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GENERAL ENQUIRIES

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UQ’s HUMAN movement and sport sciences ranked first in Australia and second in the world, according to the 2019 QS World University Rankings of Academic Performance.

The UQ School of Human Movement and Nutrition Sciences brings together leading academics, alumni and industry partners who work together to improve Australia’s health and well-being through the interdisciplinary areas of exercise and sports science, nutrition, physical activity and health, sport and physical education.

The school is internationally ranked in the top five of more than 300 universities and is recognised nationally and internationally for high achievements in teaching and research.

We are dedicated to providing world-class education and translation of research into action. This is supported by our award-winning teachers, high-quality programs, state-of-the-art teaching and research facilities, well established clinical, sport and education partnerships, and international teaching and research collaborations.

Our broad range of programs provides plenty of opportunities for careers in health as accredited exercise physiologists, accredited sport and exercise scientists, dietitians or nutritionists, sports nutritionists, sports coaches, specialists in sports medicine, and physical education, health and junior science teachers.

The school is proud of the fact that a high percentage of our graduates achieve full-time employment after their studies. The School of Human Movement and Nutrition Sciences is a global centre of research excellence that undertakes research across the fields of exercise and sports science, neuroscience, biomechanics, nutrition, physical activity and health, sport history and physical education.

Our research is recognised as world-class according to several international rankings and our researchers have received prestigious awards and honours. We are constantly pushing boundaries with innovative, new research projects. Our four research centres work closely with external organisations to find science-based answers to real-word problems, and to translate research findings into action.

These partnerships provide our research students with exceptional opportunities to work on meaningful programs that make a real difference.

Our many partners include Queensland Health, Cancer Council Queensland, Boeing Research and Technology Australia, Asics Oceania, Queensland Academy of Sport and Australian Paralympic Committee.

1. UQ’s Human movement and sport sciences ranked No. 1 in Aus.*
2. UQ’s Human movement and sport sciences ranked No. 2 globally.*

* 2019 QS World University Rankings of Academic Performance
CENTRE FOR RESEARCH ON EXERCISE, PHYSICAL ACTIVITY & HEALTH

THE CENTRE for Research on Exercise, Physical Activity and Health (CRExPAH) leads research in exercise, physical activity, health and wellbeing.

The aim of our research is to build capacity for primary, secondary and tertiary prevention that will underpin improvements in health to create a physically active and healthy Australia. Our research addresses issues relating to exercise, physical activity, health and wellbeing across the lifespan, in clinical and non-clinical populations, and in settings such as health services, workplaces, schools, universities, aged care and communities.

Research projects are strategically targeted at different levels of interventions, from supporting individuals with chronic health conditions, working with employees and workplaces in a prevention framework, and to a broader level of policy research to enhance our current knowledge of physical activity and health.

PROJECTS

- Physical activity and reproductive health problems in young adult women
- Exercise intensity: the key to prevention of chronic disease?
- Effects of exercise on sexual function and cardiovascular health in men with prostate cancer (ESCA) Study

OUR RESEARCH ADDRESSES ISSUES RELATING TO EXERCISE, PHYSICAL ACTIVITY, HEALTH AND WELLBEING ACROSS THE LIFESPAN, IN CLINICAL AND NON-CLINICAL POPULATIONS...

- Exercise for Type 2 Diabetes
- Peer Support and Exercise for Cancer Survivors
- The Effects of High Intensity Exercise on Cardiovascular Function in Men with Metastatic Castrate-Resistant Prostate Cancer
- An evidence-based intervention ("Fit for Treatment") to prevent chemotherapy-induced neurotoxicity in breast cancer patients: An effectiveness-implementation hybrid study
- Enhancing language learning in ageing with exercise: An fMRI investigation
- Worldwide gender and socioeconomic differences in physical activity—can the gap be closed?

CENTRE FOR SENSORIMOTOR PERFORMANCE

THE apparent ease with which humans perform a rich repertoire of physical tasks belies the true complexity of the processes involved.

To produce appropriately timed and physically calibrated movements, the brain and spinal cord must coordinate activation of a myriad of muscles within the context of diverse sensory input and varying task demands.

The centre combines research strengths in sensorimotor function, neurophysiology, biomechanics, sensory processing, and applied skill acquisition to tackle basic and applied research questions relating to health (rehabilitation and surgical training), sports (performance and training), and industry (interface design and simulator-based training).
THE UQ Centre for Sport and Society (CSS) aims to create a better world through research, teaching, and community engagement activities related to sport, health, education, and movement cultures. Centre members are committed to the capacity for sport and movement cultures to enable people to learn about health, relationships, bodies, the environment, and their communities.

The centre further advocates that sporting organisations have a critical role to play in shaping ways of knowing and thinking about a range of issues.

We also view sport as playing a vital role in Australian society and our engagement with Asia-Pacific and global communities.

Our members include coaching, cultural studies, education, history, psychology, and sociology scholars. The centre has multidisciplinary expertise on bodies, health, sport, and movement cultures, including high performance, school-based, recreation or leisure forms of participation.

We address a range of topics such as: health and physical education; Indigenous health and sporting achievements; sport for development and peace; the participation of women; and the impacts of digital technologies.

We advocate for holistic approaches to health and well-being that include diverse people and forms of participation, enabling all individuals to achieve their goals or potential.

RESEARCH PROJECTS

- The Commercial Provision of Schooling and its Implications for Australia
- LifeMatters
- External provision of the school curriculum: Local needs to global networks in Health and Physical Education
- Small technology, big data and the business of young people’s health: an international investigation of the digitisation of school health and physical education
- Transformative Approaches to Student Voice in Higher Education (Institute for Teaching and Innovation Fellowship)
- The Social, Cultural and Political Uses of the Sporting Role-Model
- Healthy School Architecture: Towards Participatory Design, Policy and Research Agendas
- Using Physical Activity to Enhance Classroom Engagement and Readiness to Learn: Stakeholder Perspectives, Recommendations, and Dissemination of Findings from a Localised Project
- History of the Australian Paralympic Movement
- Sport, Stories and Survival: Reframing Indigenous Sport History
- Understanding the Growth of Women’s Recreational Surfing (The Australian women’s surfing project)
- Evaluating the Value Created from Cricket Australia’s International Coach Study Tour
- Sport for Development Programmes: Privatised Aid and Indigenous Sport in Australia and Canada
THE Centre for Dietetics Research (C-DIET-R) focusses on the three major practice areas of dietetics: individual case management (medical nutrition therapy), food and nutrition service management and public health nutrition, as well as the underpinning nutrition science of the emerging field of functional nutrition therapy.

The centre promotes and builds on our expertise in innovation and applied research in dietetics.

The School of Human Movement and Nutrition Sciences works closely with a wide network of organisations, industries, and individuals to deliver first-class teaching, student experiences, alumni connections and research outcomes.

We offer opportunities for:

- professionals looking to meet their CPD requirements
- organisations wishing to hire graduates, or engage students for pro bono work
- schools or businesses wishing to engage students for professional practicum opportunities
- industries requiring professional research consultation
- alumni seeking to stay connected
- high schools wishing to show their students the human movement and nutrition sciences school experience.

In 2012–2017, articles by UQ research staff in peer-reviewed sports publications attracted 4737 citations
OUR research in Biomechanics and Motor Control investigates the latest hot topics in biomechanics, motor control, neuromechanics, perception and motor learning, and sports medicine.

Biomechanics involves the use of the mechanical principles of physics and engineering to study human motion and the mechanical properties of biological tissues. Applications include, among others, the study of movement in sporting situations (sports biomechanics), in work environments (occupational biomechanics), in rehabilitation settings (clinical biomechanics) and where there are interactions between the nervous system and mechanical properties of the body (neuromechanics).

Motor Control seeks to understand how movement skills are controlled, how they develop and how they are acquired. The field examines issues that relate to both normal skill acquisition, coordination and control, plus how these processes are effected by factors such as injury, disability, disease, disuse and fatigue and involves a combination of approaches from neuroscience and cognitive science.

Generally speaking, human neuroscience is at the core of motor control, neuromechanics and perception and motor learning. As such our researchers in these areas have strong and successful research links within The University of Queensland (e.g. Queensland Brain Institute; the NHMRC CCRE for Spinal Pain and Health; Speech Pathology; Physiotherapy, Engineering).

COACHING and Sport Psychology research examines the psycho-social and pedagogical aspects of sport participation from the perspective a variety of actors (e.g. athlete, coaches, officials) in a range of sport physical activity settings.

Key areas of research include:

- Positive psychology with a focus on self-determination theory, autonomy-supportive learning environments, attribution styles, and mental toughness
- Coach development using psycho-social and pedagogical frameworks such as workplace learning theories
- Conceptualisations of leadership and culture in performance sport settings

The learning of sport participants in varying settings (e.g. action sports, Indigenous sport) through pedagogical and socio-cultural approaches

The development of mental skills for performance enhancement, life satisfaction, and self-worth.

RESEARCH PARTNERSHIPS
ONE of Australia’s top research-intensive universities, UQ is consistently awarded the maximum five-star rating for research grants and research intensity in the Good Universities Guide. UQ continually builds on its global reputation in key areas of national and international significance such as energy, sustainability, water, health, food security and social equity through an emphasis on high-quality, interdisciplinary global collaboration with public and private organisations.

GENERAL ENQUIRIES
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CONTACT HOURS
Mon–Fri, 9.00 am–5.00 pm
PEDAGOGY and Socio-cultural Studies research focuses on developing theory and methodologies to inform and achieve evidence-based policy and practice in HPE curriculum, pedagogy and government agendas.

Our researchers in this field attract international interest related to HPE curriculum, pedagogy and policy, education commercialisation, as well as informing government agendas.

Their work also includes research into HPE teacher education and the meaning of physical activity in the lives of young people.

Sport history research focuses on philosophy of sport history, and history as represented through material culture including film, monuments, memorials, and photographs.

NUTRITION and Dietetics research focuses on understanding and promoting the role and effect of food on human health and disease.

Areas of speciality include:
- Nutrition screening, nutrition assessment including body composition assessment, nutrition diagnosis, international nutrition and dietetics terminology and dietetics outcomes research
- Medical nutrition therapy for particular conditions and patient groups e.g. oncology nutrition, renal nutrition and nutrition for older adults, functional nutrition therapy for chronic disease management
- Immuno-nutrition and functional foods and beverages, including functional nutrition therapies
- Food and nutrition service policy, evaluation, practice and management
- Dietetics and nutrition education.

OUR research in Physical Activity and Health is concerned with understanding, measuring, and promoting physical activity and related health behaviours.

This involves examining population trends, as well as the socio-demographic, psychological, social and environmental factors that influence behaviour at different life stages.

Researchers have worked on the development of new measures which will improve understanding of the links between physical activity, sedentary behaviour and health and well-being.

They use a multi-disciplinary approach and concepts from epidemiology, health promotion, public health, exercise science and psychology to design, implement, and evaluate innovative interventions.

These interventions aim to reduce sedentary behaviour and promote physical activity among adults, older people, and people with health issues such as diabetes, arthritis, and depression.
EXERCISE PHYSIOLOGY

EXERCISE physiology research focuses on understanding exercise interventions for clinical populations and addressing ways to manage chronic health conditions and improve sports performance.

Exercise Physiology is concerned with the study of the responses of the various physiological systems to exercise. The work focuses on both the acute and chronic adaptations to physical activity and involves different levels of analysis from molecular, through cellular, to system level.

Basic science projects investigate exercise immunology, exercise-induced oxidative stress and molecular mechanisms of cardio-protection.

Applied science projects include exercise interventions for clinical populations (e.g., people with diabetes, cardiovascular disease or cancer survivors); sports performance enhancement (e.g., through optimising rehydration and caffeine supplementation); and classification for Paralympic sport.

Featured projects

- High intensity exercise for non-alcoholic steatohepatitis
- Exercise intensity: the key to prevention of chronic disease?
- The FITR Heart Study: Feasibility, Safety, Adherence, and Efficacy of High Intensity Interval Training in hospital-initiated rehabilitation for coronary heart disease
- Artificial Intelligence & Machine Learning to Predict Exercise Adherence in Cancer Survivors
- Hypertension and cerebrovascular function during exercise
- Genes to Predict VO2max trainability (PREDICT HIIT)
- Enhancing language learning in ageing with exercise: An fMRI investigation
- An evidence-based intervention (“Fit for Treatment”) to prevent chemotherapy-induced neurotoxicity in breast cancer patients: An effectiveness-implementation hybrid study
- The Effects of High Intensity Exercise on Cardiovascular Function in Men with Metastatic Castrate-Resistant Prostate Cancer
- Peer Support and Exercise for Cancer Survivors
- Exercise for Type 2 Diabetes

Top ten collaborative organisations for UQ Sport and Exercise research papers (2012–2018)

1. Australian Catholic University
2. University of Melbourne
3. Griffith University Queensland
4. Monash University
5. Ruhr-Universitat Bochum
6. Deakin University
7. Vrije Universiteit
8. La Trobe University
9. Baker Heart Research Institute
10. Curtin University of Technology