

Architecture, Construction & Engineering

Te Ara Hanganui

2027

STUDY GUIDE

Architecture

- Architecture
- Interior Design

Construction

- Construction Management
- Quantity Surveying

Engineering

- Civil Engineering
- Electrical & Electronics Engineering
- Mechanical Engineering

**GET
SET**



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KIA ORA

Choosing what comes next can feel exciting, daunting and full of pressure — but it's also full of possibility.

We believe education should open doors, build confidence and lead somewhere meaningful. That's why our learning is grounded in the real world: practical, hands-on and shaped by industry, so you graduate ready to step into work, further study or whatever future you're aiming for.

More than a qualification, study is about finding people who support you, discovering what you're capable of and building a life that feels right for you. With flexible study options, supportive tutors and a welcoming community, we give you the space to learn in a way that suits you and a place to achieve success, your way.



Disclaimer The information contained in this document is correct at the time of production (July 2026). Ara reserves the right to cancel or postpone any of the programmes, and shall not be liable for any claim other than the proportion of programme fees that the cancelled portion bears. Some programmes may be dependent upon formal approval from NZQA (New Zealand Qualifications Authority), TEC (Tertiary Education Commission) funding allocation, and the number of enrolments. Fees, programmes, entry and selection criteria, and dates, are subject to change. Please check the relevant programme pages at ara.ac.nz for up-to-date information and full entry requirements before applying to enrol. Information regarding English language requirements is available on each programme page at ara.ac.nz.

**SUCCESS ISN'T
ONE-SIZE-FITS-ALL.**

**AT ARA,
SUCCESS IS SHAPED
AROUND YOU.**

**YOUR GOALS,
YOUR PACE,
YOUR LIFE.**

**SUCCESS.
YOUR WAY.**



ARCHITECTURE

Architecture shapes the buildings and places people live, work and gather in. Architects and architectural designers create spaces that respond to human needs, environmental conditions, cultural context and community aspirations. In Aotearoa New Zealand, this means considering sustainability, Te Tiriti o Waitangi and te ao Māori perspectives alongside site, budget,

materials, structure and building rules. Professionals in this field develop concepts, test design options, create drawings and digital models, and coordinate with engineers, planners and other specialists to help bring safe, functional and meaningful places to life.

Would this suit me?

Architecture may suit you if you enjoy creative problem solving and like thinking in both images and practical steps. You might be drawn to how places feel, function and connect to people and culture. It helps to be open to feedback, organised with deadlines, and keen to build skills over time.

Career Pathways

Entry Level

- Architectural assistant
- Junior architectural technician
- Architecture studio intern
- Building consent support officer

Intermediate

- Architectural designer
- Architectural technician
- BIM coordinator
- Draftsperson
- Documentation technician
- Building consent officer

Advanced

- Registered architect
- Design lead
- BIM manager
- Urban designer
- Sustainability consultant
- Architectural historian
- Building industry consultant
- Design manager
- Project manager

NB: Advanced roles may require experience and/or further study.

WHAT will I learn?

- Architectural design principles and processes
- Design thinking and concept development
- Architectural communication and visual storytelling
- Digital modelling, Building Information Modelling (BIM)
- Construction systems, materials and detailing
- Building science, comfort, light and acoustics
- Sustainable design, carbon and lifecycle thinking
- Professional practice, ethics and legal basics

HOW will I learn?

- Studio-based projects with real design briefs
- Regular critiques with tutors and peers
- Workshops for drawing, modelling and making
- Digital lab work using industry software
- Site visits, guest talks and Design Jam
- Work experience in an architectural office

Industry connections

You'll learn with strong industry input through Ara's formal connections with Te Kāhui Whaihanga New Zealand Institute of Architects and Architectural Designers of New Zealand, including joint professional development events. Practising architects and other

specialists contribute through guest talks, studio critiques and applied projects. Site visits and the annual Design Jam build real-world perspective, supported by work experience in an architectural office.

Study options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Diploma in Architectural Technology	6	Christchurch	Full-time 2 years Part-time up to 5 years	February, July
Bachelor of Architectural Studies	7	Christchurch	Full-time 3 years Part-time up to 5 years	February

Starter options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Certificate in Study and Employment Pathways (Open pathway)*	4	Christchurch	Full-time 19 weeks Part-time available	February, July

**If you don't meet the academic requirements for the degree, you can gain them via this starter course. Please note: completing the starter course doesn't guarantee entry to the higher-level qualification as other criteria may apply.*



Scan for more
information on
this subject



INTERIOR DESIGN

Interior design is about creating interior spaces that look good, work well and support the people who use them. Interior designers interpret a client brief, develop concepts, plan layouts and select materials, finishes, furniture and lighting. They balance creativity with practical requirements like budgets, timelines, accessibility and sustainability, and in Aotearoa

New Zealand, they work within building regulations and a bicultural context.

Interior designers communicate ideas through drawings, digital presentations and specifications, then coordinate with clients, suppliers and other specialists to bring a space to life.

Would this suit me?

This area suits people who are interested in design, colour and detail, and like turning ideas into practical solutions. You might enjoy creative problem solving, working to a brief and refining your work after feedback. It helps to be organised, people focused and keen to learn how to design, conceptualise and implement design solutions.

Career Pathways

Entry Level

- Colour consultant
- Design assistant
- Junior interior designer
- Interior design CAD technician
- Design project coordinator
- Showroom or product consultant

Intermediate

- Interior designer (commercial)
- Interior designer (residential)
- Interior design product specifier
- Spatial designer

Advanced

- Design business owner
- Design practice manager
- Public space designer
- Exhibition designer
- Design researcher

NB: Advanced roles may require experience and/or further study.

WHAT will I learn?

- Design principles and processes
- Space planning, layout and ergonomics
- Colour theory
- Materials, finishes and specifications
- Construction technology and building methods
- Digital drawing and computer-aided design (CAD)
- Sustainable design thinking
- Professional practice
- Local industry structure, suppliers and trades

HOW will I learn?

- Studio-based, project-based design work
- Classroom learning and face-to-face tutorials
- Computer labs and draughting or drawing sessions
- Collaborative critiques and presentations
- Field trips and site visits
- Work-integrated learning in workplace settings

Industry connections

Our Interior Design Advisory Committee and industry-experienced tutors ensure learning aligns with current practice, supported by guest lectures and field trips. You'll build industry awareness through project work

that reflects real design expectations, with opportunities for critique and feedback from people working in the sector. You'll also develop a portfolio that is presented to industry at the end of the programme.

Study options

	LEVEL	LOCATION	DURATION	INTAKES	NOTES
New Zealand Diploma in Interior Design (Residential)	5	Christchurch	Full-time 1 year Part-time up to 4 years	February	



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CONSTRUCTION MANAGEMENT

Construction management is about planning and leading building projects from start to finish. Construction managers coordinate people, materials and subcontractors to keep work moving safely, to plan and on budget. They organise schedules, manage site activities, monitor quality and solve problems as they come up.

The role also involves contracts, procurement, documentation and making sure work meets relevant laws and building requirements. Construction managers spend their time both on site and in the office, working with clients, designers, suppliers and project teams to deliver finished buildings.

Would this suit me?

This area suits people who like organising and taking responsibility, and who enjoy seeing a plan become something real. It helps to be a clear communicator, a steady decision-maker and someone who can juggle details while keeping the bigger picture in mind. If you like practical problem solving and working with a mix of people, this could be a great fit.

Career Pathways

Entry Level

- Construction cadet
- Site administrator
- Project coordinator
- Assistant site manager
- Junior contract administrator

Intermediate

- Site manager
- Construction manager
- Project manager
- Contract administrator
- Construction planner

Advanced

- Senior construction manager
- Project director
- Contracts manager
- Operations manager
- Development manager

WHAT will I learn?

- Construction industry roles and documentation
- Statutory and regulatory requirements
- Construction planning and methodology
- Site management procedures and safety systems
- Programming, sequencing and resource allocation
- Procurement, tendering and contractor selection
- Contract administration and financial processes
- Materials, building systems and sustainability

HOW will I learn?

- Tutorials and workshops with tutor support
- Face-to-face sessions with guided activities
- Blended learning using Moodle and online tools
- Case studies using real project documentation
- Field trips and building site visits
- Work-integrated learning and industry projects

Industry connections

You'll learn with input from industry through advisory relationships and feedback from professional groups. Industry projects and work-integrated learning help you apply skills in real workplace settings, supported by a

workplace supervisor and Ara staff. Guest speakers, site visits and project-based learning keep your knowledge current and focused on what employers expect on site and in project offices.

Study options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Diploma in Construction (Construction Management)^	6	Christchurch	Full-time 2 years Part-time up to 6 years	February, July
Bachelor of Construction (Construction Management)	7	Christchurch	Full-time 3 years Part-time up to 8 years	February, July
Graduate Diploma in Construction Management	7	Christchurch	Full-time 1 year Part-time up to 4 years	February, July

^Credits from the diploma can be transferred to the degree, with only another 120 credits (1 year full-time study) required to graduate with a Bachelor of Construction.

Starter options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Certificate in Study and Employment Pathways (Construction pathway)*	4	Christchurch	Full-time 19 weeks Part-time available	February, July

**If you don't meet the academic requirements for the degree, you can gain them via this starter course. Please note: completing the starter course doesn't guarantee entry to the higher-level qualification as other criteria may apply.*



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this subject



QUANTITY SURVEYING

Quantity surveying is the cost, contract and commercial management side of construction. Quantity surveyors help clients and contractors plan budgets, price work and keep spending on track, from concept through to completion. They measure and estimate materials and labour, prepare tender documents, support procurement and manage contract variations and

progress payments. Many also advise on risk, value for money and whole-of-life costs.

In Aotearoa New Zealand, the New Zealand Institute of Quantity Surveyors (NZIQS) is the professional body for the field.

Would this suit me?

Quantity surveying could suit you if you like numbers, enjoy practical problem-solving and take pride in getting details right. You need to be methodical, analytical and calm under pressure. It also helps if you're comfortable dealing with a range of different people and you can communicate clearly.

Career Pathways

Entry Level

- Assistant quantity surveyor
- Junior estimator
- Trainee contracts administrator
- Procurement assistant
- Project support coordinator

Intermediate

- Quantity surveyor
- Estimator
- Contracts administrator
- Cost planner
- Procurement advisor
- Commercial coordinator

Advanced

- Senior quantity surveyor
- Commercial manager
- Construction cost manager
- Procurement manager
- Claims and disputes specialist
- Company director

NB: Advanced roles may require experience and/or further study.

WHAT will I learn?

- Construction technology and building systems
- Measurement and quantity take-offs
- Estimating and cost planning
- Procurement and tender documentation
- Contract administration and payment processes
- Construction law and commercial practice
- Building Information Modelling (BIM) basics
- Sustainability and whole-of-life thinking

HOW will I learn?

- Hands-on workshops and supported class learning
- Real drawings, specifications and case material
- Industry software practice and applied exercises
- Project-based tasks that mirror workplace work
- Site visits, forums and guest presentations
- 80-hours work-integrated learning

Industry connections

You'll learn with input from industry through guest speakers, site visits and industry networking events. You'll also have access to New Zealand Institute of Quantity Surveyors (NZIQS) professional development sessions hosted on campus, alongside support from

Building Industry Aotearoa. A Construction Industry Advisory Committee helps keep learning relevant, and work-integrated learning supports work-readiness through real workplace experience.

Study options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Diploma in Construction (Quantity Surveying) [^]	6	Christchurch	Full-time 2 years Part-time up to 6 years	February, July
Bachelor of Construction (Quantity Surveying)	7	Christchurch	Full-time 3 years Part-time up to 8 years	February, July
Graduate Diploma in Quantity Surveying	7	Christchurch	Full-time 1 year Part-time up to 4 years	February, July

[^]Credits from the diploma can be transferred to the degree, with only another 120 credits (1 year full-time study) required to graduate with a Bachelor of Construction.

Starter options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Certificate in Study and Employment Pathways (Construction pathway)*	4	Christchurch	Full-time 19 weeks Part-time available	February, July

*If you don't meet the academic requirements for the diploma or the degree, you can gain them via this starter course. Please note: completing the starter course doesn't guarantee entry to the higher-level programme as other criteria may apply.



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CIVIL ENGINEERING

Civil engineering focuses on the infrastructure that communities rely on every day. Civil engineers plan, design and oversee infrastructure such as roads, bridges, buildings, earthworks and water and wastewater networks. They assess sites and materials, model designs, manage construction, check quality

and safety, and maintain assets over their life. The work balances cost, performance and sustainability, aiming to meet community needs while reducing environmental impact. Civil engineers can work in consultancy, on site and for local authorities.

Would this suit me?

Civil engineering could suit you if you like figuring out how things are built and how they stand up over time. You need to enjoy maths, visual thinking and solving practical puzzles. It helps to be organised, patient and steady under pressure, with a team-focused mindset and clear communication.

Career Pathways

Entry Level

- Civil engineering technician
- CAD technician
- Junior site engineer
- Engineering draughtsperson
- Survey assistant

Intermediate

- Civil design engineer
- Structural engineer
- Water and wastewater engineer
- Roading and transportation engineer
- Project engineer

Advanced

- Project manager
- Senior civil engineer
- Principal engineer
- Infrastructure asset manager
- Sustainability lead

NB: Advanced roles may require experience and/or further study.

WHAT will I learn?

- Engineering maths and applied science
- Civil materials and construction methods
- Structural analysis and detailing
- Water and wastewater systems
- Roothing and transport
- Site investigation and surveying
- Computer-aided design and modelling
- Sustainable infrastructure decision-making

HOW will I learn?

- Tutor-led classes with worked examples
- Practical labs and engineering workshop tasks
- Design projects using industry software
- Site visits to active infrastructure works
- Final-year applied project work

Industry connections

During your studies you'll connect with industry through partnerships, site visits, and guest speakers from the civil engineering sector. Real-world projects help you apply learning to challenges seen in infrastructure, construction, and engineering consultancies, as well as water and wastewater and roading organisations.

Access to industry-standard spaces like workshops, labs and technology facilities supports practical, work-ready skills. Our engineering qualifications are fully accredited by Engineering New Zealand (EngNZ) and meet international standard requirements.

Study options

	LEVEL	LOCATION	DURATION	INTAKES	NOTES
New Zealand Diploma in Engineering (Civil) [^]	6	Christchurch	Full-time 2 years Part-time up to 5 years	February, July	Graduates qualify for membership of Engineering New Zealand.
Bachelor of Engineering Technology (Civil) [^]	7	Christchurch	Full-time 3 years Part-time up to 10 years	February, July	

[^]Our engineering qualifications are fully accredited by Engineering New Zealand (EngNZ). They're also internationally recognised; under the Dublin Accord for the diploma and the Sydney Accord for the degree.

Starter options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Certificate in Study and Employment Pathways (Engineering pathway)*	4	Christchurch	Full-time 19 weeks Part-time available	February, July

*If you don't meet the academic requirements for the diploma, you can gain them via this starter course. Then, upon successful completion of the diploma, you can transfer up to 180 credits towards a Bachelor of Engineering Technology, helping you to progress faster through the degree. Please note: completing the starter course doesn't guarantee entry to the higher-level programme as other criteria may apply.



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ELECTRICAL & ELECTRONICS ENGINEERING

Electrical and electronics engineers design, build and maintain the electrical systems that power modern life, from the national grid and industrial plants to commercial buildings and smart devices. They work across high voltage generation and distribution and low voltage electronics, communications and control.

Day to day, they model circuits and systems, build prototypes, test performance, diagnose faults and improve reliability and safety. Many roles also focus on energy efficiency and end of life impacts to reduce environmental footprint.

Would this suit me?

If you like solving real problems and understanding how things work, this area could suit you. You'll do well if you enjoy maths and logical thinking, notice detail and can explain ideas clearly. It helps to be patient, organised and motivated to make systems safer, smarter and more sustainable.

Career Pathways

Entry Level

- Engineering technician
- Electronics technician
- Test technician
- Maintenance technician
- Electrical CAD technician

Intermediate

- Electrical design engineer
- Electrical systems engineer
- Electronics engineer
- Building services engineer
- Project engineer
- Maintenance/plant engineer

Advanced

- Power systems engineer
- Robotics and automation engineer
- Project manager
- Technical lead engineer
- Engineering manager
- Energy systems specialist

NB: Advanced roles may require experience and/or further study.

WHAT will I learn?

- Engineering mathematics and core principles
- Circuit analysis and system design
- Electrical power and high voltage fundamentals
- Electronics and embedded systems
- Computer aided design and 3D modelling
- Prototyping, testing and fault finding
- Programmable and logic-designed control systems
- Sustainable engineering and lifecycle thinking

HOW will I learn?

- Tutor-led classes and problem-solving sessions
- Hands-on laboratory work and measurement
- Soldering and electronics lab practice
- Engineering workshop build-and-test activities
- Applied projects, including final-year projects
- Site visits and guest speaker sessions

Industry connections

Our electrical engineering programmes are shaped by partnerships with local infrastructure organisations, manufacturers and engineering consultancies. You'll hear from guest speakers, join site visits and tackle projects that reflect current industry practice.

Connections include Orion, Transpower and Connectics, with collaboration opportunities such as robotics research with Tait Communications. These relationships help you build relevant skills, professional networks and confidence for the workplace.

Study options

	LEVEL	LOCATION	DURATION	INTAKES	NOTES
New Zealand Diploma in Engineering (Electrical) [^]	6	Christchurch	Full-time 2 years Part-time up to 5 years	February, July	Graduates qualify for membership of Engineering New Zealand.
New Zealand Diploma in Engineering (Electronics) [^]	6	Christchurch	Full-time 2 years Part-time up to 5 years	February, July	
Bachelor of Engineering (Electrical) [^]	7	Christchurch	Full-time 3 years Part-time up to 10 years	February, July	

[^]Our engineering qualifications are fully accredited by Engineering New Zealand (EngNZ). They're also internationally recognised; under the Dublin Accord for the diploma and the Sydney Accord for the degree.

Starter options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Certificate in Study and Employment Pathways (Engineering pathway)*	4	Christchurch	Full-time 19 weeks Part-time available	February, July

*If you don't meet the academic requirements for the diploma, you can gain them via this starter course. Then, upon successful completion of the diploma, you can transfer up to 180 credits towards a Bachelor of Engineering Technology, helping you to progress faster through the degree. Please note: completing the starter course doesn't guarantee entry to the higher-level programme as other criteria may apply.



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MECHANICAL ENGINEERING

Mechanical engineering is about turning ideas into working machines, products and systems. Mechanical engineers design, analyse, build, test and maintain everything from building services and infrastructure plant to robots, refrigeration and aerospace components. They use maths, physics and materials knowledge to solve practical problems, improve

performance and keep people safe. The work often involves modelling and computer-aided design (CAD), prototyping, quality testing and planning for maintenance. In Aotearoa New Zealand, the profession is supported by Engineering New Zealand and aligned to international standards.

Would this suit me?

If you like working out how things work and enjoy solving practical problems, this area could be a good fit. It suits people who are creative, methodical and good at thinking things through. Confidence with maths helps, along with strong time management and the ability to explain ideas clearly.

Career Pathways

Entry Level

- Engineering technician
- CAD technician
- Mechanical engineering intern
- Production technician
- Maintenance technician
- Quality technician

Intermediate

- Mechanical design engineer
- Manufacturing engineer
- Project engineer
- Building services engineer
- Test and quality engineer
- Maintenance engineer

Advanced

- Project manager
- Robotics and automation engineer
- Thermal and energy engineer
- Plant engineering manager
- Engineering consultant
- Engineering manager
- Product manager

NB: Advanced roles may require experience and/or further study.

WHAT will I learn?

- Core mechanical engineering principles and calculations
- Problem-solving methods and design thinking
- Computer-aided design (CAD) and modelling
- Materials selection and manufacturing processes
- Prototyping, testing and design validation
- Maintenance planning and reliability basics
- Sustainable engineering and environmental impact
- Project planning and quality standards
- Advanced fluid mechanics, product design and air handling systems

HOW will I learn?

- Tutor-led classes with hands-on problem solving
- Practical labs and engineering workshop sessions
- Technology Hub prototyping with 3D printers
- Team projects and real design briefs
- Site visits to local engineering workplaces
- Guest speakers and industry-led insights

Industry connections

Ara's mechanical engineering area keeps close links with local engineering and manufacturing across Christchurch and wider Canterbury. Students benefit from industry guest speakers, site visits and projects that reflect real workplace constraints such as

budgets, materials and sustainability. Where opportunities arise, applied collaboration can include research-focused projects, such as robotics work with Tait Communications.

Study options

	LEVEL	LOCATION	DURATION	INTAKES	NOTES
New Zealand Diploma in Engineering (Mechanical) [^]	6	Christchurch	Full-time 2 years Part-time up to 5 years	February, July	Graduates qualify for membership of Engineering New Zealand.
Bachelor of Engineering Technology (Mechanical) [^]	7	Christchurch	Full-time 3 years Part-time up to 10 years	February, July	

[^]Our engineering qualifications are fully accredited by Engineering New Zealand (EngNZ). They're also internationally recognised; under the Dublin Accord for the diploma and the Sydney Accord for the degree.

Starter options

	LEVEL	LOCATION	DURATION	INTAKES
New Zealand Certificate in Study and Employment Pathways (Engineering pathway) [*]	4	Christchurch	Full-time 19 weeks Part-time available	February, July

^{*}If you don't meet the academic requirements for the diploma, you can gain them via this starter course. Then, upon successful completion of the diploma, you can transfer up to 180 credits towards a Bachelor of Engineering Technology, helping you to progress faster through the degree. Please note: completing the starter course doesn't guarantee entry to the higher-level programme as other criteria may apply.



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City campus

130 Madras Street, Christchurch
Mon-Fri, 8am - 4.30pm

Manawa campus

276 Antigua Street, Christchurch
Mon-Fri, 8.30am - 4.30pm

Woolston campus

Ensors Road, Christchurch
Mon-Fri, 8am - 4.30pm

Timaru campus

32 Arthur Street, Timaru
Mon-Fri, 8am - 4.30pm

Connect with us:

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