

Bachelor of Building Science

The quality of our buildings is vital to our economy, environment, and lifestyle. Take your interest in the process and business of creating great buildings—from construction methods, materials, and systems to project management and contractor relations—and contribute to a more sustainable world.

Te Herenga Waka is an international leader in building science, and our Tohu Paetahi Whare Hangahanga—Bachelor of Building Science (BBSc) is the country's leading programme devoted to the science of buildings. You will study building construction and sustainability to promote the construction of durable, economic, and healthy buildings, while being aware of architectural design issues.

The BBSc is a three-year undergraduate degree unique to Te Herenga Waka with five majors: Building Surveying, Built and Natural Heritage Construction, Project Management, Smart Cities and Digital Built Environments, and Sustainable Engineering Systems. You may choose to study a second major or take two minors. These majors have been developed in response to the evolving needs of the building industry.

In your first year, you will study core courses alongside students in the first year of the Bachelor of Architectural Studies (BAS) and Bachelor of Construction (BConst). This maximises your exposure to all aspects of built environments and is designed to increase your awareness of the different disciplines contributing to it.

In the following two years, you will study core Building Science topics, including building systems, construction, digital tools, environmental science, project management, structures, and surveying.

At the end of the three years' study, you will have the knowledge and skills to begin a satisfying career in the building industry or continue your study at postgraduate level. Graduates have expertise in the economics, environmental impact, science, and technology of building and an understanding of architecture.

CAREER OPPORTUNITIES

Our Building Science graduates are in high demand with the growing needs of New Zealand's building and construction industry. You will find careers in diverse areas including acoustics, building consent, building information modelling, building research and development, compliance, digital construction, heating, heritage consultancy and policy, lighting, procurement, project management, sustainable engineering, and ventilation.

 wgtn.ac.nz/careers

POSTGRADUATE STUDY

A BBSc leads to postgraduate study in the two-trimester Postgraduate Diploma in Construction and Building Science (PGDipCBSc) or the three-trimester Master of Building Science, Master of Construction*, or Master of Construction Law.

As a Master's student, you can extend your undergraduate studies. The PGDipCBSc can lead to the Master of Construction and Building Science (Research) programme, where you will use state-of-the-art digital tools in project management, designing sustainable building systems, or another area that can be supervised in Te Kura Waihanga—School of Architecture. Our PGDipCBSc is now taught in block-mode delivery to accommodate your busy lifestyle.

 wgtn.ac.nz/architecture/postgraduate

*Subject to regulatory approval.

SCHOOL SUBJECTS

There are no required subjects for studying Building Science, but a broad selection of school subjects is recommended—these might include Art, Design, Design and Visual Communication, English, Mathematics, Physics, and any Science or Technology.

MAJORS

Building Surveying / Aromātai Hanganga

Ensure safe, efficient, and climate-adaptable structures that stand the test of time. In the Building Surveying major, you will gain a comprehensive understanding of building codes, regulations, and standards in Aotearoa New Zealand. You'll evaluate and implement sustainable building practices in building design, construction, and operation. You'll learn how to identify and assess common building defects and propose appropriate remedial solutions, and you'll develop the skills to evaluate and implement sustainable building practices in building design, construction, and operation.

Built and Natural Heritage Conservation / Te Whāmotanga o te Hanga ā-Ringa me te Hanga ā-Taiao

Be a guardian of history, restoration, and adaptation for modern living. Preserve our architectural treasures and natural wonders. The Built and Natural Heritage Conservation major will give you a comprehensive understanding of heritage conservation principles, theories, and practices. You'll learn the art and science of conservation, blending traditional knowledge with modern techniques to safeguard our heritage for future generations.

FIND OUT MORE

 info@vuw.ac.nz

 [VUWArchitectureandDesign](https://www.facebook.com/VUWArchitectureandDesign)

 [wgtnFADI](https://www.instagram.com/wgtnFADI)

 [wellington-faculty-of-architecture-and-design-innovation](https://www.linkedin.com/company/wellington-faculty-of-architecture-and-design-innovation)

 wgtn.ac.nz/bbsc

 wgtn.ac.nz/wfadi

Project Management / Whakahaere Kaupapa

Become a master planner and navigate the complexities of construction projects with finesse. In the Project Management major, you'll learn to apply project-management tools and techniques to plan, schedule, and budget construction projects. You'll gain a firm grasp of risk management so you can identify, analyse, and manage project risks and minimise their impact on project objectives, and you'll learn how to harness stakeholder relationships in a way that means you deliver projects on time and within budget.

Smart Cities and Digital Built Environments / Tāone Atamai me ngā Whaitua Hanga Matihiko

Shape the future of cities. Harness the power of digital technologies to design intelligent buildings and infrastructure. In this major, you'll use AI, digital twins, and virtual reality to optimise the design, construction, and operation of buildings and infrastructure. You'll analyse and interpret data from various sources to inform decision-making in the planning, design, and management of smart-built environments. Become an innovator using building information modelling and data analytics to create sustainable and resilient urban environments.

Sustainable Engineering Systems / Pūnaha Pūhanga Toitū

Engineer a sustainable future by mastering the science of high-performance buildings. In the Sustainable Engineering Systems major, you'll apply engineering principles and tools to evaluate and optimise the performance of building systems. You'll learn to assess the environmental impacts of building materials and construction practices and select sustainable alternatives. And you'll consider the social and economic aspects of sustainable engineering—including the comfort, health, and wellbeing of those living in the built environment.

DEGREE REQUIREMENTS

Three years of full-time study.

Complete the four core courses at 100 level (in your first year). See below.

Satisfy the requirements for at least one major.

A total of 360 points is required:

- ▶ at least 270 points must be from courses listed for the BAS, BBS, and BConst schedules
- ▶ at least 210 points must be at 200 and 300 level
- ▶ of the 210 points, at least 180 points must be from courses listed for the BAS, BBS, and BConst schedules
- ▶ of the 180 points, at least 90 points must be at 300 level in the BAS, BBS, and BConst schedules.

First-year core (all majors)

Trimester 1 (1/3)	Trimester 2 (2/3)
SARC 131	SARC 121
SARC 161	SARC 122

Major in Building Surveying (BSUR)

First year: BILD 101 and a 15-point elective from 100-level BILD/CONM/SARC courses.

Second year: BILD 202, BILD 222, SARC 221, SARC 224, and 15 further points from 200-level BILD/CONM/SARC courses.

Third year: BILD 301, BILD 302, BILD 364, SARC 301, SARC 321, SARC 362.

Major in Built and Natural Heritage Conservation (BNHC)

First year: One course from BIOL 132, CONM 121, EHUM 101, GEOG 114, GEOG 115, GEOS 101, SARC 151.

Second year: BILD 222, BILD 261, BILD 262, SARC 221, SARC 252, and one course from ARCI 251, BILD 202, BILD 251, CONM 212, CONM 222, DSDN 221, EHUM 201, INTA 251, LAND 251, GEOG 214, SARC 223, SARC 232.

Third year: BILD 361, BILD 364, SARC 321, SARC 354, SARC 362, and one course from BILD 322, BILD 362, BILD 364, CONM 311, CONM 322, SARC 302, SARC 331, SARC 352, SARC 363.

Major in Project Management (BPGT)

First year: SARC 121 and 15 further points from 100-level BILD/CONM/SARC courses.

Second year: BILD 222, SARC 221, BILD 251, BILD 261, BILD 262.

Third year: BILD 361, BILD 362, BILD 364, SARC 321, SARC 362.

Major in Smart Cities and Digital Built Environments (BSCD)

First year: Two courses from AIML 131, CONM 122, COMP 102, COMP 103, COMP 132, CYBR 171, DSDN 142, SARC 151.

Second year: BILD 222, MDDN 222, MDDN 242, SARC 221, and one course from ARCI 251, CONM 212, CONM 222, GEOG 215, INTA 251, LAND 251, NWEN 241, NWEN 243, SIDN 271.

Third year: BILD 364, MDDN 333, MDDN 342, SARC 321, SARC 362, and one course from CONM 311, CONM 322, GEOG 315, MDDN 314, NWEN 301, SARC 301, SARC 315, SARC 351, SARC 352, SARC 363.

Major in Sustainable Engineering Systems (BSEG)

First year: 30 points from 100-level BILD/CONM/SARC courses.

Second year: BILD 222, BILD 231, SARC 221, SARC 223, SARC 232.

Third year: BILD 321, BILD 322, BILD 364, SARC 331, SARC 321, SARC 362.

DEGREE EXAMPLES

BBSc majoring in Building Surveying and Project Management

YEAR 1		YEAR 2		YEAR 3	
1/3	2/3	1/3	2/3	1/3	2/3
SARC 131 15 points	SARC 121 15 points	BILD 222 15 points	BILD 202 15 points	BILD 364 15 points	SARC 321 15 points
SARC 161 15 points	SARC 122 15 points	SARC 221 15 points	SARC 224 15 points	SARC 362 15 points	BILD 301 15 points
ELECTIVE FROM 100-LEVEL BILD 15 points	BILD 101 15 points	ELECTIVE FROM 200-LEVEL BILD 15 points	BILD 251 15 points	SARC 301 15 points	BILD 302 15 points
ELECTIVE FROM 100-LEVEL CONM 15 points	ELECTIVE 15 points	BILD 261 15 points	BILD 262 15 points	BILD 362 15 points	BILD 361 15 points
60 POINTS	60 POINTS	60 POINTS	60 POINTS	60 POINTS	60 POINTS
120 POINTS		120 POINTS		120 POINTS	

Total points required: 360

Total points completed: 360

BBSc majoring in Built and Natural Heritage Conservation and Smart Cities and Digital Built Environments

YEAR 1		YEAR 2		YEAR 3	
1/3	2/3	1/3	2/3	1/3	2/3
SARC 131 15 points	SARC 121 15 points	BILD 222 15 points	BILD 262 15 points	BILD 364 15 points	SARC 321 15 points
SARC 161 15 points	SARC 122 15 points	SARC 221 15 points	SARC 252 15 points	SARC 362 15 points	BILD 361 15 points
SARC 151 15 points	CONM 121 15 points	BILD 261 15 points	CONM 222 15 points	SARC 354 15 points	COMD 322 15 points
ELECTIVE 15 points	CONM 122 15 points	MDDN 242 15 points	MDDN 222 15 points	MDDN 342 15 points	MDDN 333 15 points
60 POINTS	60 POINTS	60 POINTS	60 POINTS	60 POINTS	60 POINTS
120 POINTS		120 POINTS		120 POINTS	

Total points required: 360

Total points completed: 360

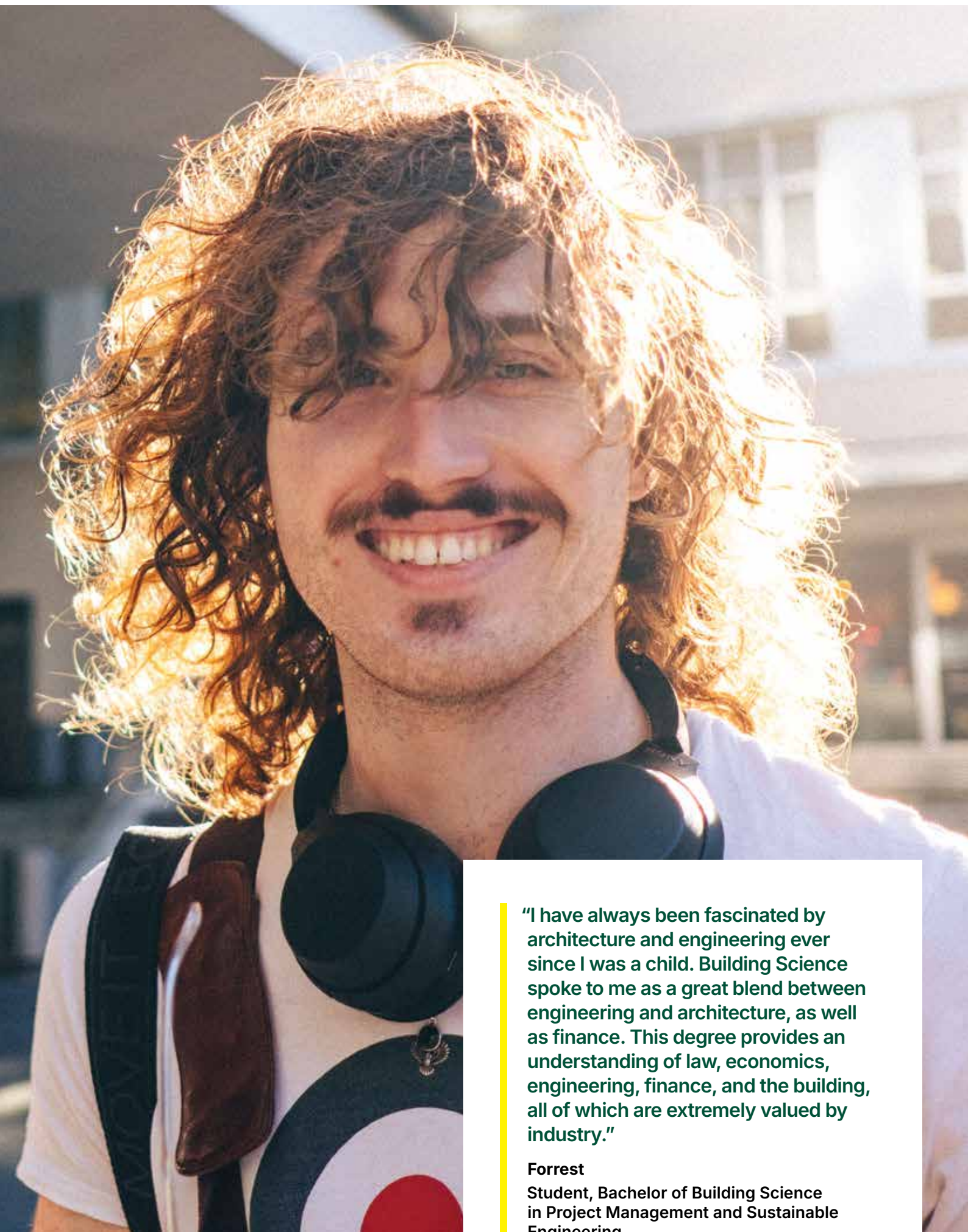
BBSc majoring in Sustainable Engineering Systems

YEAR 1		YEAR 2		YEAR 3	
1/3	2/3	1/3	2/3	1/3	2/3
SARC 131 15 points	SARC 121 15 points	BILD 222 15 points	SARC 232 15 points	BILD 364 15 points	SARC 321 15 points
SARC 161 15 points	SARC 122 15 points	SARC 221 15 points	BILD 231 15 points	SARC 362 15 points	BILD 322 15 points
ELECTIVE FROM 100-LEVEL BILD, CONM, SARC 15 points	ELECTIVE FROM 100-LEVEL BILD, CONM, SARC 15 points	SARC 223 15 points	ELECTIVE 15 points	SARC 331 15 points	BILD 321 15 points
ELECTIVE 15 points	ELECTIVE 15 points	ELECTIVE 15 points	ELECTIVE 15 points	ELECTIVE 15 points	ELECTIVE 15 points
60 POINTS	60 POINTS	60 POINTS	60 POINTS	60 POINTS	60 POINTS
120 POINTS		120 POINTS		120 POINTS	

Total points required: 360

Total points completed: 360

KEY: CORE FIRST MAJOR SECOND MAJOR ELECTIVE



"I have always been fascinated by architecture and engineering ever since I was a child. Building Science spoke to me as a great blend between engineering and architecture, as well as finance. This degree provides an understanding of law, economics, engineering, finance, and the building, all of which are extremely valued by industry."

Forrest

Student, Bachelor of Building Science
in Project Management and Sustainable
Engineering