	▪	▪
MEDIMAGE 722	Introduction to Cardiac Ultrasound	▪	
MEDIMAGE 724	Ultrasound Assessment of Heart Disease 1		▪
MEDIMAGE 726	Ultrasound Assessment of Heart Disease 2	▪	
MEDIMAGE 727	Introduction to Congenital Heart Disease	▪	
MEDIMAGE 728	Advanced Concepts in Cardiac Ultrasound		▪
CLINIMAG 724	Cardiac Ultrasound Clinical Practice		▪

"Diagnostic medical imaging is currently a fast-developing area of medical research that is filled with potential"





"I want to make a positive contribution during my career. This entails working in an environment driven by compassion, led with respect and where learning is valued. I believe medical imaging embodies these qualities and goals.

"At work, I am inspired daily by the diverse community and the passion of my colleagues. This has encouraged me to further develop myself as a medical imaging technologist through undertaking postgraduate studies in cardiac ultrasound.

"The University of Auckland is currently the only university that is offering a postgraduate degree in cardiac sonography in New Zealand. I appreciate the practicality of this programme as what I learn in the coursework always has real life applications. At the same time, the programme also encourages me to extract my own learnings from reflecting on my clinical practice.

"The coursework is both interesting and directly applicable to our clinical practice. It covers the fundamental theories and at the same time discusses new developments in the field of medical imaging which means we can directly apply our coursework to our ever-evolving clinical practice. The assessments encourage students to explore their own areas of interest within the field.

"This qualification will allow me to be a registered cardiac sonographer with the Medical Radiation Technologists Board. Obtaining this qualification will allow me to work in cardiac centres both within and outside of New Zealand.

"In the future, I am greatly interested in further study and research. Diagnostic medical imaging is currently a fast-developing area of medical research that is filled with potential."

Cindy Cao

Postgraduate Diploma in Health Sciences student Cindy Cao works as a trainee cardiac sonographer at Te Toka Tumai (Auckland Hospital).

"I chose to study MRI because it is the gold standard of all imaging technologies, and it keeps on evolving to better imaging. This has been my main goal since qualifying ten years ago as a medical imaging technologist.

"I gravitated towards The University of Auckland knowing that it is the leading University of New Zealand and that the diploma in MRI is internationally recognised. The online academic programme fits well with my clinical training, rostered shiftwork and living in Whangārei. I am able to stay close to my whānau and complete the course.

"I would promote a career in MRI scanning to our younger generations. Our Māori ancestors sailed from Hawaiiki and found Aotearoa with their technology, innovation and vision. So, I hope to be a beacon for Māori and Pasifika and inspire them to come and take a leap into medical imaging because I enjoy what I do, and others might too.

"I found that the MAPAS (Māori and Pacific Admission Scheme) programme provided the extra support that links to other students or tutors who are like-minded and from similar cultural backgrounds. I signed up for MAPAS to help me refocus and build that motivation again when times were hard to start studying again. Regardless, MAPAS made me feel like the University was a safe space to learn, share inspiration, and be confident when overcoming mistakes.

"In the future, I hope to work up to senior roles in the department, learn cardiac MRI, or become a tutor. I know the opportunities are bountiful in this career."

Serena-Mei Wihongi

Postgraduate Diploma in Health Sciences (MRI) student Serena-Mei Wihongi works as a trainee MRI technologist at Whangārei Hospital – Te Whatu Ora - Te Tai Tokerau District.

auckland.ac.nz/pg/mri

Magnetic Resonance Imaging (MRI)

This programme 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).

Postgraduate Diploma in Health Sciences in Magnetic Resonance

PGDipHSc (Magnetic Resonance Imaging)

Graduates of the PGDipHSc (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, specifically within MRI. Graduates will also be able to advance to master's level study and contribute to the development of medical imaging services through research.

To satisfy admission into this programme, the student must be employed in an appropriate clinical training position. This is a paid position in an MRI practice in New Zealand and it is the responsibility of the student to find and secure 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).

For those interested in pursuing a career in MRI and who are not medical imaging technologists, please refer to the University of Auckland website for more information:

auckland.ac.nz/pg/mri

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 should approach MRI team leaders based in public hospitals and/ or private radiology facilities that provide MRI services. You should also consult employment websites where these roles are often advertised.

We offer medical imaging practitioners the opportunity to enrol in a PGCertHSc (Medical Imaging) and complete four courses which may then be credited towards an MRI postgraduate diploma, should you succeed in obtaining a training position within five years. This option demonstrates to potential employers your enthusiasm and aptitude.

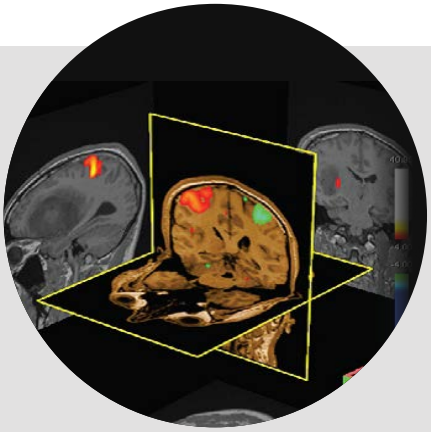
This pathway is currently under review so please contact the Medical Imaging Postgraduate Academic Coordinator at medicalimaging@auckland.ac.nz for more information before proceeding on this pathway.

Schedule of courses 2025**

Course Code	Course Name	S1	S2
MEDIMAGE 701	Imaging Anatomy and Pathology		▪
MEDIMAGE 702	Professional Issues in Medical Imaging	▪	▪
MEDIMAGE 714*	Fundamentals of Clinical MRI	▪	▪
MEDIMAGE 715	MRI Technology	▪	▪
MEDIMAGE 721	MRI Safety	▪	
CLINIMAG 710	MRI Clinical Applications I	▪	
CLINIMAG 711	MRI Clinical Applications II		▪
CLINIMAG 712	MRI Clinical Practice	▪	▪

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

***This schedule is subject to change each year. Please contact the Medical Imaging Postgraduate Academic Coordinator at medicalimaging@auckland.ac.nz for an individual study plan.*



"Our Māori ancestors sailed from Hawaiiki and found Aotearoa with their technology, innovation and vision. So, I hope to be a beacon for Māori and Pasifika and inspire them to come and take a leap into medical imaging because I enjoy what I do, and others might too."

Mammography

This programme provides a combination of academic and clinical elements ensuring graduates from this programme will be eligible to work for BreastScreen Aotearoa (BSA).

Postgraduate Certificate in Health Sciences in Mammography

PGCertHSc (Mammography)

Graduates of the PGCertHSc (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.

To satisfy admission into this programme, the student must be employed in an appropriate clinical training position. This is a paid position in a mammography practice in New Zealand and it is the responsibility of the student to find and secure 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 MRTB before study is commenced.**

Workplace clinical requirements

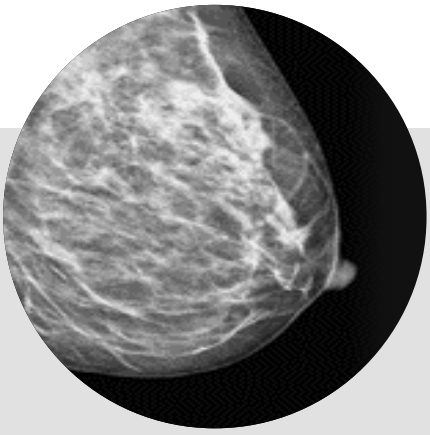
In order to develop the necessary technical, clinical and diagnostic skills, students must be exposed to a large number and wide range of mammographic examinations. Completion of the training period will require that the student has experienced a minimum of 300 clinical hours.

Assessment of clinical competency will also occur in the student's workplace throughout the duration of their enrolment in the two mammographic courses. Students will not be able to compensate an inadequate clinical assessment with excellent academic work.

Schedule of courses 2025

Course Code	Course Name	S1	S2
CLINIMAG 721	Mammographic Practice	▪	
CLINIMAG 722	Extended Mammographic Practice		▪

"After over 10 years of being a full-time mammographer, I still find mammography interesting and technically challenging"



"In 2007, I was offered a position in a dedicated mammography centre in Johannesburg. I was fortunate to work with a radiologist who was passionate about breast imaging. As a result, I realised that a mammogram was more than screening and obtaining four images.

"We as mammographers have a great responsibility to the women we image to make a scary, uncomfortable experience one they will return for. After over 10 years of being a full-time mammographer, I still find mammography interesting and technically challenging.

"I have always enjoyed teaching, and opted to do a Clinical Supervision course as part of my Postgraduate Certificate in Health Sciences (Mammography) at the University of Auckland. In 2017, I followed this with a Postgraduate Certificate in Clinical Education.

"Three years ago I became a clinical supervisor for BreastScreen Aotearoa. I find this role very interesting as I get to watch my students grow and develop - much like watching baby birds leave the nest! I enjoy establishing a relationship with my students, helping them develop the confidence to seek feedback and become more reflective in their practise. It's very fulfilling knowing that you have contributed to teaching someone a skill they can use throughout their career."

Fathima Okoroigwe

Postgraduate Certificate in Health Sciences (Mammography) graduate

Fathima Okoroigwe works at BreastScreen Waitematā Northland and was a clinical supervisor for the University of Auckland.

auckland.ac.nz/mammography

Nuclear Medicine

This programme 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).

Postgraduate Diploma in Health Sciences in Nuclear Medicine

PGDipHSc (Nuclear Medicine)

The PGDipHSc (Nuclear Medicine) prepares our graduates to contribute to clinical health services for New Zealanders to implement their nuclear medicine knowledge and expertise. Graduates will also be able to advance to master's level study and contribute to the development of medical imaging services through research.

To satisfy admission into this programme, the student must be employed in an appropriate clinical training position. This is a paid position in a nuclear medicine practice in New Zealand and it is the responsibility of the student to find and secure 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).

For those interested in pursuing a career in nuclear medicine and who are not medical imaging technologists, please refer to the University of Auckland website for more information:

auckland.ac.nz/pg/nuclear-medicine

Schedule of courses 2025*

Course Code	Course Name	S1	S2
MEDIMAGE 702	Professional Issues in Medical Imaging	▪	▪
MEDIMAGE 720	Fundamentals of Clinical Nuclear Medicine	▪	
MEDIMAGE 708	Nuclear Medicine Technology		▪
MEDIMAGE 729	Theranostics		▪
CLINIMAG 706	Nuclear Medicine Specialised Clinical Applications	These courses will not be offered in 2025	
CLINIMAG 723	PET-CT Imaging		
CLINIMAG 707	CT Clinical Practice		▪
CLINIMAG 716	Nuclear Medicine Clinical Practice	▪	▪

**This schedule is subject to change each year. Please contact the Medical Imaging Postgraduate Academic Coordinator at medicalimaging@auckland.ac.nz for an individual study plan.*

Workplace clinical requirements

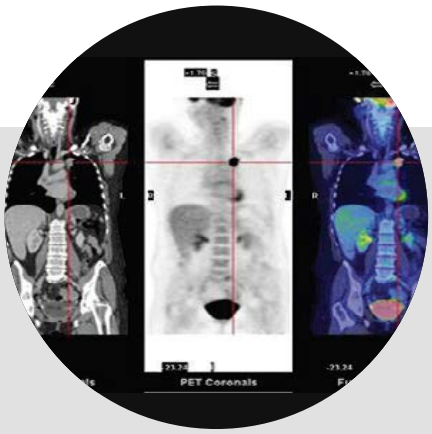
In order to develop the necessary technical, clinical and diagnostic skills, trainees must be exposed to a large number and wide range of nuclear medicine examinations. By completion of the training period the requirement is that the student has experienced a minimum of 2000 clinical hours.

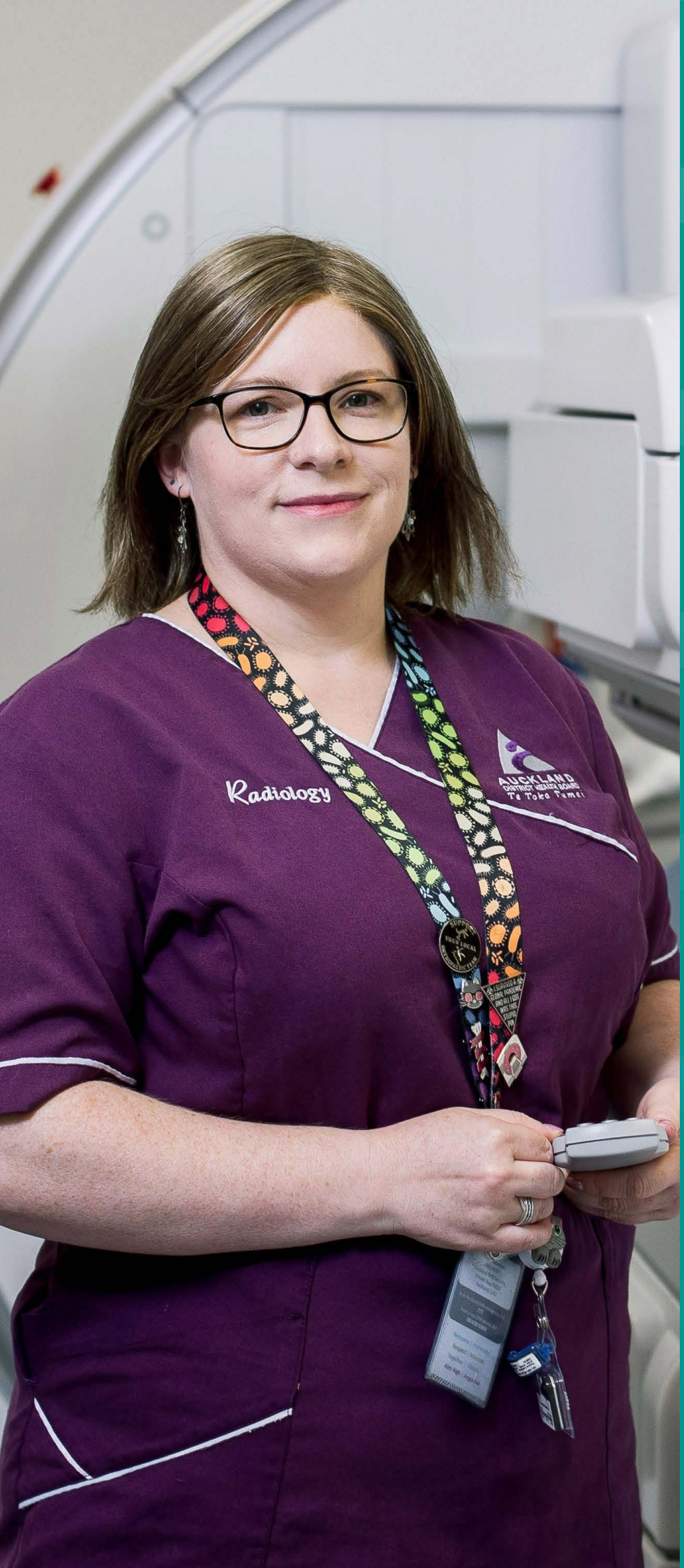
Additionally, the minimum total number of nuclear medicine examinations to be recorded is 1000, of which no fewer than 500 must be performed without assistance. Within the nuclear medicine programme, there is also a requirement for familiarisation and competency of processes and procedures additional 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.

"The idea that we can use radioactive materials to image how organs are functioning is fascinating."





"From the moment I first learned about nuclear medicine, I knew I wanted to do it. I have a background in chemistry, so the idea of working in the hot lab really appealed to me. The idea that we can use radioactive materials to image how organs are functioning is fascinating.

"You learn about many new pathologies, which for me has helped in my other role as a CT Medical Imaging Technologist. Because it's such a niche job, you get to know people from all around the country.

"The academic programme at The University of Auckland complements the clinical work I do. While I learn on the job how to do the exams, the academic aspect ensures that I have the knowledge to explain the procedure to patients and perform the exam safely. The teaching staff are fantastic and are really easy to talk to. They do everything they can to help you succeed in your studies."

Katie Percival

Auckland City Hospital/Te Toka Tumai, Nuclear Medicine Technologist Trainee

auckland.ac.nz/pg/nuclear-medicine

Positron Emission Tomography-Computed Tomography (PET-CT)

This programme provides a combination of academic and clinical elements ensuring graduates will be eligible for registration with the regulatory body, the New Zealand Medical Radiation Technologists Board (MRTB).

Postgraduate Certificate in Health Sciences in Positron Emission Tomography-Computed Tomography

PGCertHSc (PET-CT)

Graduates of the PGCertHSc (PET-CT) 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, specifically within PET-CT. Graduates will also be able to advance to postgraduate diploma and master's level study and contribute to the development of medical imaging services through research.

For those interested in pursuing a career in PET-CT, an undergraduate degree in medical imaging is a requirement for eligibility. In addition, to satisfy admission into this programme, the student must be employed in an appropriate clinical training position. This is a paid position in a PET-CT practice in New Zealand and it is the responsibility of the student to find and secure this position. Appropriate supervision of the student must also be provided by a qualified and experienced member of staff.

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 PET-CT examinations. By completion of the training period the requirement is that the student has experienced a minimum of 500 clinical hours of supervised PET-CT practice and a further minimum of 240 hours in supervised diagnostic CT practice on a system routinely performing diagnostic CT. Additionally, the minimum total number of PET-CT examinations to be recorded is 500, of which no fewer than 250 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.

Schedule of courses 2025*

Course Code	Course Name	S1	S2
MEDIMAGE 702	Professional Issues in Medical Imaging	▪	▪
MEDIMAGE 720	Fundamentals of Clinical Nuclear Medicine	▪	
CLINIMAG 707	CT Clinical Practice		▪
CLINIMAG 725	PET-CT Clinical Practice	Not offered in 2025	

**This schedule is subject to change each year. Please contact the Medical Imaging Postgraduate Academic Coordinator at medicalimaging@auckland.ac.nz for an individual study plan.*

"I believe this qualification will set me up to be able to work in any Nuclear Medicine department/laboratory. This will enable me to provide continuous patient care through imaging and potentially open a future path in research"

"The field of nuclear medicine intrigued me due to the extensive variety of imaging procedures and laboratory work. It's an ever-changing field, which keeps it interesting. Nuclear Medicine as an imaging modality offers extensive future opportunities for me, not only in SPECT/CT and PET/CT imaging but also in playing a role in new radiopharmaceutical agents that can be used for targeted cancer treatments and imaging.

"The University of Auckland is the only institution in New Zealand offering a qualification in Nuclear Medicine. Surprisingly, the thing I was most worried with about the programme turned out to be the most helpful. Working while studying has provided valuable insights, enhancing my learning by combining academic knowledge with real-world experience.

"The academic programme provided me with the required knowledge to make clinical decisions. It also helped me understand why we ask the questions we do for each procedure and how the answers to each question could change the scan, what we do, and how we do it. The programme's diverse assessments have also been valuable, offering different ways to learn and apply my knowledge."

Zane Bezuidenhout

Postgraduate Diploma in Health Sciences (Nuclear Medicine) student Zane Bezuidenhout works as a trainee nuclear medicine technologist at Integral Diagnostics (IDX) in Auckland.

auckland.ac.nz/pg/nuclear-medicine

Ultrasound

This programme 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).

Postgraduate Diploma in Health Sciences in Ultrasound

PGDipHSc (Ultrasound)

By pursuing the PGDipHSc (Ultrasound), our students will be equipped to implement their ultrasound knowledge and expertise to improve clinical health services for New Zealanders. Graduates will also be able to advance to master's level study and contribute to the development of medical imaging services through research.

To satisfy admission into this programme, the student must be employed in an appropriate clinical training position. This is a paid position in an ultrasound practice in New Zealand and it is the responsibility of the student to find and secure 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 the optional, full-time intensive course which requires on-campus attendance.

For those interested in pursuing a career in ultrasound and who are not medical imaging technologists, please refer to the University of Auckland website for more information:

auckland.ac.nz/pg/ultrasound

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

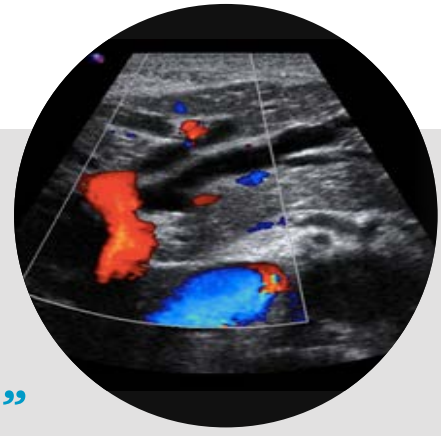
To obtain a training position, you should approach utrasound team leaders based in public hospitals and/ or private radiology facilities that provide ultrasound services. You should also consult employment websites where these roles are often advertised.

We offer medical imaging practitioners and graduates from other health science-related fields (e.g., biomedical science, or allied health professions) the opportunity to enrol in a Postgraduate Certificate in Health Sciences. In this certificate, you would complete four courses that could then be credited towards an ultrasound diploma, should you succeed in obtaining a training position within five years. This option demonstrates to potential employers your enthusiasm and aptitude.

This pathway is currently under review so please contact the Medical Imaging Postgraduate Academic Coordinator at medicalimaging@auckland.ac.nz for more information before proceeding on this pathway.

Schedule of courses 2025

Course Code	Course Name	S1	S2
MEDIMAGE 701	Imaging Anatomy and Pathology		▪
MEDIMAGE 702	Professional Issues in Medical Imaging	▪	▪
MEDIMAGE 716	Fundamentals of Clinical Ultrasound	▪	▪
MEDIMAGE 717	Ultrasound Imaging Technology	▪	▪
CLINIMAG 719	Ultrasound Abdominal Clinical Applications	▪	▪
CLINIMAG 713	Ultrasound in Women's Health		▪
CLINIMAG 720	Ultrasound Specialised Clinical Applications	▪	
CLINIMAG 715	Ultrasound Clinical Practice	▪	▪



"After seeing what sonographers do and the way they impact both patients and the diagnostic experience, I found that ultrasound was the perfect pathway for me"

"I have always had a passion for healthcare. I previously studied physiotherapy and decided it was not the right career pathway for me which is when I found myself in the radiology world.

"After seeing what sonographers do and the way they impact both patients and the diagnostic experience, I found that ultrasound was the perfect pathway for me. I love the one-on-one patient care we provide and the way we can care for patients in a way that not all modalities do.

"The University of Auckland is a renowned university for providing some of the best education for students to set them up for a successful and knowledgeable career. I love that the class sizes are small. It is always easy to reach out for help from the Course Coordinators.

"The learning content is always relevant and useful in my ultrasound training. I find myself learning things in my coursework and immediately finding it come up in some of the scans I do.

"I am hoping to become a qualified sonographer and potentially in the future specialise further in musculoskeletal scans and paediatric scanning! I have lots of musculoskeletal knowledge already from physiotherapy and love working with children so I am very excited for what I may be able to do in the future."

Alisha Heath

Postgraduate Diploma in Health Sciences (Ultrasound) student Alisha Heath works as a trainee sonographer at Astra Radiology in Auckland.

auckland.ac.nz/pg/ultrasound

Course descriptions

Enrolment information explained

Prerequisite

A course that you must pass before you can start to study in this course.

Restriction

A course which is restricted against another course because the learning objectives, content, and/or assessment are so similar to the other course that you cannot gain credit for both courses towards a certificate, diploma, or degree.

Corequisite

A course that should be taken in the same semester as another unless it has previously been satisfactorily completed.

Department consent required

Before you can enrol in this course you must obtain permission to do so from the department. Contact your Student Hub if you need help or advice. Refer to the back page for further details.

MEDIMAGE 701

Imaging Anatomy and Pathology

Addresses the principles of medical science at whole body, organ, tissue, cellular and subcellular levels by developing an integrated understanding of anatomy and pathology as it applies to medical imaging in the clinical context. Specific anatomical regions and pathologies will be investigated to explain imaging appearances and evaluate the role of a variety of imaging modalities in patient pathways.

MEDIMAGE 702

Professional Issues in Medical Imaging

Students will investigate the concept of professional practice leading to an exploration of current professional issues relevant to medical imaging. The course will develop students' ability to reflect on, and respond to, the wide variety of professional, ethical, medico-legal and clinical workplace issues generated in a rapidly changing environment.

MEDIMAGE 708

Nuclear Medicine Technology

Extends students' specialised theoretical knowledge and understanding of the underlying scientific principles of nuclear medicine technology. Students will develop the ability to apply this knowledge to obtain images of optimal diagnostic quality.

Prerequisite: MEDIMAGE 720

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 714

Fundamentals of Clinical MRI

Provides students with knowledge of the fundamental scientific principles of MRI. Students will examine components of the clinical environment in the context of patient care and safety. In addition, students will evaluate common clinical applications, developing the ability to analyse standard imaging protocols and explain normal and abnormal MR imaging appearances.

MEDIMAGE 715

MRI Technology

Extends students' specialised theoretical knowledge and understanding of the underlying scientific principles of MR technology. Students will develop the ability to apply this knowledge to obtain images of optimal diagnostic quality.

Prerequisite: MEDIMAGE 714

Restriction: MEDIMAGE 703, 704

MEDIMAGE 716

Fundamentals of Clinical Ultrasound

Provides students with knowledge of the fundamental scientific principles of ultrasound. Students will develop the ability to apply this knowledge to different patient populations. In addition, students will investigate standard sonography imaging techniques and analyse sonographic imaging appearances.

MEDIMAGE 717

Ultrasound Imaging Technology

Explores the principles of ultrasound physics and instrumentation. Students will have the opportunity to learn about the properties of sound waves and their behaviour with tissues in the production of ultrasound images. Students will develop the ability to manipulate and optimise image production by refining components and controls of the ultrasound machine, while considering the importance of bioeffects and safety.

MEDIMAGE 720

Fundamentals of Clinical Nuclear Medicine

Provides students with knowledge of the fundamental scientific principles of nuclear medicine. Students will examine components of the clinical environment in the context of patient care and safety. In addition, students will evaluate common clinical applications, developing the ability to analyse standard imaging protocols and explain normal and altered biodistribution and nuclear medicine imaging appearances.

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.

Prerequisite: MEDIMAGE 714

Please note that the courses on offer each semester depend on sufficient student enrolments and is subject to change.

MEDIMAGE 722

Introduction to Cardiac Ultrasound

Introduces cardiac ultrasound by exploring the analysis and interpretation of the 2D, m-mode, Spectral Doppler, and Colour Doppler components of the normal cardiac ultrasound examination. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence.

MEDIMAGE 724

Ultrasound Assessment of Heart Disease 1

Expands on comprehension of the normal cardiac ultrasound examination, by developing the specialised skills and knowledge required to critically analyse and interpret ventricular function and complex forms of heart, disease including cardiomyopathies and pericardial diseases, using various ultrasound modalities. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making, and clinical competence.

Prerequisite: MEDIMAGE 717, 722

MEDIMAGE 726

Ultrasound Assessment of Heart Disease 2

Expands on comprehension of the normal cardiac ultrasound examination, by developing the specialised skills and knowledge required to critically analyse and interpret common and complex forms of heart disease including valve disease and adult congenital heart disease. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence.

Prerequisite: MEDIMAGE 724

MEDIMAGE 727

Introduction to Congenital Heart Disease

Expands knowledge of normal foetal cardiovascular system development which is imperative to understanding the intricacies of congenital heart lesions. Integrates a comprehension of congenital heart lesions with a systematic segmental approach to scanning allows practitioners to identify congenital lesions and interrogate the haemodynamic consequences using ultrasound, pre- and post-medical intervention.

MEDIMAGE 728

Advanced Concepts in Cardiac Ultrasound

Builds on knowledge of transthoracic Cardiac Ultrasound, explores advanced echocardiography techniques, and the role of the cardiac sonographer in these examinations. Complementary diagnostic modalities used in the investigation of heart disease are introduced. Integrating knowledge of a broader range of diagnostic modalities, allows practitioners the opportunity to correlate diagnostic findings, and provide a deeper understanding of underlying pathology.

Prerequisite: MEDIMAGE 726

MEDIMAGE 729

Theranotics

Addresses principles, theories and clinical applications of theranostics in nuclear medicine and molecular imaging. Radiopharmaceuticals, biodistribution, radiation safety aspects and the role of imaging in theranostics will be explored. In addition, students will investigate new and evolving techniques or applications.

Prerequisite: MEDIMAGE 720

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, in addition to investigating new and evolving techniques and applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence.

Prerequisite: MEDIMAGE 720

CLINIMAG 707

CT Clinical Practice

Provides students with a sound understanding of CT technology and its application including radiation safety and dose reduction. Addresses normal and abnormal computed tomography (CT) imaging appearances, protocol selection and modification, in relation to a range of standard clinical applications. Students will develop the knowledge, competencies, skills and attitudes needed to enable clinical competence in both academic and professional capability in CT practice and application to clinical practice.

CLINIMAG 710

MRI Specialised Clinical Applications I

Addresses normal and abnormal imaging appearances, protocol selection and development, and applications associated with a range of MRI examinations. Students will examine standard and advanced pulse sequences, in addition to investigating new and evolving techniques and applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical decision making and clinical competence.

Prerequisite: MEDIMAGE 714

Restrictions: CLINIMAG 701, 702

CLINIMAG 711

MRI Specialised Clinical Applications II

Addresses normal and abnormal imaging appearances, protocol selection and development, and applications associated with a range of MRI examinations. Students will examine standard and advanced pulse sequences in addition to investigating new and evolving techniques and applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical decision making and clinical competence.

Prerequisite: MEDIMAGE 714

Restriction: CLINIMAG 702

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 in Women's Health

Addresses normal and abnormal ultrasound imaging appearances, scanning techniques and applications relating to women's health. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence.

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 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 specialised ultrasound imaging. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making and clinical competence

Prerequisite: MEDIMAGE 716

Restriction: CLINIMAG 704, 714

CLINIMAG 721

Mammographic Practice

An in-depth understanding of mammographic imaging of breast anatomy and pathology, and the principles of mammographic technology and image quality. Addresses the knowledge, skills and attributes needed to demonstrate competence in clinical mammographic practice.

CLINIMAG 722

Extended Mammographic Practice

An in-depth understanding of mammography assessment, interventional techniques and quality assurance. Addresses the knowledge, skills and attributes needed to demonstrate competence in academic and extended clinical mammographic practice.

CLINIMAG 723

PET-CT Imaging

Addresses the fundamentals of PET-CT and hybrid imaging including equipment, normal and altered radiopharmaceutical biodistribution appearances and a range of clinical applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning and decision-making.

Prerequisite: MEDIMAGE 720

CLINIMAG 724

Cardiac Ultrasound Clinical Practice

Refines and expands specialised skills, knowledge, and attitudes required to demonstrate proficiency in the competency domains set out by the New Zealand Medical Radiation Technologists Board, within the scope of practice of Cardiac Ultrasound.

Prerequisite: Department approval

CLINIMAG 725

PET-CT Clinical Practice

Addresses the fundamentals of PET-CT and hybrid imaging including equipment, normal and altered radiopharmaceutical biodistribution appearances and a range of clinical applications. An emphasis will be placed on integrating theory and clinical practice elements to facilitate sound clinical reasoning, decision-making. Develops the knowledge, competencies, skills and attitudes needed to demonstrate mastery in both academic and professional capability in PET-CT practice.

Prerequisite: MEDIMAGE 720

Restriction: CLINIMAG 723

Course schedule 2025

Course Code	Course Name	S1	S2
MEDIMAGE 701	Imaging Anatomy and Pathology		▪
MEDIMAGE 702	Professional Issues in Medical Imaging	▪	▪
MEDIMAGE 708	Nuclear Medicine Technology		▪
MEDIMAGE 711	Musculoskeletal Trauma Image Evaluation		▪
MEDIMAGE 714	Fundamentals of Clinical MRI	▪	▪
MEDIMAGE 715	MRI Technology	▪	▪
MEDIMAGE 716	Fundamentals of Clinical Ultrasound	▪	▪
MEDIMAGE 717	Ultrasound Imaging Technology	▪	▪
MEDIMAGE 720	Fundamentals of Clinical Nuclear Medicine	▪	
MEDIMAGE 721	MRI Safety	▪	
MEDIMAGE 722	Introduction to Cardiac Ultrasound	▪	
MEDIMAGE 724	Ultrasound Assessment of Heart Disease 1		▪
MEDIMAGE 726	Ultrasound Assessment of Heart Disease 2	▪	
MEDIMAGE 727	Introduction to Congenital Heart Disease	▪	
MEDIMAGE 728	Advanced Concepts in Cardiac Imaging		▪
MEDIMAGE 729	Theranostics		▪
CLINIMAG 706	Nuclear Medicine Specialised Clinical Applications	Not offered in 2025	
CLINIMAG 707	CT Clinical Practice	▪	▪
CLINIMAG 710	MRI Clinical Applications	▪	
CLINIMAG 711	MRI Specialised Clinical Applications		▪
CLINIMAG 712	MRI Clinical Practice	▪	▪
CLINIMAG 713	Ultrasound in Women's Health		▪
CLINIMAG 715	Ultrasound Clinical Practice	▪	▪
CLINIMAG 716	Nuclear Medicine Clinical Practice	▪	▪
CLINIMAG 719	Ultrasound Abdominal Clinical Applications	▪	▪
CLINIMAG 720	Ultrasound Specialised Clinical Applications	▪	
CLINIMAG 721	Mammographic Practice	▪	
CLINIMAG 722	Extended Mammographic Practice		▪
CLINIMAG 723	PET-CT Imaging	Not offered in 2025	
CLINIMAG 724	Cardiac Ultrasound Clinical Practice		▪
CLINIMAG 725	PET-CT Clinical Practice	Not offered in 2025	

This course schedule lists all postgraduate courses that will be offered in 2025.

Please note: If you are not already enrolled in a postgraduate programme, you will need to apply online for admission.

To apply for admission to these programmes, please visit the University website at the following link: ***auckland.ac.nz/fmhs/postgraduate-admission-enrolment***

Postgraduate Certificate in Health Sciences

Postgraduate certificates can be used to give students a postgraduate qualification in an area of interest or in which they have some professional involvement. The PGCertHSc (Mammography), PGCertHSc (Medical Imaging) and PGCertHSc(PET-CT) 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 while seeking a clinical training position in MRI, ultrasound or nuclear medicine.

Often students begin with this qualification if they have been out of study for some time or they just want to see what postgraduate study is like. It is also the recommended initial qualification for non-university and overseas graduates.

Any course offered by the faculty can also be taken as a certificate of proficiency (COP). Students sometimes enrol in a course as a COP if they wish to take only one or two courses and know that they definitely will not be returning to the University to take up any further study in that particular area. COP courses cannot be reassigned into research master's degrees, and there are point limits and time limits for reassigning COPs into other postgraduate programmes. If you are considering enrolling in a course as a COP then you are advised to seek advice from either the department that offers the course or the Student Hubs (see back page for contact details).

Eligibility

Students applying for the Medical Imaging specialisation need to have:

- Completed a qualification in medical imaging.

And

- Must hold current registration with the New Zealand Medical Radiation Technologists Board (MRTB) in the medical imaging technologist scope of practice, or provide evidence of registration (or other evidence of the right to work) as a medical imaging technologist in their country of domicile.

Students applying for the Mammography specialisation need to have:

- Completed a qualification in medical imaging or radiation therapy.

And

- Must hold current registration with the New Zealand Medical Radiation Technologists Board in the medical imaging technologist or Radiation Therapist scope of practice, or provide evidence of registration (or other evidence of the right to work) as a medical imaging technologist or radiation therapist in their country of domicile.

And

- Must confirm that they have secured employment in a clinical training position approved by the Programme Director (or delegate).

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.

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 (Cardiac Ultrasound), PGDipHSc (MRI), PGDipHSc (Medical Imaging), PGDipHSc (Nuclear Medicine) and PGDipHSc (Ultrasound) 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.

The PGDipHSc (Cardiac Ultrasound), PGDipHSc (MRI), PGDipHSc (Nuclear Medicine) and PGDipHSc (Ultrasound) programmes provide a route to registration for magnetic resonance imaging technologists, sonographers and nuclear medicine technologists. These programmes have been accredited by the New Zealand Medical Radiation Technologists Board (MRTB).

Eligibility

Students applying for the Medical Imaging specialisation need to have:

- Completed an undergraduate degree in medical imaging.

And

- Must hold current registration with the New Zealand Medical Radiation Technologists Board (MRTB) in the medical imaging technologist scope of practice, or provide evidence of registration (or other evidence of the right to work) as a medical imaging technologist in their country of domicile.

Students applying for the Magnetic Resonance Imaging, Nuclear Medicine, or Ultrasound specialisation need to have:

- Completed a qualification in medical imaging, or an undergraduate degree in a biomedical science related field or allied health profession as approved by the Programme Director (or delegate).

And

- Must confirm that they have secured employment in a clinical training position approved by the Programme Director (or delegate).

Duration and points value

Points required:	120
Time to complete:	Within one year if enrolled full-time, within four years if enrolled part-time
Start semester:	One or Two

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.

auckland.ac.nz/fmhs/pgdiphsc-regulations

Students who successfully complete the University of Auckland Postgraduate Certificate in Health Sciences (or its equivalent) may go on to complete the 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 postgraduate 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

For students who have completed a postgraduate certificate for which credit is to be granted to the Postgraduate Diploma in Health Sciences, admission to the Postgraduate Diploma must take place within five years of their completion of a postgraduate certificate.

In addition, the requirements for the Postgraduate Diploma must be completed within:

One semester of admission	If enrolled full-time
Two years of admission	If enrolled part-time

Reassignments

With the approval of the Head of Department, courses may be reassigned to the 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.

Master of Health Sciences (MHSc)

The regulations for this degree are to be read in conjunction with all other relevant statutes and regulations including the Academic Statutes and Regulations.

Admission

In order to be admitted to this programme, a student needs to have completed the requirements for the Postgraduate Diploma in Health Sciences or its equivalent with an average grade of B or higher and not exceed 160 points for the total enrolment for this degree.

A 120 point thesis or research portfolio may be started on 1 March, 15 July or 1 December and must be completed within two years if enrolled part time.

Research Masters

- 120 points: HLTHSCI 796 Thesis

OR

- 120 points: HLTHSCI 797 Research Portfolio

OR

- 90 points: HLTHSCI 793 Research Portfolio

And

- 30 points from courses listed in the Master of Health Sciences Schedule

Taught Masters

- 60 points: HLTHSCI 790 Dissertation
- 60 points from the courses listed in the Master of Health Sciences Schedule

Contact

Medical Imaging Masters and PhD Adviser

Dr Beau Pontré

Email: b.pontre@auckland.ac.nz

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. 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, 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 arguments 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.

"My Master's research is investigating the impact training has on medical imaging technologists' (MITs) ability to detect and describe acute abnormalities on extremity X-ray examinations in emergency departments, using a system known as preliminary image evaluation (PIE).

"I decided to study this topic because extending MITs' practice in New Zealand (NZ) into image evaluation has not been pursued for almost 10 years, and I saw this topic as a good step toward restarting the discussion. This research is important because while there is a significant amount of international research, particularly in UK and Australia, which demonstrates radiographers have a high performance when participating in PIE, there is currently no research in NZ. It is important that any advancement to our profession is supported by research that is done in a NZ context.

"I chose to complete my Master's degree at the University of Auckland because the Medical Imaging team understood my aims and goals, and my supervisors are the most supportive supervisors a student could ask for. I anticipate that my research will be useful to open the door to extended and advanced practice for MITs in NZ. I hope to continue this research in the future and demonstrate that NZ MITs are capable of moving into extended and advanced practice."

Kim Lewis

Master of Health Sciences student Kim Lewis works as Clinical Tutor at Te Whatu Ora, Taranaki.

Doctoral study in Medical Imaging

Why study with us?

Our Department of Anatomy and Medical Imaging delivers the only postgraduate programmes in New Zealand for the medical imaging profession. The department is widely recognised for several outstanding features, including:

- Academic support for the state-of-the-art Biomedical Imaging Research Unit and Centre for Advanced MRI
- An internationally recognised human brain bank for neuroscience research
- A fully integrated facility that underpins anatomy, radiology and pathology teaching on the human body
- AMRF Medical Sciences Learning Centre – Whakaaro Pai
- A broad range of high-quality histology techniques in the Histology Laboratory
- Cutting edge anatomical research in the Auckland Clinical Anatomy Research Team

Research opportunities

You could become involved in some of the important and life-changing research in our faculty.

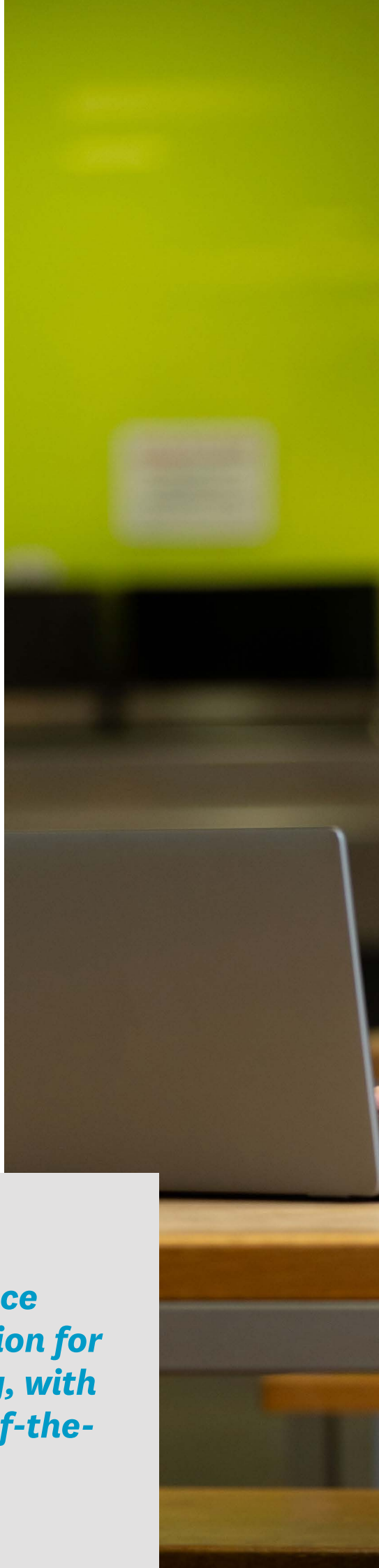
Medical Imaging Research being undertaken in the Department of Anatomy and Medical Imaging covers a variety of aspects of medical imaging. These include imaging physics and technology, medical imaging practice, medical imaging education and more. The Department has experts in working across a variety of medical imaging modalities.

Contact

Medical Imaging Masters and PhD Adviser

Dr Beau Pontré

Email: b.pontre@auckland.ac.nz



"I chose The University of Auckland for studying my PhD in Medical Imaging since this University has an excellent reputation for research in the field of medical imaging, with renowned faculty members and state-of-the-art facilities."

"I studied a Bachelor of Radiology and Master of Medical Physics in Iran before working as an MRI technologist for around ten years in Iran.

"My PhD thesis topic is 'Developing A Deep Learning-Based Radiomics Model Based On PET/CT Fused Images and Clinicopathological Factors to Predict Post-Surgical Recurrence Risk in Patients with Non-Small Cell Lung Cancer'.

"I decided to study this topic because of AI's potential to revolutionise patient care and outcomes in oncology. Traditional methods of assessing recurrence risk rely heavily on subjective criteria and have limitations in accuracy. By leveraging AI techniques, we can analyse vast amounts of patient data, including imaging scans, clinical parameters, and genetic markers, to develop predictive models with higher precision. Therefore, I am motivated by the prospect of contributing to advancements in cancer care and making a positive impact on patient outcomes through the application of artificial intelligence in healthcare.

"This research has the potential to improve post-surgical management decisions, such as determining the frequency of follow-up visits, initiating adjuvant therapy, and identifying patients who may benefit from personalised treatment strategies.

"I chose The University of Auckland for studying my PhD in Medical Imaging since this University has an excellent reputation for research in the field of medical imaging, with renowned faculty members and state-of-the-art facilities. Secondly, it provides opportunities for interdisciplinary collaboration and professional development."

Ghazal Mehrikakavand

PhD(Medical Imaging) student Ghazal Mehrikakavand is an MRI technologist from Iran. Her research is focused on developing a deep learning-based radiomics model to improve prognostic accuracy for patients with lung cancer.

How to apply

For information regarding application for admission and entry requirements visit:
auckland.ac.nz/postgraduate-applications

1

Apply (online)

Go to **applytostudy.auckland.ac.nz**

Click on the '**Start your Application for Admission**' at the top of the page

Complete the online application for a place in your programme of choice before the closing date.

For assistance, please phone 0800 61 62 65

2

Submit all requested information and attend interview/audition if requested

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.

3

Receive offer of place in programme

Your application will be assessed and, if successful, you will receive an 'Offer of a place in a programme'.

4

Accept offer of place in programme

Accept your offer of a place in a programme online.

5

Enrol in courses

Enrol in your chosen courses via the online Student Services Online system

6

Pay fees

For personal assistance, please visit us at your local Student Hub, where students and whānau are welcome to talk with our expert advisers.

Enquiries: auckland.ac.nz/askus
Or phone: 0800 61 62 63
International: +64 9 373 7513

CITY CAMPUS
General Library, Building 109,
5 Alfred Street, Auckland

GRAFTON CAMPUS
Philson Library, Building 503
Level 1, 85 Park Rd, Grafton
(Entry via the Atrium)

SOUTH AUCKLAND CAMPUS
Te Papa Ako o Tai Tonga
6 Osterley Way, Manukau

WHANGĀREI CAMPUS
Te Papa Ako o Tai Tokerau: L Block,
13 Alexander Street,
Whangārei

MEDICAL IMAGING CONTACTS

For academic or general medical imaging programme enquiries contact:

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Medical Imaging Postgraduate Academic Coordinator
Email: medicalimaging@auckland.ac.nz

For medical imaging clinical programme enquiries contact:

Shelley Park
Medical Imaging Postgraduate Clinical Coordinator
Email: MIclinical@auckland.ac.nz

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Waipapa Taumata Rau

auckland.ac.nz/fmhs/medical-imaging