

2019 Human Factors / Ergonomics Tertiary Qualifications, Programmes and Courses in New Zealand (on offer for 2020)	
University/ Tertiary provider	University of Otago
School/ Faculty/College	Dunedin School of Medicine Department of Psychology School of Physiotherapy
Qualifications/Programmes	PGCert/Dip/Masters Health Science BA/BSc, MA/Msc, PhD MHealSc, PGDipSEM, PGDipPhty, MPhty, PGDipHealSc
OCCH401	Occupational Health
Delivery mode / Semester	Distance
Credit Value	30
Total Course Hours	150
HFE Content Hours	30
Co-ordinator/Tutor	Dave McBride
Cost	Domestic \$2,692.75, International \$9,125
Frequency of offering	Annual
Students last 5 years	10-15
Prescription	Strategic management of health and safety risks in the workplace requires the systematic and analytical framework taught in this course. Students learn to recognize chemical, physical, biological, ergonomic and psychosocial hazards, and, using the bio-psychosocial model, develop evidence based strategies to manage and control health and safety risks.
Learning outcomes	The graduate will have developed 'hands on' skills in the systematic evaluation of occupational health hazards and will be able to formulate a workplace specific health and safety management plan
HFE Content/Topics	Ergonomics and human factors, the biopsychosocial model in health and safety practice: safe person, safe work, safe systems, the role of ergonomics in prevention of MSDs, rehabilitation.
Other information	Two additional papers from Diploma, one 'substitute ' paper from another institution

OCCH402	Occupational Safety
Delivery mode / Semester	Distance
Credit Value	30
Total Course Hours	300
HFE Content Hours	30
Co-ordinator/Tutor	Dave McBride
Cost	Domestic \$2,692.75, International \$9,125
Frequency of offering	Annual
Students last 5 years	10-15
Prescription	This paper builds upon the knowledge and skills gained in OCCH401 by in depth development of critical analysis and workplace health and safety. The successful candidate will identify 'best practice' in the management of workplace risks to health and safety, and formulate a strategy to implement a management plan.
Learning outcomes	Learning Outcomes: Students who successfully complete the paper will be taught best practice in hazard recognition and get team-based, hands-on practice in evaluating the occupational environment. Graduates will be able to develop and operationalise a strategy to manage health and safety in the workplace so as to meet, and exceed, the requirements of the Health and Safety at Work Act.
HFE Content/Topics	Systematic and 'in depth' analysis of human factors and ergonomics. Fatigue. Shift work. Physical hazards.
Other information	
PSYC326	Cognitive Engineering
Delivery mode / Semester	On campus, Semester 2
Credit Value	18 points
Total Course Hours	180 hours
HFE Content Hours	180 hours
Co-ordinator/Tutor	Dr Vanessa Beanland (Ex David O'Hare)
Cost	\$1,018.05
Frequency of offering	Semester 2 each year
Students last 5 years	100-130
Prescription	The study of factors that affect decision making and cognition in naturalistic task settings. It is a field of study concerned with human performance in technological settings. These include transportation (road, rail, air and sea), manufacturing, mining and healthcare. The paper provides an introduction to the topic and preparation for further study in the area.
Learning outcomes	<ul style="list-style-type: none"> • Develop knowledge of theories of human error and systemic failure and the ability to apply these to real-world incidents and accidents. • Develop knowledge of human attention and apply this to problems of display design, skill development, automation and workload. • • Develop knowledge of theories of decision making and their application in medicine and health care. • Demonstrate critical thinking about accident causation and failures involving human performance.
HFE Content/Topics	Human error and accident analysis, display design, attention and performance, automation, fatigue, risk perception, decision making
Other information	

PSYC212	Social and Applied Psychology
Delivery mode (eg Int/Dist)/ Semester	Internal on-campus /Semester 1
Credit Value	18 points
Total Course Hours	180
HFE Content Hours	90
Co-ordinator/Tutor	Prof Jamin Halberstadt
Cost	Domestic \$1,018.05, international \$4,320
Frequency of offering	Semester 1 each year
Students last 5 years	280-320
Prescription	Social psychology, decision making, applied psychology, and human factors. This paper examines theories and research in social psychology - the study of how people influence and are influenced by others - and covers a variety of real-world practical problems that have stimulated research in psychology. We will give attention to both classic and contemporary theories about these problems and take a critical approach to the research used to test them. CONTENT UNDER REVIEW FOR 2019
Learning outcomes	This paper includes components on social psychology and applied psychology. Social psychology topics include: Causal attribution, Attitudes and attitude change, Prejudice, Aggression, Altruism, Emotion, Self-perception, Group behaviour, Applied social psychology. Applied topics include: Communication failures in aviation, The design of technological devices, Motor vehicle crashes, Varieties of human error, Stress and performance, Personnel selection, Behaviour in emergencies, Decisions under uncertainty. Students will gain a basic background in social and applied psychology and learn to use the scientific method to test hypotheses in these areas.
HFE Content/Topics	Ergonomics in design, flight deck performance, human error, stress, driving, automation, decision making
PSYC432	Safety Science and Application
Delivery mode	Internal on-campus Semester 1
Credit Value	10 points
Total Course Hours	120
HFE Content Hours	120
Co-ordinator/Tutor	Prof David O'Hare
Cost	Fees not yet set for 2019
Frequency of offering	Semester 1 each year
Students last 5 years	New course offering
Prescription	The course examines the traditional person-based framework to safety and risk management involving identifying hazards, estimating risk and attributions of human error. We will then look at engineering oriented approaches from Human Reliability Analyses to Leveson's control theory of safety. Lastly we will traverse a range of contemporary approaches proposed by Rasmussen, Dekker and Hollnagel as well as precursor approaches to looking at failures in complex systems such as Perrow's 'normal accidents' and Vaughan's 'normalisation of deviance'.
Learning Outcomes	Critically review current approaches to safety and risk management and contrast with new ways of conceptualising success and failure in complex systems. Understand the limitations of traditional accident and incident reviews. Gain an awareness of new proposed methods (e.g. FRAM) for developing system safety.

HFE Content/Topics	As described above
SPME710	Sports Ergonomics
Delivery mode / Semester	Distance – delivered by webconference if minimum class number reached.
Credit Value	30
Total Course Hours	?
HFE Content Hours	?
Co-ordinator/Tutor	Dr Daniel Cury Ribiero, School of Physiotherapy
Cost	Domestic \$2,692.75, International \$6250
Frequency of offering	Annual?, if enough enrolments
Students last 5 years	?
Prescription	The interaction between the sports person and their environment, specifically its effect on injury mechanisms and injury prevention including interaction with other participants, the surface on which the sport is performed, and equipment used. This paper, run by the School of Physiotherapy, is based on comprehensive reviews and readings of the literature. It allows students to gain a new level of understanding in an area of particular interest to them. For example, some students have a particular interest in the ground surface on which a particular sport is played and in the interaction between the surface, shoes and injury. The paper gives them the skills to read widely across the chosen topics (guided by the lecture series and readings) and develop three assignments, each building on the previous. As a result, by the end of the paper the student has a comprehensive understanding of this chosen topic and an ability to translate the skills learnt in this process to other questions they may have.
Learning outcomes	Sport and Exercise Medicine describes the health care of active people, including high-performing athletes. The University of Otago has a unique Postgraduate Diploma course available to suitably qualified graduates from Medicine, Physiotherapy, Pharmacy, Physical Education, Podiatry, Nutrition and other related health science subjects. A doctor who chooses to specialise in Sports Medicine must complete additional advanced training for Fellowship of the Australasian College of Sports Physicians (FACSP). A physiotherapist who wishes to specialise in the rehabilitation of athletes completes postgraduate study in the management of sports injuries. Similarly, sport science graduates follow their specific area of expertise in psychology, nutrition or exercise science. There is an increasing demand for sport psychologists, nutritionists, and strength and conditioning experts who work with professional sports teams. Team doctors and physiotherapists accompany our national teams to world championships, Commonwealth and Olympic Games.
HFE Content/Topics	
Other information	

PHTY539	Occupational Health Physiotherapy
Delivery mode / Semester	Distance Learning, 2 nd Semester
Credit Value	30
Total Course Hours	?
HFE Content Hours	?
Co-ordinator/Tutor	Olivia Stone
Cost	Fees not yet determined for 2019
Frequency of offering	Annual
Students last 5 years	?
Prescription	<p>This paper is intended to provide practising physiotherapists with specific knowledge and skills to apply in occupational health practice, and includes the assessment, management, prevention and treatment of work-related musculoskeletal disorders, and the role of government regulatory bodies and statutory authorities in occupational health practice.</p> <p>This paper meets the Accident Compensation Corporation (ACC) vocational rehabilitation competencies.</p> <p>Topics include: Ergonomics, worksite assessment, risk factors, injury prevention, vocational rehabilitation, management of persistent pain and disability and legislation.</p>
Learning outcomes	<p>On completion of this paper students will be able to:</p> <ul style="list-style-type: none"> ○ Apply ergonomic principles in worksite assessment; ○ Analyse a task and evaluate findings, choosing appropriate worksite assessment tools; ○ Demonstrate an advanced ability to communicate information effectively; ○ Identify and critique risk factors that make a worker susceptible to pain, injury and disability - (including biomechanical, psychosocial, cultural and environmental factors) and relate evidence on risk factors to physiotherapy practice; ○ Synthesise current injury prevention literature and formulate an injury prevention plan for a selected industry; ○ Analyse and synthesise current evidence on vocational rehabilitation and the role of occupational health team members; ○ Demonstrate awareness of current evidence on assessment and management strategies that are effective in the vocational rehabilitation of clients with persistent pain and disability.
HFE Content/Topics	?
Other information	