



# Dental Technology Hangarau ā-Niho

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Ana Grymak  
Bachelor of Dental Technology  
with Honours

## Designing smiles

Dental technology is the technical side of dentistry in which dental technicians make appliances to improve a patient's appearance, speech or ability to chew. Dental technicians are a crucial part of the dental team. They use their understanding of dental material science, and their skills of design and fabrication, to recreate people's teeth. The satisfaction comes from knowing you have made it possible for that person to smile again.

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## What is Dental Technology?

Dental technicians work as part of the dental care team within a dental laboratory, and don't have direct contact with patients. They design and construct artificial teeth (in various forms), and removable orthodontic appliances.

Working with dentists, technicians use a wide range of materials, including gold, porcelain and acrylic, to design and construct appliances to meet each patient's needs.

The fact that the products they make can affect the health and appearance of a person demands a high level of responsibility and accuracy.

Dental technicians work with their hands on detailed and delicate items and have good hand to eye co-ordination. A dental technician learns to visualise in a 3D perspective. They typically have an eye for detail to get things just right.

## Background required

To be admitted to the course directly from school, you should have attained a minimum of 14 credits in each of two National Certificate of Educational Achievement (NCEA) Level 3 approved subjects (or equivalent) from science, mathematics or technology.

## Career opportunities

Dental technology is a global profession. Throughout the world, there is a high demand for skilled dental technicians. The high skill base that New Zealand dental technicians achieve makes them desirable to overseas employers.

In New Zealand and Australia, dental technicians are employed by commercial dental laboratories. These laboratories provide the bulk of work for the private dental industry, the defence forces, hospitals and state dental services.

The ratio of employer to employee is approximately 1:3, and many dental technicians ultimately set up business for themselves. There are no barriers to becoming self-employed.

The areas within the profession are diverse, with individuals specialising in different areas of dental technology.

## Dental Technology at Otago

The University of Otago's Bachelor of Dental Technology programme is the only one in New Zealand. It is a three-year degree programme taught within the Faculty of Dentistry. This creates long-lasting relationships with other dental health professionals and establishes the right dental care perspective from day one.

During your study, you will learn about the oral environment, biomaterials, design principles and practical skills in designing and fabricating appliances for the mouth.

These appliances include:

- artificial teeth (including complete dentures)
- partial dentures
- implants
- mouth guards
- crowns
- bridges
- removable orthodontic appliances.

## Postgraduate study

If you wish to take your knowledge beyond the Bachelor of Dental Technology, there is a range of postgraduate study options.

A fourth-year honours programme is available for students who achieve high academic grades. There are further opportunities for higher study through the Master of Dental Technology and PhD programmes.

For those interested in treating patients, there is a Postgraduate Diploma in Clinical Dental Technology. Graduates of this programme can offer a removable denture service direct to patients.

## Professional registration

The profession of dental technician is registered under the Health Practitioners Competence Assurance Act (2004). Graduates of the Bachelor of Dental Technology programme are automatically entitled to register with the New Zealand Dental Council in order to practise as a registered dental technician.

For questions about  
Dental Technology  
[otago.ac.nz/dentaltechnology](https://otago.ac.nz/dentaltechnology)



## PROFILE

### Ana Grymak

Bachelor of Dental Technology with Honours  
Winner of the 2020 IADR Colgate Research Poster Competition New Zealand division  
and third place in the Australia / New Zealand division

"When I was researching the degrees available in the New Zealand dental field, I was drawn to dental technology. It was something I had never heard about so I watched some YouTube videos and saw that it is new, very exciting and creative, which is one of the most important factors for me. After completing the three-year degree, I think it's the best choice I have made in my life.

"I chose the path to the honours degree because during the first three years of study, I was fascinated by how much scientific research is behind the practice. It seems like a simple process for a dental appliance to be made but there is a complex science behind the work. I chose to get into the research side to develop my practical skills and theoretical knowledge further. I want to tackle problems that dental technicians face in real life and help solve them using available research tools.

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"In my third year, I investigated the occlusal splint materials used to treat patients with teeth grinding (bruxism). I presented my findings in the International Association of Dental Research (IADR) Colgate Research Poster Competition. It was a new and challenging experience to participate in this competition, to summarise research findings in a poster and present to the judges in five minutes, and take questions. Taking part in this competition helped enhance my public speaking and research presentation skills.

"The Bachelor of Dental Technology leads to various career opportunities. The common pathway is to work in a dental laboratory and collaborate with dentists in making various dental appliances, like dentures, crowns and orthodontic appliances etc. Most graduates open their own dental laboratory business after getting work experience. Another popular career path is working directly with patients after completing a Postgraduate Diploma in Clinical Dental Technology. Some students get into research and development and work in commercial dental manufacturing companies."

