



THE UNIVERSITY OF AUCKLAND
FACULTY OF MEDICAL AND
HEALTH SCIENCES



University of Auckland

Master of Audiology

MAud



Master of Audiology (MAud)

The Master of Audiology degree is offered at the University of Auckland, through the Section of Audiology in the School of Population Health on the Tamaki Campus. It provides a professional training programme for clinical audiologists in New Zealand. There are experienced teaching staff and modern teaching and research facilities in the School of Population Health including an audiology clinic. The MAud course is a two-year researched-based programme and is recognised by the New Zealand Audiological Society (NZAS). It is acceptable as a clinical audiology qualification in most countries.

This brochure provides information about audiology as a career and the MAud degree.

Audiology - A Profession of Choice



- Audiologists provide services for people who have a hearing impairment
- Audiology is an expanding health profession in New Zealand and internationally
- Audiology brings together the domains of Science and Humanities

There is a worldwide shortage of audiologists. The demand for audiology services is increasing due to...

- The ageing population
 - Most people suffering hearing loss are elderly
 - More than 1/2 a million New Zealanders are aged over 65
- Introduction of newborn hearing screening
- Digital technology has improved the sound quality of hearing aids, which enables more people to use them successfully
- Cochlear implants are being fitted in larger numbers

Career Opportunities

Audiologists can choose to work...

- With children or adults
- In hospital clinics
- In educational settings (Deaf Education Resource Centres)
- In private practice
- In their own business
- Within cochlear implant programmes
- In academic settings (universities)
- For hearing aid manufacturers
- As a company representative
- Research in clinical science and developing new technology

Audiology will suit you if you enjoy:

- Helping people improve their quality of life
- Working with people
- Diversity of work
- Constant change, learning and challenge
- Career flexibility
- Technology
- Combination of disciplines

What Audiologists do...

❖ Identifying and assessing hearing problems

Hearing is evaluated by recording a person's response to a sound. This is behavioural testing as the person's hearing is assessed by observing behaviour.

Hearing can also be tested without the client having to respond. This is called physiological testing where special equipment is used to measure hearing by measuring the way the ear and brain respond to sound. This sort of measurement is used for very young children and for people who are not able to give a reliable behavioural response.

❖ Counselling patients and families about hearing

It takes time for some people to realise they have a hearing loss, and then to accept it. Having a hearing loss can affect your whole life because hearing is so important to communication. Very commonly people withdraw from social situations because they become embarrassed when they mis-understand what people are saying. It can take time for people to accept that they have a hearing loss (up to 10 years). Audiologists need to be understanding about the effect of hearing loss and provide support and information to help their clients and their families.



- Rewarding

- Dynamic

- Diverse

❖ Working with hearing impaired children

It is very important to detect hearing loss in children at a young age so that their speech and language can develop. If a child has a permanent hearing loss, they are usually fitted with a hearing aid or a cochlear implant (if they have a profound hearing loss). Audiologists work with other professionals like advisers on deaf children, speech and language therapists, ear, nose and throat specialists and paediatricians to make sure the child is getting benefit from the hearing device and is developing well.

❖ Assessing auditory processing problems

Some people have trouble interpreting speech and other sounds even though they have normal hearing sensitivity. This is described as an auditory processing disorder (APD). People with APD have exceptional difficulty hearing in challenging listening situations like background noise (i.e. in a classroom or a group of people).

Assessment of APD involves a large number of tests including specialised auditory processing tests, which help to identify specific auditory processing problems. If an APD is detected, a management plan is created based on the specific problems observed in the auditory processing assessment.

❖ **Prescribing and fitting hearing aids and other hearing devices**

There is a large range of technology available to the hearing impaired person. Like computers and mobile phones, the technology in hearing aids is improving constantly; hearing aids are getting smaller and more complex, cochlear implants are improving in their ability to process sound, and there are many assistive listening devices available now to help people with hearing loss.

Hearing aids range in technology level. As they increase in complexity they increase in price. Audiologists ask about the client's lifestyle, listening needs and hearing difficulties then choose hearing aids to match the client's needs.



❖ **Tinnitus management**

Tinnitus is the name given to the sensation of sound when there is no external physical sound present. Perceived sounds can vary from whistles to cicadas; some people hear more than one sound. Tinnitus assessment involves a hearing assessment and the measurement of the pitch and loudness of tinnitus. Management may include counselling combined with hearing aid fitting and/or therapeutic sound generators.

❖ **Programming cochlear implants**



Cochlear implants are devices used by those who are severely or profoundly deaf. Audiologists work in a team with surgeons, auditory therapists and others to assess the need and potential success of a new cochlear implant client. The audiologist is responsible for programming the implant and working with the client to help adjust to the new sounds sensations.



❖ **Working for a hearing aid manufacturer**

Some audiologists work for hearing aid manufacturers providing support to the audiology profession as new products and fitting strategies are developed.

❖ **Conducting research into hearing problems**

Knowledge about the hearing system and function is increasing greatly because of the research performed in this area. Some audiologists choose to further research in various aspects of hearing.

❖ **Educating and advising about hearing conservation**

One of the main reasons for hearing loss is excessive noise exposure. Audiologists advise industry and the public on hearing conservation measures and promote hearing preservation.

THE DEGREE OF MASTER OF AUDIOLOGY - MAUD

The degree is a two year programme of academic and clinical instruction in the areas of physics, neuroscience and audiology technique and clinical practice.

It is based in the Section of Audiology at the University of Auckland, Tamaki Campus in Glen Innes, Auckland.

Structure and Content

The programme (subject to approval) consists of Part I (first year) and Part II (second year) as follows:

Part 1 :

In the first year the focus is on fundamental sciences of Audiology and audiology techniques. There are courses dealing with anatomy and physiology of the auditory system, acoustics, audiology testing and rehabilitation techniques, ear disease, and basic clinical practice. Part 1 concludes with a nine-week practicum over the summer months, which is undertaken in hospital audiology clinics, usually outside Auckland.

The following courses must be completed in order to advance to Part II:

AUDIOL 701: *Auditory Neuroscience*

The anatomy and physiology of the auditory system, including the central nervous system. Topics include: the anatomy and neuroanatomy of the ear, the role of the middle ear, cochlear mechanics and micromechanics, transduction in the cochlea and vestibular system, responses of the auditory nerve and cochlear homeostasis.

AUDIOL 702: *Basic Diagnostic Audiology*

The basic principles and techniques of diagnostic audiology in adults and children. Topics studied include: basic audiometric techniques (history-taking, pure tone audiometry, speech audiometry, immittance audiometry, traditional site-of-lesion tests, paediatric assessment, non-organic hearing loss). Emphasis is placed on critical assessment of current literature.

AUDIOL 704: *Central Auditory Function*

Auditory neurophysiology and electrophysiology of central auditory pathways, psychoacoustics, and speech and language. Topics include: the use of electrophysiology imaging technologies and psychoacoustics to probe the function of the auditory system, central processes involved in speech and language.

AUDIOL 713: *Clinical Otolaryngology and Related Sciences*

An introduction to otolaryngology and speech pathology. Topics include: principles of pathology and mechanisms of disease, imaging techniques, diseases of the ear and head and neck, the genetics of deafness, neurological disorders that affect hearing and balance, occupational deafness and hearing conservation, speech pathology.

Restriction: AUDIOL 703

AUDIOL 714 : **Hearing Aids and Other Devices for the Hearing Impaired**

An introduction to the design and technology of analogue and digital hearing aids, cochlear implants and assistive devices for children and adults with hearing-impairment. Analysis of the signal processing techniques and strategies used in digital hearing aids and cochlear implants.

AUDIOL 715 : **Physics and Acoustics for Audiology**

The basic physics of sound; and instrumentation and the principles of digital signal processing involved in audiological research. Topics include the physics of sound waves, room acoustics, the measurement of reverberation time, the nature of acoustic impedance, the nature of filters and amplifiers, acoustics of speech, calibration.

Restriction: AUDIOL 705

AUDIOL 716A and AUDIOL 716B **Clinical Practicum I**

An introduction to the clinical practice of audiology. Topics include communication skills, the ethics associated with audiological clinical practice, cultural issues associated with the delivery of audiology; and the clinical practice of audiology, including counselling, understanding the effects of aging, tinnitus and hyperacusis management. Students will obtain the necessary skills and knowledge to take a clinical history and to perform basic audiometric assessment of adults and children. Particular emphasis is placed on critical evaluation and independent learning. The course involves substantial clinical work including a nine week practicum during the summer semester between Part I and Part II.

Restriction: AUDIOL 703

To complete this course students must enrol in AUDIOL 716 A and B

Part 2:

In the second year of the course emphasis is on independent learning, advanced practice and management. Half of the year is devoted to a research thesis in Audiology. The research is important to the development of clinicians able to be active consumers and critics of research. The degree also provides the pre-requisites for PhD study.

AUDIOL 718A and AUDIOL 718B **Clinical Practicum II**

The advanced clinical practice of audiology with particular emphasis on paediatric audiology and case management of children and adults. Topics include: assessment of hearing in the paediatric population, including clinical electrophysiology, development of speech, auditory processing disorders and management of hearing loss in children. Particular emphasis is placed on critical evaluation and independent learning. The course involves substantial clinical work.

Prerequisite: AUDIOL 716

Restriction: AUDIOL 712

AUDIOL 796A and AUDIOL 796B **Thesis 90 points**

A 90 point thesis. The thesis is to be carried out under the guidance of a supervisor appointed by the Head of School of Population Health. The thesis is to embody the results obtained by the student in an investigation in to an area of Audiology. Any laboratory work in connection with the thesis must be carried out within the University. However, Senate or its representative may permit a student to carry out the work in an

approved institute outside the University for any period or periods considered necessary. The thesis is to be completed and submitted in accordance with the General Regulations - Masters Degrees.

To complete this course students must enrol in AUDIOL 796 A and B

MAUD REGULATIONS :

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

1. In order to be admitted to this programme, a student needs to have:

a completed the requirements for:

either

(i) the Degree of Bachelor of Science (Honours)

or

(ii) the Degree of Bachelor of Science

or

(iii) the Degree of Bachelor of Arts

or

(iv) an equivalent qualification approved by Senate or its representative

and

b passed at Stage III:

(i) at least 45 points in Physiology, with an average grade of B or higher, and at least 15 points in Psychology

or

(ii) at least 45 points in Psychology, with an average grade of B or higher, and at least 15 points in Physiology

and

c passed at least 15 points with an average grade of B or higher in each of:

Chemistry

Biology or Zoology

Physics or Acoustics

2. In exceptional circumstances, Senate or its representative may, on the recommendation of the Head of School of Population Health, vary the admission requirements including exempting a student wholly or partly from any of the prerequisite courses and/or accept a lower average grade than B in the prerequisite courses required under Regulations 1 b and c.

Duration and Total Points Value

3. A student enrolled for this degree must:

a pass courses with a total value of 240 points

and

b complete within the time limit specified in the General Regulations - Masters' Degrees.

4. The total enrolment for this degree must not exceed 280 points.

Structure and Content

5. Research Masters

A student enrolled for this degree must pass courses with a total value of at least 240 points from Parts I and II as listed in the Master of Audiology Schedule.

6. The programme for each student must be approved by the Head of School of Population Health prior to enrolment.

Practical and Clinical Requirements

7. Each student must pass the clinical and practical requirements of the required courses to the satisfaction of the Head of School of Population Health. This includes a practicum undertaken between Part I and Part II.

Thesis

8. a The thesis is to be carried out under the guidance of a supervisor appointed by the Head of School of Population Health.
- b The thesis is to embody the results obtained by the student in an investigation into an area of Audiology.
- c Any laboratory work in connection with the thesis must be carried out within the University. However, Senate or its representative may permit a student to carry out the work in an approved institute outside the University for any period or periods considered necessary.
- d The thesis is to be completed and submitted in accordance with the General Regulations - Masters' Degrees.

Variations

9. In exceptional circumstances Senate or its representative may approve a personal programme which does not conform to these regulations.

Honours

10. This degree may be awarded with Honours as specified in the General Regulations - Masters' Degrees.

Commencement

11. These regulations came into force on 1 January 2010. The 2006 regulations for the Degree of Master of Audiology were thereby repealed.

Master of Audiology (MAud) Schedule

Requirement:

Part I:

- 120 points : AUDIOL 701, 702, 704, 713-716

Part II:

- 30 points: AUDIOL 718
- 90 points: AUDIOL 796 Thesis

Testimonials

VARIETY AND OPPORTUNITY- Michelle

I graduated from the University of Auckland with a Master of Audiology in 2000 and immediately started work at Waikato Hospital. Within the first year I was given the opportunity of taking over the management the department. I have been the Charge Audiologist for three years now and have experienced many highlights in my career so far.

Working in public practice audiology gives me a huge variety in clinical experience as we deal with the very young (infants) right through to the very elderly. We provide a full range of tertiary level diagnostic procedures which includes auditory processing disorder testing and electrophysiological testing, as well as the full range of rehabilitative services. Paediatric hearing aid fitting is a very strong focus in public hospital audiology, and you gain a huge amount of personal satisfaction knowing that you have enabled hearing impaired children to improve their quality of life and given them an opportunity for a positive future.



I am currently responsible for six staff members and have had the opportunity through the District Health Board to obtain a Post-graduate Certificate in Health Management. Audiology has given me the means to be involved on a daily basis helping patients, as well as developing strong management and leadership skills in a very short time following graduation. I am fortunate now to embark on the implementation of the largest newborn hearing screening programme in NZ which will potentially change the lives forever of the hearing impaired children born in the Waikato region.

POSITIVE AND REWARDING - Anthony

I guess I have been in a fairly unique position of always being aware of the field of Audiology through my family who has had a close connection with hearing impairment and hearing rehabilitation for many years. My grandmother began to lose her hearing due to a disease known as Otosclerosis soon after giving birth to her first child. Frustrated at the lack of specialist hearing aid services available at the time, my grandfather, after much research and self-training established Dunedin Hearing Clinic - thought to be the first private clinic in New Zealand to specialise in hearing aid work. When he died in 1970 my father stepped in to keep the practice alive. Both of my parents are still involved in the management of the clinic.

I am a born and bred Dunedinite but after graduating in 1998 with an M.Aud. (Hons) my partner and I decided to stay on in Auckland for a few years. This gave me the opportunity to gain some valuable work experience in two different settings.

In my first year I worked in a hospital based clinic under the guidance of an experienced senior audiologist. In working towards my certificate in clinical competence at the hospital, and through secondments to other clinics I was able to get a good grounding in all areas of clinical Audiology. In my second year after graduating I accepted a position managing a private clinic in Takapuna. In addition to



specializing more in adult hearing aid work, this gave me an excellent chance to develop my business skills and learn more about overall practice management.

In July 2000 my partner and I moved back to Dunedin. For the past three years I have worked alongside my parents in growing a very successful Audiology practice. I find it extremely rewarding to see the positive changes we can make for people whose lives are affected by hearing impairment.

AUDIOLOGY OVERSEAS - Amy

I always knew I wanted to travel and it made sense to embark on a career that was going to be recognised internationally. Before heading overseas I worked in Whangarei Hospital and in a private practice for 1.5 years to consolidate the knowledge and skills I acquired during my masters degree. After obtaining my certificate of clinical competence I headed over to the UK. My initial priority was to work as little as possible and to travel as long as my money allowed. I worked short term contracts (locuming) in many hospitals across England and got a good feel for how Audiology services within the UK worked. I didn't appreciate how well regarded the New Zealand Audiology degree was until I started travelling, as I and other Kiwi trained audiologists never had a problem finding work.

A unique opportunity arose after a year of locuming and I was seconded to work at The University of Manchester for a year. This job entailed lecturing and clinical teaching on the Master of Audiological Science degree. After working for a year I decided it was time to fit in a bit more travelling so took 8 months off! I returned to The University of Manchester to take up a challenging new role. I am currently responsible for providing training courses to paediatric NHS staff and Teachers of the Deaf to help them modernise children's hearing aid services. The UK government has released £94 million in an attempt to modernise adult and children's hearing aid services.

By 2005 all hospitals in England will be providing digital hearing aids within a modernised service. Such vast changes have never been seen in English Audiology before and I am relishing the opportunity to be involved in such a large project. My technical knowledge has widened considerably and I am now a confident public speaker.

I am meeting audiologists and teachers of the deaf throughout England many of whom I hope I will always keep in contact with. I am involving myself in research and have many opportunities to attend conferences in Europe and the United States. Audiology is a great profession as it doesn't stand still. The rapid technological advances in both diagnostic work and rehabilitation allow you to continually update your knowledge and get involved in innovative research. Doing my Masters at Auckland University was the best thing I ever did. Even if I don't stay in Audiology for the rest of my life the research, teaching and public speaking skills I have learnt will hold me in good stead for any job I may undertake in the future.



INCREASING KNOWLEDGE - Lara

Obtaining a Masters degree in Audiology has given me great freedom and choice in type of work that I am able to do. The field of Audiology has many different facets including research, clinical work - adult and paediatric, diagnostics and rehabilitation, cochlear implant work and hearing aid manufacturing - so you are able to focus the direction you take to suit your interests.



After working clinically in private practice for 18 months, I was given the opportunity to work for a hearing aid manufacturer in Sydney, Australia. This type of work is extremely varied and exciting and involves compiling training materials, running seminars, product launches, customer support, sales, marketing and travel. It allows you to become very specialised in your rehabilitation knowledge and product support. My position also required me to attend and present at conferences in Denmark, America and Italy as well as compiling marketing plans, budgets and forecasts to launch new products. I

was also involved in a PR Campaign to promote new technology and conducted several radio and television interviews.

My experience in manufacturing has strengthened my public speaking and training abilities and developed sales, marketing and management skills which are useful tools that will serve me well in future endeavours.

CAREER FLEXIBILITY - Toby

I came to audiology through studying psychology, and it appealed to me because it involved helping people to improve their lives and because I also had a family member with deafness. The Master's degree was very stimulating intellectually but quite a challenge at times, although I had a lot of support from family, friends, classmates and the wonderful staff at the dept of audiology, Auckland University. It was a life-changing experience!



Since graduating, I have worked in a public hospital setting with hearing impaired patients from all age groups for a year, a privately owned clinic for three and a half years, and now co-own and direct a private clinic in Dunedin. We focus on adult rehabilitation primarily through establishing strong individual relationships with hearing impaired people in combination with the application of modern hearing instrument technology. The knowledge gained through the MAud course has been invaluable in allowing me to achieve the improvement in quality of life that our clinic can offer to the hearing impaired person who chooses to visit us. At the same time, it has been a strong catalyst to the quality of life that I enjoy

through having the privilege to work with such people, and see the joy that such improvements can bring.

Audiology for me is very much a passion rather than just a job. I am very glad that I was in the position to do the MAud degree, and grateful to those who organised it through the Audiology Department and the University of Auckland.

For More Information about: The University of Auckland Master of Audiology course...

Websites

www.fmhs.auckland.ac.nz/soph/depts/audiology
www.audiology.org.nz
www.kiwicareers.co.nz

email

audiology@auckland.ac.nz

Phone

Audiology administrator
Ph (09) 373-7536

Applications for the University of Auckland Master of Audiology degree (MAud) close on the 1st of November.