EXERCISE SCIENCES

UNDERGRADUATE HANDBOOK

2017

THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

SCIENCE

Welcome to the Department of Exercise Sciences

A degree in Exercise Sciences is the key to understanding how the human body works and works-out.

As Exercise Scientists we seek to understand how physical activity changes the human body when it is growing, performing complex physical skills and how aging and disease impact on being physically active.

The exercise sciences bring together biomechanics, movement neuroscience, exercise physiology, exercise metabolism and exercise psychology to understand the role of exercise in sustaining health, improving disease outcomes, and enhancing human performance.

Exercise scientists prescribe exercise as medicine, analyse performance techniques, develop new interventions to help rehabilitation and recovery from disease, and engage with physicians, allied health professionals and the health industry.

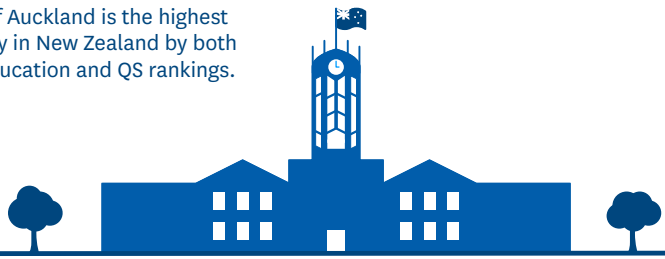
Access world-class facilities and resources

science.auckland.ac.nz/facilities

From 2017 the name of the major will change from Sport and Exercise Science to "Exercise Sciences" and the prefix for the courses will be EXERSCI. Many of our courses are attractive to students in physiology, engineering and other science disciplines.

ASSOCIATE PROFESSOR GREG ANSON
Head of Department

The University of Auckland is the highest ranked university in New Zealand by both Times Higher Education and QS rankings.



Bachelor of Science in Exercise Sciences*

Are you interested in how and why the human body moves? Then study exercise sciences, an important discipline that relates to all aspects of our everyday life. Our courses cover human physiology, exercise and sport psychology, biomechanics, and movement neuroscience. Exercise sciences will facilitate skills for life-long learning, critical and analytical thinking, communication, independence, collaboration and intellectual curiosity. In laboratory classes you will develop hands-on skills in experimentation and interacting with human participants. The programme is committed to developing graduates working in the exercise sciences, health, wellness, physical fitness, rehabilitation, sport science and clinical exercise physiology.

**subject to CUAP approval*

3 The average number of years it takes to complete a Bachelor of Science degree

You can choose either a single or double major

Preparation for school leavers

Students are strongly encouraged to have NCEA Level 3 Biology and/or Human Biology, Chemistry, Mathematics (including Algebra and Trigonometry) Physics, Statistics, and Physical Education.

Complementary majors

A double major is strongly recommended as it will enhance your career options by providing a broader base of skills and knowledge.

EXERCISE SCIENCES +

Biological Sciences
Physiology
Psychology
Statistics

www.science.auckland.ac.nz/doublemajors

For course planning and enrolment, go to **www.science.auckland.ac.nz/student-centre**

Thinking about postgraduate study options? **Go to www.es.auckland.ac.nz/pg**

Planning your major

BSc

Year 1

EXERSCI 101	EXERSCI 103	BIOSCI 107	MEDSCI 142	PSYCH 108 or 109	ELECTIVE	ELECTIVE	ELECTIVE

With appropriate prerequisites can also be filled by Stage II or III.

Recommended courses are: EXERSCI 105, STATS 101, MATHS 102, PHYSICS 160, CHEM 150, SCIENCE 101 or other courses in Chemistry or Computer Science.

Year 2

EXERSCI 201	EXERSCI 202	EXERSCI 203	EXERSCI 204	MEDSCI 205			GEN ED
					Any Stage		

Year 3

EXERSCI 301	EXERSCI 303	EXERSCI 304	EXERSCI 305				GEN ED
				Stage III Science	Stage II or III Science		

1. Courses in a minimum of three subjects listed in the BSc Schedule.
2. At least 180 points (12 courses) must be above Stage 1.
3. Up to 30 points (2 courses) may be taken from outside the Faculty.
4. 30 points (2 courses) must be taken from the appropriate General Education Schedules for BSc students.
5. At least 75 points must be at Stage III, of which 60 points must be in the majoring subject.

EXERSCI 206, 302 and 309 recommended.

To view regulations for majors, and course descriptions, see www.calendar.auckland.ac.nz

BSc degree requires: 360 points (24 x 15 point courses). Each box represents one 15 point course.

It is recommended that students enrol in 8 courses each year.

Note: In 2017 all SPORTSCI courses will change to 'EXERSCI' (subject to approval).

Undergraduate courses in Exercise Sciences

Stage I

EXERSCI 101	Foundations of Exercise Sciences and Sport
EXERSCI 103	Human Anatomy
EXERSCI 105	Exercise Prescription

Stage II

EXERSCI 201	Exercise Physiology 1
EXERSCI 202	Principles of Tissue Adaptation
EXERSCI 203	Biomechanics 1
EXERSCI 204	Psychology of Physical Activity
EXERSCI 206	Exercise Nutrition

Stage III

EXERSCI 301	Exercise Physiology 2
EXERSCI 302	Exercise Physiology for Special Populations
EXERSCI 303	Biomechanics 2
EXERSCI 304	Sport Psychology
EXERSCI 305	Movement Neuroscience
EXERSCI 309	Practicum in the Exercise Sciences

For course descriptions and prerequisite information, go to www.es.auckland.ac.nz/ugcourses, www.es.auckland.ac.nz/prerequisitecourses

The following courses are offered by other departments at the University of Auckland. These courses are prerequisites for the BSc, Exercise Sciences' programme.

BIOSCI 107	Biology for Biomedical Science: Cellular Processes and Development
MEDSCI 142	Biology for Biomedical Science: Organ Systems
PSYCH 108, or	Individual, Social and Applied Psychology
PSYCH 109	Mind, Brain and Behaviour
MEDSCI 205	The Physiology of Human Organ Systems

General Education course offered by our department

EXERSCI 100G	Exercise and Fitness: Myths and Reality (see www.auckland.ac.nz/generaleducation)

Careers in Exercise Sciences

A career in Science could take you anywhere

An Exercise Sciences major can lead on to a career in any of the following:

- Cardiac physiologist
- Clinical exercise physiologist
- Exercise scientist
- Human movement scientist
- Injury prevention consultant
- Respiratory physiologist
- Sport and fitness practitioner
- Sport scientist (consultant in biomechanics, exercise, nutrition, physiology)

Meet our postgraduate students, practitioners and industry experts

Disclaimer

Although every reasonable effort is made to ensure accuracy, the information in this document is provided as a general guide only for students and is subject to alteration. All students enrolling at the University of Auckland must consult its official document, the University of Auckland Calendar, to ensure that they are aware of and comply with all regulations, requirements and policies.

"I've had a passion for sports as early as I could bounce a ball and decided to select BSc Sport and Exercise Science as a conjoint degree to complement Mechatronics.

"I love using biomechanics to analyse human motion for high performance and injury prevention measures, as well as physiology to understand the relationship between training and adaptation.

"Core areas within Sport and Exercise Science such as biomechanics, exercise physiology and movement neuroscience, all have an increasing demand for robotics and smart devices. I hope to use this unique point of difference to design innovative devices in these fields."

Oscar Moosman *is studying a conjoint degree in Science and Engineering, majoring in Sport and Exercise Science (BSc) and specialising in Mechatronics BE(Hons).*

Helpful information

Academic dates	www.auckland.ac.nz/dates
Academic Integrity Course	www.auckland.ac.nz/academic-integrity
Accommodation	www.accommodation.auckland.ac.nz
Buy course books	www.science.auckland.ac.nz/resource-centre
Career Development and Employment Services	www.auckland.ac.nz/careers
Course advice and degree planning in Science	www.science.auckland.ac.nz/student-centre
General education	www.auckland.ac.nz/generaleducation
How to apply	www.apply.auckland.ac.nz
How to enrol	www.auckland.ac.nz/enrolment
International students	www.international.auckland.ac.nz
Māori and Pacific students	www.science.auckland.ac.nz/tuakana
Need help?	www.askauckland.ac.nz
Rainbow Science Network for LGBTI students	www.science.auckland.ac.nz/rainbowscience
Scholarships and awards	www.scholarships.auckland.ac.nz
Support for students	www.science.auckland.ac.nz/support

Applications close on December 1 for all students applying to Exercise Sciences.

Questions about Exercise Sciences?
Email exercise-sciences@auckland.ac.nz

THE UNIVERSITY OF AUCKLAND
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NEW ZEALAND

Connect with us

Faculty of Science, The University of Auckland
Private Bag 92019, Auckland 1142, New Zealand

Phone: 0800 61 62 63 | Email: scifac@auckland.ac.nz
Web: www.es.auckland.ac.nz

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